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THE
PEDAGOGICAL
SEMINARY.

A QUARTERLY

INTERNATIONAL RECORD OF EDUCATIONAL LITERATURE,
INSTITUTIONS AND PROGRESS.

EDITED BY

G. STANLEY HALL,

President of Clark University and Professor of Psychology and Education.

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THE PEDAGOGICAL SEMINARY.

Founded and Edited by G. STANLEY HALL.

VOL. X.

MARCH, 1903.

No. 1.

EDITORIAL.

The contents of this number of the Pedagogical Seminary is somewhat more varied than usual.

In the first article, Mr. Swift has brought together some interesting biographical material, illustrating phases of intellectual development in distinguished men, with certain inferences.

The tame crow Oliver was for ten years an object of great interest to the school children of Westfield. On the basis of data collected by Professor W. S. Monroe, Mr. Bucke tells briefly this story and has in preparation similar data with regard to other animal species, which tend to show how much they mean and how deeply they enter into the life of the young.

The fact that man within his own body is shut up to the narrow range of only ten degrees of variation of heat and to an environment which cannot vary more than one hundred degrees suggests a problem not hitherto treated, viz., how the young are oriented to a heat scale above and below them, ranging through thousands of degrees. The surprises of this study perhaps are the extreme plasticity of the youthful mind as illustrated in what children see in fire and in their extremely diversified conceptions of Jack Frost.

Mr. Elkins gives from personal experience a very vivid picture of the present condition of education in Hawaii, especially interesting in view of the larger conceptions of the relation of higher and lower races now arousing attention.

Next follows a note on children's cloud fancies, supplemental to Dr. Slaughter's more extended article upon the subject, published in the *American Journal of Psychology* for April, 1902.

Professor W. G. Chambers's article on the evolution of ideals is in some respects a model in the child study field: first, in that he prints a concise and very available digest of all the previous studies, twenty-three in number, upon the subject; second, in that he draws practical lessons of great importance, especially for the education of girls, but also for that of boys, and establishes what is essentially a new and important standpoint for judging of certain educational values. We hope the form and thoroughness of this article in these respects will be a model widely copied.

Professor Monroe makes a very brief but interesting contribution to the musical development of childhood, of practical as well as scientific interest.

The usual number of book notes follow.

STANDARDS OF EFFICIENCY IN SCHOOL AND IN LIFE.

By EDGAR JAMES SWIFT, Fellow in Clark University.

Various tests for determining mental ability have been suggested at different times but all seem to call for special kinds of ability instead of testing the more fundamental mental endowment. Nor are the several subjects of the school curriculum exceptions since success in them, also, requires particular powers none of which are essential to greatness, as is evident from the fact that there is not one of them in which some man of genius has not been a dunce.

It seemed probable that mental endowment might be more accurately determined by getting the pupils' judgment of an entire situation the interpretation of which would require an estimation of conditions from given relations. For this purpose the two following fables of Æsop were selected together with Pestalozzi's fable of the fishes and the pike.

NO. 1. THE BOY AND THE FILBERTS.

A boy once thrust his hand into a pitcher nearly filled with filberts. He grasped as many as his hand could possibly hold; but when he tried to draw out his closed fist, the narrowness of the neck prevented him from doing so. Unwilling to lose his nuts, yet unable to get them by drawing out his hand, he burst into tears and bitterly lamented his hard fortune.

NO. 2. THE HORSE AND THE RIDER.

A cavalry officer took the greatest of pains with his horse. As long as the war lasted the horse was looked upon as a companion and fellow-helper. He was carefully groomed every day and fed with oats.

But when the war was over, the allowance of grain and hay ceased and the horse was fed with chaff, and whatever he might find by the wayside. He was made a drudge, too, and often forced to carry loads much too heavy for his strength.

When in course of time, war was again proclaimed, the soldier brought his military trappings, and put them on his horse; and, after putting on his own coat of mail, he mounted to ride to battle.

But the horse, no longer equal to the burden, fell down straightway under the weight.

No. 3. THE FISHES AND THE PIKE.

The fishes in a pond brought an accusation against the pike who were eating them up. The judge, an old pike, said that their complaint was well founded, and that in the future, to make things right, he would allow two ordinary fish every year to become pike.

The school in which the test was made is a ninth grade of the Worcester, Mass., public schools in which the pupils are divided, according to proficiency in their studies, into four sections. Those selected made up the "best" and "poorest" divisions. It will be seen from this that only those who were considered decidedly bright and decidedly dull were included in the test since there were two other divisions, of 36 and 33 pupils each, between the ones chosen. The "best" group contained 33 pupils and the poorest 22. Each fable was read separately and the pupils were asked to write "what they thought of the boy" in No. 1, before either of the others were read; and then of the cavalry officer, after they had heard No. 2; and finally of the plan of Judge Pike in No. 3. The entire test occupied one recitation period.

When the replies had been tabulated the differences due to varying ability, which the school estimate would lead us to expect, did not appear. The two sets of answers were different, but the difference did not indicate an intellectual superiority of the "best" group. The tabulated answers were submitted to a number of university men with the request that they select the set written by the dull division but in no case did they feel that their judgment would be anything more than a guess. In the fable of the "fishes and the pike," which presents conditions the right interpretation of which involves a distinctly intellectual process, the "dull" division excelled the "bright." Twenty-seven per cent. of the latter thought that the plan of Judge Pike was wise and just, while only nine per cent. of the "dull" ones were of this opinion and, again, only fifteen per cent. of the "bright" division replied that the plan would not help the fishes that were not turned into pike, while thirty per cent. of the "dull" group gave this answer.

That the question might be still further tested the fables were submitted to two hundred and thirty-six boys in the Lyman Industrial, reform, school. This included all who could write, and of these twelve were discarded because they were unintelligible. With the exception of these the answers of the boys from the reform school decidedly outranked those from both of the other groups, but especially the ones from the "bright" divi-

sion in the penetration and versatility that they showed. Fifty per cent. said that Judge Pike's plan would not help the little fishes and one-fourth of these added that it would even make matters worse by increasing the number of pikes to eat them, a point that was made by only one in the "best" division, while among the "dull" pupils the same proportion as in the reform school gave this answer. Twenty-three per cent. of the Lyman school boys thought the plan a good one.

The test was then repeated with other children, the "dullest" and "brightest" of four divisions being selected as before. There were forty in the best section and nineteen in the poorest. Here, too, the replies to the first two fables left those who examined them in doubt as to which group was the "best" but the "dull" ones again led in seeing through the plan of Judge Pike. Thirty-seven per cent. of the former and fifty per cent. of the latter said that it would not help the little fishes while thirty per cent. of the "best" and fifteen per cent. of the "dullest" thought it a good plan.

One thing was decidedly noticeable. The answers from the public school children lacked individuality. They were conventional, while those from the reform school gave evidence of spontaneity and resourcefulness. The question may be seriously raised whether the schools do not train children to stupidity.

A few of the best replies from each group are given below.

I. BEST DIVISION.

Girl, 14. "I think he was a very shrewd judge, as soon there would be nothing but pike in the pond."

Boy, 15. "I think the plan of Judge Pike was not a very good one. It not only encouraged the pikes to be more savage but it also tended to make the other fishes inclined that way."

Girl, 13. "I do not think Judge Pike's plan was fair, because the fishes that were made pikes were not any better than their companions and he did not stop the pikes from eating other fishes."

Boy, 13. In my opinion Judge Pike's plan was very poor, for the ordinary fish that became pike, might like certain politicians, when once got in power, treat their former fellows very poorly.

Boy, 14. I think Judge Pike was a sly old fellow, for, of course the small fish would become pike when the pike had eaten them.

Boy, 12. I don't think that that was a very good plan of Judge Pike's, because, after he had changed some of the small fish into pike, there would be more pike to eat up the small fish.

Boy, 13. The two fishes, who would be pike, would be eaten up before their term of office came around.

Girl, 15. Judge Pike is one of the kind that makes the case better for his own side, he's not willing to be fair.

Boy, 14. The pike was foxy by letting two of the small fishes become pike. In this way the pike would be enlarging their numbers, and still more be enlarging the death rate of the smaller fishes.

Girl, 14. "It was a sneaky, cute way to get out of the scrape. His plan was unjust because it was impossible. The plan shows the wit

of the judge. It was a merciless plan because it had no sympathy for the simple fish."

2. DULL DIVISION.

Boy, 15. "It is easily seen that the judge's plan would help to destroy the common fish as every year there would be more pike to destroy the fish."

Boy, 15. "I think it was not a good plan except for the two who were to become pike and soon all the fish would be pikes, because the pikes would keep on eating little fish and two little fish becoming pikes would exterminate all the little fish."

Boy, 16. "I do not think that the judge was very wise. If two fish were made pikes every year, after a while all the little fishes would be eaten up, and there would be no other kind of fish but pike in the pond."

Boy, 15. When the judge said, "that he would allow two ordinary fish to become pikes," he was thinking of his own fellows rather than the little fish.

Boy, 14. "I think that the pike's decision was more on his own side. By the time the term expired nearly all the old fish would be dead or eaten by the pike."

Girl, 15. I think that the Pike was cruel because he knew that the little fishes were not very bright and he knew that they could not see what he was trying to do.

Boy, 15. "I do not think the old pike was a good judge because if he had two new pikes added every year in course of time the pikes would eat up all the fish in the pond."

Boy, 14. "I think the judge pike was doing something for his own benefit. He was as bad as the other pike because he would eat the fish just the same."

REFORM SCHOOL BOYS.

Boy, 14. "I think the judge was out of his head and talking through his hat; he let the fishes become pike so they could eat up the small fishes."

Boy, 14. "The little fishes did not want to be eaten up but when they were pikes they wanted to eat the little fishes up."

Boy, 15. He was crafty in arranging this plan, for the pike could eat fish for a year and then there would be two more pike added to the list of fish-eaters; and the two added would be the most effective; any one who has been in subjection, if suddenly brought to rule will be worse than one that has never been in subjection.

Boy, 14. I think that is a bad plan for if two of the little fishes became pike each year before the year was ended the pike would have them all eaten.

Boy, 13. I think the judge was wrong for when those two fish become pikes they would eat just like the other pikes and so eat the little fish up.

Boy, 15. "This plan of this old pike was a very clever one he thought by doing that he could keep right on eating up these little ones and those two that were to be made pike would pay for it."

Boy, 14. "If that little fish was a big fish he would do the same thing."

Let us see how some eminent men and women have responded to the school test.

Linnæus's gymnasium teachers would have made a cobbler

of him, telling¹ his father that he was unfit for a learned profession. When he went up to the university the director gave him this certificate. "Youth at school may be compared to shrubs in a garden, which will sometimes, though rarely, elude all the care of the gardener, but if transplanted into a different soil may become fruitful trees. With this view, therefore, and no other, the bearer is sent to the university, where it is possible that he may meet with a climate propitious to his progress." And the director's only claim to fame is that he wrote this note.

"During my whole life," says Charles Darwin in his autobiography, "I have been singularly incapable of mastering any language. . . . When I left the school I was for my age neither high nor low and I believe that I was considered by all my masters and by my father as a very ordinary boy, rather below the common standard in intellect. To my deep mortification my father once said to me, 'you care for nothing but shooting, dogs, and rat-catching, and you will be a disgrace to yourself and all your family,'"² Dr. Butler, the head master, once rebuked him for wasting his time on such subjects as chemistry, but no one would have heard of the Doctor had not Darwin rescued him from the dark waters of oblivion by pulling him into his autobiography.

Harriet Martineau's parents considered her mind dull and unobservant and unwieldy.³ Though a born musician, "never known to sing out of tune," she could do nothing in the presence of her irritable master, Mr. Beckwith. "Now and then he complimented my ear," she tells us, "but he oftener told me that I had no more mind than the music-book, . . . and that it was no manner of use trying to teach me anything. All this time, if the room door happened to be open without my observing it when I was singing Handel by myself, my mother would be found dropping tears over her work, and I used myself, as I may now own, to feel fairly transported."⁴

"I was the first of my family," she continues, "who failed in the matter of hand-writing; and why I did remains unexplained. I am sure I tried hard; but I wrote a vulgar, cramped, untidy scrawl till I was past twenty;—till authorship made me forget manner in matter and gave freedom to my hand. . . . It was a terrible penance to me to write letters home from Bristol; and the day of the week when it was to be done was very like the Beckwith music-lesson days. If any-

¹ Famous Men of Science, by Sarah K. Bolton.

² Life and Letters, pp. 29-30.

³ Autobiography, edited by Maria Weston Chapman, 1877, Vol. I, p. 27.

⁴ *Loc. cit.*, Vol. I, p. 42.

one had told me then how many reams of paper I should cover in the course of my life, life would have seemed a sort of purgatory to me." ¹

Miss Martineau speaks interestingly of a visit to some cousins when she was about 16 years old. "I still think," she tells us, "that I never met with a family to compare with theirs for power of acquisition, or effective use of knowledge. They would learn a new language at odd minutes; get through a tough philosophical book by taking turns in the court for air; write down an entire lecture or sermon, without missing a sentence; get round the piano after a concert, and play and sing every new piece that had been performed. Ability like this was a novel spectacle to me; and it gave me the pure pleasure of unmixed admiration; for I was certainly not conscious of any ability whatever at that time."² Yet these cousins are known to-day only from a page in the autobiography of the timid, backward girl who sat unnoticed in the drawing room shadows made gloomier by contrast with the brilliancy of their precocious minds.

Napoleon Bonaparte does not seem to have distinguished himself in any of his studies at the military school in Paris, unless, perhaps, in mathematics. In the final examination for graduation he stood forty-second in his class.³ Who were the forty-one above him? "Neither he nor his sister Eliza, the two strong natures of the family, could ever spell any language with accuracy and ease, or speak and write with rhetorical elegance."⁴ Napoleon's laxity in matters of military discipline after he joined the artillery is astonishing in view of his later success, and in 1789 he fully decided to withdraw from the service.⁵

William H. Seward's teacher once reported to his father that he was too stupid to learn.⁶ Like his classmates Seward used to while away the tedium of Dr. Wayland's Homer recitation by reading novels.

Patrick Henry "was too idle to gain any solid advantage from the opportunities which were thrown in his way. He was passionately addicted to the sports of the field, and could not support the confinement and toil which education required. Hence, instead of system or any semblance of regularity in his studies, his efforts were always desultory and became more and

¹*Loc. cit.*, Vol. I, p. 69.

²*Loc. cit.*, Vol. I, p. 71.

³Life of Napoleon Bonaparte, by William M. Sloane, 1896, Vol. I, p. 33.

⁴*Loc. cit.*, Vol. I, p. 36.

⁵See *loc. cit.*, Vol. I, p. 48.

⁶Autobiography, 1877, p. 22.

more rare until at length, when the hour of his school exercises arrived, Patrick was scarcely ever to be found."¹ Instead, he went fishing and hunting for days and weeks at a time. His biographer, Wirt, could not learn "that he gave, in his youth, any evidence of that precocity which sometimes distinguishes uncommon genius. His companions recollect no instance of premature wit, no striking sentiment, no flash of fancy, no remarkable beauty or strength of expression; and no indication, however slight, either of that impassioned love of liberty, or of that adventurous daring and intrepidity, which marked so strongly, his future character. So far was he, indeed, from exhibiting any one prognostic of this greatness, that every omen foretold a life, at best of mediocrity, if not of insignificance. His person is represented as having been coarse, his manners uncommonly awkward, his dress slovenly, his conversation very plain, his aversion to study invincible, and his faculties almost entirely benumbed by indolence. No persuasion could bring him either to read or to work. On the contrary, he ran wild in the forest, like one of the aborigines of the country, and divided his life between the dissipation and uproar of the chase and the languor of inaction."²

Started in business as a merchant by his father his indolence brought speedy failure. Married at 18 without any means of support his father and father-in-law came to his aid with a little farm, the work of which he so hated that relief soon came in failure. Another attempt at business, followed by bankruptcy, and he determined, *as a last hope*, to try law. Yet neither he nor his friends seem to have had any confidence in his success. But the rest of his life is our country's history.

At twelve years of age Sir Isaac Newton, as he himself tells³ us, was at the foot of his class. At that time he showed neither ability nor industry. Even in one of his university examinations in Euclid he made so poor a showing as to get the disapproval of his examiner.⁴

The corporals for the West Point companies were selected from the sophomore class "for their military bearing and qualifications"⁵ and Grant was not chosen. In the junior class, from which the sergeants were taken, he was the last but one of eighteen who were selected, and he adds, "the promotion

¹Sketches of the Life and Character of Patrick Henry, by William Wirt, 1852.

Patrick Henry, by Moses Coit Tyler, 1887.

²Sketches of the Life and Character of Patrick Henry, by William Wirt, Vol. I, p. 24.

³Sir David Brewster's Memoirs of the Life, Writings and Discoveries of Sir Isaac Newton, 1855, Vol. I, p. 7.

⁴King's Biographical Sketch of Sir Isaac Newton, p. 21.

⁵U. S. Grant: Personal Memoirs, 1885, Vol. I, p. 40.

was too much for me. That year my standing in the class, as shown by the number of demerits of the year, was about the same as it was among the sergeants, and I was dropped, and served the fourth year as a private."¹ In his class work Grant was never above mediocrity and he was not a leader among his classmates, nor did he seek to become one. He graduated number twenty-one and was delighted to get even that place.²

Samuel Johnson was indolent. "My master," he once said,³ "whipt me very hard. Without that, sir, I should have done nothing."

"Swift's college course was entirely without brilliancy or promise; in his last term examination he failed in two out of the three subjects"⁴ and he was refused his degree because of "dullness and insufficiency." He was finally allowed to take it only by "special favor."⁵

When the Duke of Wellington was a boy his speech was thick and slow so that he appeared stupid. Even later, at the Military College of Angiers, his record was in no way unusual.⁶

Wordsworth's⁷ university career grievously disappointed his friends, and up to about twenty-five years of age he shifted aimlessly from one thing to another, causing his friends endless anxiety because of his seeming inability to settle down to any regular work. As a boy in school he made but little progress, spending his time chiefly in reading Gulliver's Travels, Don Quixote, Tales of a Tub, Fielding's Works, Gil Blas and other similar books and he considered that the chief merit of his school was that it did not interfere with his reading.

Richard Brinsley Butler Sheridan was indolent in school and ranked correspondingly low. Dr. Parr, his language teacher at Harrow, says⁸ that "there was little in his boyhood worth communication, he was inferior to many of his school fellows in the ordinary business of a school, and I do not remember any one instance in which he distinguished himself by Latin or Greek composition, either in prose or verse." . . . He was "not only slovenly in construing, but unusually defective in his Greek grammar." Dr. Parr's Greek and Latin prose was

¹ *Loc. cit.*, Vol. I, p. 41.

² General Grant, by James Grant Wilson, p. 37.

³ Boswell's Life of Johnson, Vol. I.

⁴ The Prose Works of Jonathan Swift, with a Biographical Introduction, by W. E. H. Lecky, 1897, Vol. I, Introduction, p. xiv.

⁵ Leslie Stephens's Jonathan Swift, English Men of Letters, p. 5.

⁶ See Life of Wellington, by Sir Herbert Maxwell, London, 1899.

⁷ William Wordsworth, the Story of his Life, by James Middleton Sutherland, London, 1887.

William Wordsworth, a Biographical Sketch, by Andrew James Symington, Vol. I.

⁸ Memoirs, by Thomas Moore, Vol. I, p. 12.

doubtless admirable but he is known only as the teacher under whom Sheridan could not succeed. To his teachers at Harrow he was remarkable in nothing but his idleness and winning manners.¹

Robert Fulton² was a dullard because his mind was filled with thoughts about other things than his studies, but his teachers could not understand this and so the birch rod became a frequent persuader.

Alexander von Humboldt's childhood gave no promise for the future. He "was a feeble child and had less facility in his studies than most children."³ "Until I reached the age of sixteen," he says,⁴ "I showed little inclination for scientific pursuits. I was of a restless disposition, and wished to be a soldier. This choice was displeasing to my family, who were desirous that I should devote myself to the study of finance, so that I had no opportunity of attending a course of botany or chemistry; I am self-taught in almost all the sciences with which I am now so occupied, and I acquired them comparatively late in life." At nineteen years of age he had never heard of botany.⁵

Heine made a poor showing at school, His mind was too keen and alert for him to excel in the imitative class work. The dates in Roman history were an unceasing annoyance though, as he tells us, he afterward came to appreciate their value because he has since known people with "nothing in their heads but a date or two by the help of which they have found the right houses in Berlin and become full professors,"⁶ but "reckoning was worse yet," while as to Greek, "the monks of the Middle Ages were not so far wrong when they declared that it was an invention of the devil. God knows what misery I suffered with it."⁷ He hated French meters and could not write their verses, so his teacher vowed he had no soul for poetry and called him a barbarian from the German woods.⁹ He idled away his time at Bonn and was "horribly bored" by the "odious, stiff, cut and dried tone" of Göttingen

¹*Loc. cit.*, p. 11; Speeches of Sheridan with a Sketch of his Life, London, 1842.

²The Life of Robert Fulton, by Thomas W. Knox, 1886.

³Address on Alexander von Humboldt, by Louis Agassiz, Boston Society of Natural History, 1869.

Robert Fulton; His Life and its Results, by Robert H. Thurston.

⁴Life of Alexander von Humboldt, by Karl Bruhns, 1873, Vol. I, p. 26.

⁵Bruhns's and Lassell's Life of Alexander von Humboldt, Vol. I, p. 26.

Sarah K. Bolton's Famous Men of Science, pp. 110-111.

⁶Heine's Life, told in his own words, New York, 1893, p. 11.

⁷*Loc. cit.*, p. 12.

⁸See *loc. cit.*, p. 15.

University. Nothing pleased him. The professors were more leathery than at Bonn, so he busied himself a good deal with students' duels. "It amuses me," he says, "for want of something better; and it is at least better than the wet rags of teachers, young and old, of our Georgia Augusta."¹

Joseph Banks's hatred for the monotony of school routine was so marked as to bring complaint from his teachers. Yet it was not dislike for work; he simply could not travel the road by which alone the educational doctors would permit him to reach the golden gate. One day when he came out of the water in which he had been bathing he found his companions gone and, after dressing, he walked slowly home along a meadow-path fringed on either side with fragrant flowers. Life had never shown such charms and he exclaimed, "How beautiful! Would it not be far more reasonable to make me learn the nature of these plants than the Greek and Latin I am confined to."²

In her early days George Eliot was not precocious. It was with some difficulty that she learned to read, though her brother Isaac, with pardonable pride, thought that this was because she enjoyed playing so much more than studying.³ "Hers was a large, slow-growing nature;" says her husband, "and I think it is, at any rate, certain that there was nothing of the infant phenomenon about her."⁴

Nansen was reported by his masters as "unstable" in his studies and his brothers and sisters called him a "dawdler."⁵

Sir Walter Scott⁶ never took very kindly to the school pabulum but, instead, read great quantities of poetry and fiction.

In one of his letters George Combe says, "when a boy I never could learn arithmetic. At the end of five years of teaching I could not subtract, divide, or multiply any considerable number of figures with accuracy and facility, and cannot now do so. . . . I recollect well that when at school arithmetic and algebra appeared to me to be impenetrable mysteries, and I often wondered why, in regard to them, I was so inferior to other boys whom I equalled in other branches of education."⁷ But languages went no better.

¹*Loc. cit.*, p. 127.

²The Works of Henry Lord Brougham and Vaux, Vol. I, p. 337.

³George Eliot's Life as related in her Letters and Journals, edited by J. W. Cross, Vol. I, p. 11.

⁴*Loc. cit.*, Vol. I, p. 11.

⁵Fridtjof Nansen, by W. C. Brögger and Nordhall Rolfsen, translated by William Archer, 1896.

⁶Sir Walter Scott, the Story of His Life, by R. Shelton MacKenzie, 1871.

⁷Life of George Combe, by Charles Gibbon, London, 1878, Vol. II, p. 381.

John Hunter, the celebrated anatomist and surgeon, could neither read nor write at 17 years of age, so great was his hatred for school; but he enjoyed keenly all out of door sports. He was called indolent and he himself tells why. "When I was a boy I wanted to know about the clouds and the grasses, and why the leaves changed color in the autumn; I watched the ants, bees, birds, tadpoles and cadis worms; I pestered people with questions about what nobody knew or cared anything."¹ In his unappreciated condition of learned ignorance he just missed becoming a cabinet maker through the fortunate failure in business of his brother-in-law in whose carpenter shop he was working.

Charles Lyell tells² us that, when a boy, he had an excessive aversion to work unless forced to it.

A book by Gesner, the Swiss naturalist, with colored plates, seems to have been the touchstone which united in Cuvier the disconnected powers of which he himself was, at best, but dimly conscious, and made them active. The works of Buffon did the rest.³

Hegel⁴ never distinguished himself in the lower schools and on leaving the university of Tübingen his certificate stated that he was of middling industry and knowledge but especially deficient in philosophy.

Dr. Cardew, in whose school Sir Humphrey Davy was placed at 14 years of age, says⁵ that while he was always faithful in the performance of school duties he did not at that time show any extraordinary ability nor any special talent for those scientific pursuits in which he afterward became so eminent. He kept the good Mr. Tonkin in constant terror by explosions in the attic where he was playing with chemicals. "This boy Humphrey is incorrigible," cried the old gentleman one day; "was there ever so idle a dog?"⁶ At the Coryton Grammar School he "had the reputation of being an idle boy, with a gift for making verses, but with no aptitude for studies of a graver sort."⁷ Indeed, at no time during his boyhood does he seem to have given any indication of superior talent or unusual quickness.⁸ It is interesting to learn that later in life Davy consid-

¹ Two Great Scotsmen, the Brothers William and John Hunter, by George R. Mather, Glasgow, 1893, p. 120.

² Life, Letters and Journals of Sir Charles Lyell, edited by his sister-in-law, Mrs. Lyell, London, 1881.

³ Memoirs of Cuvier, by Mrs. R. Lee, New York.

⁴ William Wallace in Encyclopædia Britannica.

⁵ Memoirs of the Life of Sir Humphrey Davy, by his Brother John Davy, London, 1836, Vol. I, p. 20.

⁶ Kings of the Rod, Rifle and Gun, by Thormanby, 1901, Vol. I, p. 300.

⁷ *Loc. cit.*, p. 299.

⁸ The works of Henry Lord Brougham and Vaux, 1873, Vol. I, p. 108.

ered it fortunate that he was left so much to himself as a child, and held to no particular plan of study, and that he was allowed to enjoy so much idleness at Mr. Coryton's school.¹

At the Aberdeen Grammar School Byron reached the head of his class "for it was the custom there to invert the proper order of the classes at the beginning of the lesson, so that the most ignorant were for the moment placed first; and more than once the master said,² bantering him, 'Now George, man, let me see how soon you 'll be at the foot.'" At Trinity College, Cambridge, "he was never anything but a poor scholar, bestowing little care on the studies of the place."³

It is interesting to learn that so clever a writer as Huxley "detested the trouble of writing, and would take no pains with it"⁴ till long past twenty years of age. "My regular school training," he tells us, "was of the briefest, perhaps fortunately, for though my way of life has made me acquainted with all sorts and conditions of men, from the highest to the lowest, I deliberately affirm that the society I fell into at school was the worst I have ever known. We boys were average lads, with much the same inherent capacity for good and evil as any others; but the people who were set over us cared about as much for our intellectual and moral welfare as if they were baby farmers."⁵

In the boys military school Schiller did not show any proficiency in philosophy, rhetoric, or law. Greek seems to have been the only study in which he excelled.⁶ In one of his school reports we find that "Schiller has abundance of good-will, and shows great desire to learn; his negligence and lack of alertness, however, call for repeated reproof. He is sensible of his faults, and strives to correct them."⁷ He took only one prize in six years, and that was in Greek, "although annually a goodly proportion of rewards was distributed."⁸ His final thesis was not satisfactory and he was not allowed to leave the institution that year.

James Russell Lowell was reprimanded, at first privately and then publicly, in his sophomore year, "for general negligence in themes, forensics and recitations."⁹ His relatives grieved at his "indolence" and on the 25th day of June, 1838, the

¹ Kings of the Rod, Rifle and Gun, 1901, Vol. I, p. 299.

² The Life of Lord Byron, by Roden Noel, London, 1890, p. 33.

³ *Loc. cit.*, p. 54.

⁴ Life and Letters, Vol. I, p. 22.

⁵ *Loc. cit.*, p. 5.

⁶ The Life of Schiller, by Heinrich Düntzer, translated by Percy E. Pinkerton, London, 1883, pp. 42, 45.

⁷ *Loc. cit.*, p. 41.

⁸ *Loc. cit.*, p. 41.

⁹ James Russell Lowell, a Biography, by Horace Elisha Scudder, 1901, Vol. I, p. 30.

college faculty voted that he be suspended "on account of continued neglect of his college duties." During this period of rustication he was required to review Locke's *Essay on the Human Understanding* and study Mackintosh's *Review of Ethical Philosophy* with a tutor, reciting twice a day.¹

Oliver Goldsmith's teacher, in his early childhood, thought him one of the dullest boys that she had ever tried to teach and she was afraid that nothing could be done with him.² Later in his school course he made no unusual progress and was considered careless and indolent. His indolence and dislike for his university tutor, who called him ignorant and stupid before his classmates, combined to make him hate mathematics, sciences and philosophy. "A lad," he says, "whose passions are not strong enough in youth to mislead him from that path of science which his tutors, and not his inclinations, have chalked out, by four or five years' perseverance will probably obtain every advantage and honor his college can bestow. I would compare the man whose youth has been thus passed in the tranquility of dispassionate prudence, to liquors that never ferment, and, consequently, continue always muddy."³

His family felt keenly his failure to take a prominent place in the university. "The first opportunity my father had of finding his expectations disappointed," he tells us, "was in the very middling figure I made at the university: he had flattered himself that he should soon see me rising into the foremost rank in literary reputation, but was mortified to find me utterly unnoticed and unknown. His disappointment might have been partly ascribed to his having overrated my talents and partly to my dislike of mathematical reasoning, at a time when my imagination and memory, yet unsatisfied, were more eager after new objects, than desirous of reasoning upon those I knew. This, however, did not please my tutors, who observed, indeed, that I was a little dull, but at the same time allowed that I seemed to be very good natured, and had no harm in me."⁴

When William Hamilton Gibson was a boy we find his teacher Mr. Gunn writing home, "Willie insists that he is getting along finely in his studies, that he studies very hard, and is doing well. But you must accept this with some grains of allowance for a boy's favorable judgment of himself. He does not learn as fast as I wish to have him." Fortunately, however, the good Mr. Gunn knew more about boys than many teachers and so he added, "I think his tendency to take on fat hinders his

¹ See *loc. cit.*, Vol. I, p. 47.

² See Irving's *Life of Goldsmith*, p. 19.

³ Irving's *Life of Goldsmith*, p. 32.

⁴ Letters from a Citizen of the World, Bohn's Library edition, p. 100.

power of industrious, persevering application.”¹ Young Gibson was reprimanded² by his father for wasting his time at school in illustrating his letters home with pen-and-ink sketches and he promised that he would never again do such a foolish thing.

“My mother taught me my letters,” says William James Stillman, “before I could articulate them; when I was two I could read, and at three I was put on a high stool to read the Bible for visitors, so that I cannot remember when I could not read, and when not more than five or six I used to be at the head of the spelling classes and spelling matches, in which all the boys and girls were divided into equal companies, and the teachers gave out the hardest words in the spelling-book to each side in turn, all who failed to spell their word sitting down, until the solitary survivor on one side or the other decided the victory, and even before I was seven I was generally that survivor. I read insatiably all the good story-books they would let me have, and I cannot recall the time at which there was anything even in the Bible new to me. With an incipient passion for nature and animal life, I read with delight all the books of natural history I could get, and I have heard in later years that in all the community of Sabbatarianism I was known as a prodigy. Fortunately I was saved from a probable idiocy in my later life by a severe attack of typhoid fever at seven, out of which attack I came a model of stupidity, and so remained until I was fourteen, my thinking powers being so completely suspended that at the dame’s school to which I was sent I was repeatedly flogged for not comprehending the simplest things. I got through simple arithmetic as far as ‘Long Division,’ and there I had to turn back to the beginning three times before I could be made to understand the principle of division by more than one figure.

In the humiliation of this period of my life, in which I came to consider myself as little better than a fool, my only consolation was the large liberty I enjoyed in the woods and fields with my father on Saturdays, or with my brothers Charles and Jacob on their long botanizing excursions, or in the moments of leisure when I was not wanted to turn the grindstone or blow the bellows in the workshop.”³

He was now about eleven years of age and the intellectual dullness had not lessened. “I left the dame’s school,” he continues, “where the rule of long division proved my *pons asinorum*, and went to a man’s school, where I earned my schooling by making the fires and sweeping the schoolroom, and

¹ William Hamilton Gibson, by John Coleman Adams, 1901, pp. 15-16.

² *Loc. cit.*, p. 16.

³ The Autobiography of a Journalist, by William James Stillman, 1901, Vol. I, pp. 27-28.

here I learned some Latin and the higher rules in arithmetic by rote, always with the reputation of a stupid boy, good in the snowball fights of the intermission, when we had two snow forts to capture and defend; in the running foot races the speediest, and in backhand wrestling, the strongest, but mentally hopeless."¹

Later, when sent to a New York school founded by the Public School Society, "my mental apathy must have been still very profound, for I remember that it often happened that when a question which had passed other pupils came to me in the class, the senior monitor," one of the paid teachers, "used to address me, 'well, stupid, what do you say?' I evidently was the most stupid boy in the class—nothing seemed to penetrate my mental dullness, but, having grown tall and strong for my age, I was often made 'yard monitor,' to keep order during the physical training."²

Meanwhile his brother Jacob had taken charge of a school in DeRuyter, New York, and he was sent there to prepare for college. But "the persistent apathy which had oppressed me for so many years," he continues, "still refused to lift, and my stupidity in learning was such that my brother threatened to send me home as a disgrace to the family. I had taken up Latin again, algebra and geometry, and though I was up by candle-light in the morning, and rarely put my books away till after ten at night, except for meals, it was impossible for me to construe half of the lesson in Virgil, and the geometry was learned by rote. I at length gave up exercise to gain time for study, and my despairing struggles were misery. I was then fourteen, and in the seventh year of this darkness, and it seemed to me hopeless.

What happened I know not, but about the middle of the first term the mental fog broke away suddenly, and before the term ended I could construe the Latin in less time than it took to recite it, and the demonstrations of Euclid were as plain and clear as a fairy story. My memory came back so completely that I could recite long poems after a single reading and no member of the class passed a more brilliant examination at the end of the term than I."³

Priestley's "whole education was exceedingly imperfect, and excepting in Hebrew and in Greek he never afterwards improved it by any systematic course of study. . . . 'When I began my experiments,' he tells us 'I knew very little of chemistry, and had, in a manner, no idea of the subject before I attended a course of lectures at an academy where I taught.'"⁴

¹*Loc. cit.*, Vol. I, pp. 42-43.

²*Loc. cit.*, Vol. I, p. 54.

³*Loc. cit.*, pp. 59-60.

⁴The Works of Henry Lord Brougham and Vaux, 1873, Vol. I, p. 70.

In the Nikolaischule at Leipzig, says Richard Wagner, "I was relegated to the 'third form' after having already attained to the 'second' in Dresden. This circumstance embittered me so much, that thenceforward I lost all liking for philological study. I became lazy and slovenly."¹

It is a pity that some precursor of Porter did not happen along to take the physical measurements of these boys and girls so that he might have given us an essay on the close connection between mental ability and physical development. Unfortunately, in these comparisons, the individuals are unnamed and so lost in the mass; for this reason the school test of ability has gone unchallenged though history continually refutes it.

The problem of development is not so simple as the schoolmaster with his universal "method" would have us believe. He has settled upon certain "essentials" for mental growth, or rather they have come down to him from different periods since the middle ages, and he has seen that their "necessity" is wrapped up in the nature of things and so he uses up much energy in keeping children of widely varying endowments in the pedagogical trail. Meanwhile the Patrick Henrys laugh at him in their indolence, the Wordsworths give thanks that he left them alone and the John Hunters literally take to the woods. And, as if to cap the climax, one of the most eminent among them finds nothing in Richard Sheridan's boyhood "worth communication."

There seems to be a substratum of ability² which, in its undeveloped state, appears not to differ greatly in children and which is more fundamental than the special, accessory powers that rise from it. The expansion of this deeper mentality, with its unquestionably varying individual possibilities, is the chief function of school during early childhood. It is more than any talent because it includes them all, and well rounded manhood, the proverbial "level head," depends on its symmetrical and unarrested growth. As common sense it deals quite effectively with problems of life and with many complex questions of utility. Not infrequently the dullard in the school is the one to whom we listen in an emergency, and this is partially due, at any rate, to a fundamental difference in the manner in which children get and interpret experience. In some experiments which the writer has been making in the psychology of learning it has been continually evident that the visual, auditory and motor minded only imperfectly share in the experi-

¹ Prose Works of Richard Wagner, translated by William Ashton Ellis, London, 1899, Vol. I, p. 5.

² See *The Child, A Study in the Evolution of man*, by Alexander F. Chamberlain, Chap. III.

ences of one another, and, in some instances, such participation is absolutely impossible. Motor mindedness seems to be one of the causes of "dullness." The teacher of one of the "dull" divisions included in the tests of the first part of this paper says that these children are the best to bring specimens and they know more about the life of animals and plants than her "best" division. They all seem to want to know how things are done and they can always be relied upon to do anything requiring action. In the other "dull" group several are greatly interested in animals and have pets. Three others like to work in electricity and one of these is absorbed in it. He goes to the electric car barn to study the plant, crawls under the cars to examine the motor, and frequently runs the cars.

Manual training, which it was thought would meet the needs of such children, early caught the pedagogic disease of form, and the thing made, which is what children are always interested in, has had to yield to the process; the content is lost in the form, and consciousness of details is forced upon children at a time when they should think only of results and revel in the enjoyment of what they have done.

A professor in one of our eastern universities tells me that when a boy his power of visualization was so strong that he could read a book through the night before his examination and the next day, as he wrote, he could see any page in detail on his desk before him. His answers were thus almost copies of the text. At the end of three months of Euclid he received a mark of about five on a scale of one hundred. He then began to read it over the night before the examination and at once brought his mark up to seventy because of his ability to visualize, though, as he himself says, he never had any mathematical ability.

Another, a university student, when a boy could visualize the entire work of any arithmetical problem that had been put on the blackboard.

It is needless to speak of the great disadvantage at which a motor-minded boy works with such classmates, especially when we remember that school work is carried on in such a manner as to distinctly favor the visual and auditory minded. It may be said that these cases are exceptions but this is true only in the degree of their power. The important point is that children differ greatly in their way of getting and utilizing experience and so dullness may express nothing more than the inability of children to immediately change their mode of reacting to the external world.

A public school superintendent tells the writer that a seven year old boy had been in the first grade two years because, as his teacher said, he was too dull to go on. The superintendent

placed him under another teacher and at the end of the year he was leading his class. In the first school a phonetic method was used and as this boy could not get auditory images he made no progress. As soon as a visual method was employed he became bright.

Then, too, young children want to construct, and analysis at this time makes them conscious of the process when they should be learning unconsciously by absorption. Later the spirit of analysis develops and they want to know how and why they do things. Unfortunately, school work is almost wholly analytic. Even those subjects like language, drawing and manual training that should least of all be analyzed at the beginning are treated in the same consciously critical way. The result is the stiffness that always accompanies consciousness of the process, and hatred for the work. English has been analyzed until its exposure has robbed it of beauty. Life outside of school is pre-eminently synthetic and failure to recognize this gives force to the claim that the schools are unpractical, and children whose minds are especially synthetic suffer by comparison with those that take naturally to analysis. And, finally, both types are arrested in their development because the demands of different periods of childhood are not recognized and because the need for constructive training is overlooked in the excessive confidence in the value of analysis.

We have accepted too readily the verdict of school studies. They require a certain specialized ability, just as do puzzles, but it does not follow that those who cannot do them successfully are dull. The range of human experience and activity is not exhausted by the curriculum, and the number of men who have become eminent without initiation into its mysteries shows that its badge of membership is not altogether necessary for success. Life cannot be interpreted in terms of English grammar, Latin or mathematics in spite of those who insist that a boy must parse his way to worldly salvation.

Precocious mental development is not always permanent. It is well known that aboriginal children learn quite as readily as children of European parentage, but it does not last. Mathew says that "for three consecutive years the aboriginal school at Remahyack, in Victoria, stood the highest of all the state schools of the colony in examination results, obtaining 100 per cent. of the marks, but the limit of the natives' range of mental development is soon reached."¹ The aboriginal children of the Andaman Islands, also, keep pace in the schools with children of European parents until they are ten or eleven

¹ Review in *Nature*, Vol. XLIII, 1890, p. 185, of Report in *Jour.*, and *Proc. of the Royal Society of New South Wales*, Vol. XXIII, part 2.

years old but at this point their mental development seems arrested.¹ Pilling² assures us that the children of the Cherokee Indians learn to read in two and one-half months, using a sort of syllabary invented by a half-bred Cherokee, "the son of a Dutch pedlar and Cherokee mother, an illiterate vagabond," who, according to reports, could read neither his own nor any other language. Stetson³ tested the memory of five hundred colored and five hundred white children in the Washington public schools and got practically the same result with both groups.

The power beneath that in which a potentially strong mind excels and which is truest to its nature rarely lies near the surface. The boy himself is usually not conscious of it. Excellent mental endowment often differentiates slowly but, unfortunately, there is every reason for believing that its expansion is very often unnaturally delayed by the narrowness of the enclosure within which the curriculum holds it. But just as native indolence saves children from the pernicious good intentions of their teachers, so the waywardness of the mind, which makes it jump fences and seek new pastures, more alluring, perhaps, because the manner in which they shall be nibbled has not been settled by ancestral convention, comes to their aid and saves many from permanent arrest.

The contention that it was, after all, being compelled to study the subjects in the course that made the men referred to in this paper great, is hardly admissible since, in most cases, they simply did not study them. According to the school standards they were negligent, indolent and dull, but theirs was too large a nature to be satisfied with a narrow range. In their seeming indolence and mental instability they were testing themselves, not consciously it is true, but in response to vague organic promptings. It is likely to be the superficially precocious, whose mental endowment is not very selective and so incapable of the loftier moods or greater intellectual achievements, who can adapt themselves without inward discontent to a prescribed and confined course. The others are restless in constraint. Their minds call for a greater variety and more freedom to do things in their own way. It is a sort of psychic ebullition and each new bubble is a point of contact with the struggling mind below. This is the teacher's chance. He should help children to learn to know themselves, and the hottest place in the seething caldron is the point of greatest efficiency at that moment. Good boys, who easily fit into the

¹See *The Aboriginal Inhabitants of the Andaman Islands*, by Edward Horace Man, London, 1883, p. xxi.

²*Am. Anthropol.*, Vol. VI, p. 183.

³*Psychological Review*, Vol. IV, 1897, p. 285.

school mould and always do just what their teachers desire, rarely seethe; they only sizzle.

To find out how students to-day feel regarding the school's attitude toward them, a few questions were asked of the older pupils in five normal schools, each in a different State. One hundred and seventy out of four hundred and fifty-three said that their teachers did not help them find out their strong and weak points, and only one hundred and fifteen said unreservedly that they did. Of the rest some thought that one or two teachers aided them. In many cases this seems to have been in the subjects that the teachers themselves especially liked. Ninety-five said that their teachers tried to find out what their ideals were and appealed to them, while two hundred and thirty-nine replied that no interest was taken in them individually. The others, again, said that in a few instances the teacher's personal influence was felt.

In a large proportion of cases the school seems to have exerted little or no influence except through the medium of the recitation. While there are, unquestionably, many exceptions, teachers too often stand apart from their pupils, conducting the recitation well, perhaps, but as something wholly external to themselves and the pupils. Throughout there is lack of the personal element. Most of those who thought that they had been helped outside of their classes felt that the chief benefit after all came from their schoolmates. The pedagogue is too much inclined to assume an attitude of superior indifference to life. Latin, mathematics, grammar and geography, he seems to think, ought to develop children's ability and so fit them to meet life's problems. If they don't, why then there is something the matter with the boy.

OLIVER, THE TAME CROW.

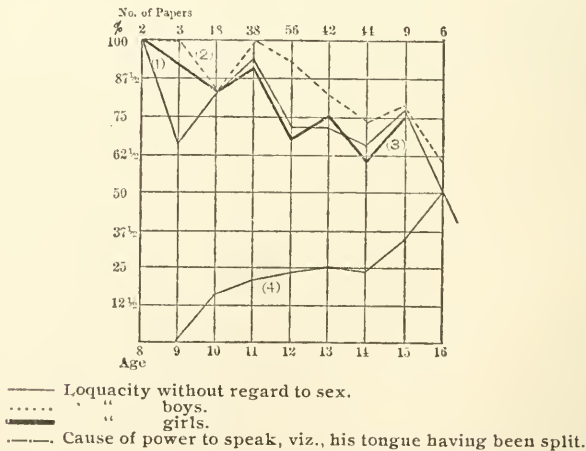
By W. FOWLER BUCKE, in Clark University.

Will S. Monroe, of the Normal School at Westfield, Mass., has made a collection of essays written under his direction, by the children in the grades, from the fifth to the eighth inclusive, upon the subject: "Oliver, the Tame Crow of Westfield." With no further suggestion from the teachers the children were given thirty minutes in which to write. As the result of this effort and a subsequent presentation giving a careful history of the crow and an able analysis of the essays, made by Mr. Monroe, together with valuable criticisms and suggestions by Dr. Hall, upon our study of the essays, we are able to present the following analyses:

The facts as gathered from the original owners are that Oliver was born in June, 1890; and brought from the nest to the farm when very young. He was placed in a dark, quiet room as a means of training him to talk. Although considered stupid, his first words were "Hello" and "Dick White," the latter being his original name. He was next taught to say "Good Morning." His food consisted of potatoes only. Having made slow progress he was released; and the effort to teach him given up. He roamed at large about the farm, but made surprising progress in the imitation of words heard. Horace, for many years an employee on the farm was Oliver's favorite. When Horace was called from the field to the house Oliver repeatedly attempted to imitate the call with "Wa! wa!" as the result. He afterwards continued to repeat this with the prefix "Hello." "Oliver" was the children's understanding of the word which gave him that name. It is believed that he recognizes the original name, "Dick White," however, when he hears it. The crow always called his owner "Bill" although his name was William, as he learned this by imitation of William's brother, who always called him Bill. Among his mischievous pranks were those of hiding the pipe of the hired man, and stealing bright objects such as thimbles, coins, button hooks, etc. He disliked other crows, but having been with the farmer for three years an effort was made to tame the second crow. The new one having made peculiar noises, Oliver flew away never to return closer than to a cluster of trees a few rods distant. Since this time he has lived at large, and has

been cared for by any who may be sufficiently interested to give him food. His favorite resorts are the main streets, and the school and play grounds during sessions of school. He thus shows a fondness for company, and a special attachment to the children.

Two hundred and forty-four essays were written, representing the boys by a majority of four. These children of Westfield represent "the better element of a fixed New England town." They had grown up with the bird, and all but one knew Oliver, who had been in town about ten years when the papers were written. All are more or less impressed with his power to use language, and imitate expressions, as well as to understand what is said to him. The accompanying table shows how this power was reported in the essays, giving at the top the number of pupils at the bottom their ages, respectively. It must be noticed that the few reports given by children at the ages of 8, 9, 15 and 16 would modify the normal direction of the curve. Those who assign a reason for the power to talk, give in every case that his tongue was split. This is shown by a curve, using the same co-ordinates. It will be interesting to note that cause does not concern the younger children, but becomes more and more in evidence, as they advance in years. (No evidence shows that the tongue was split.)



Oliver's vocabulary, as reported, is as follows:—"Get up, get up." "Hello." "Have you got the world?" "What are you doing there?" "Milk! milk." "Here comes the cop, here comes the cop." "Good bye, poor man, good bye." "Ma, ma, ma." "Good morning," "Oliver," "How do you do?" "Lazy horse, get along." "Pretty well." "What do you want here?"

"Hello, boys." "Shut up." "What bad people live here." "It is a nice day, to-day, isn't it?" "Hello, more cake." "Tra la la." "Hurry up, Jim, hurry up." "Hello, Oliver, Hello." "Get out of this." "Get out here you rascals." "Good bye, girls, I must go home too." "Hello boys, hello, come back and see me." "Drunk again, Billy, drunk again." "When are you going home?" "I guess not." "Billy drunk again." "Stop, boys, stop." "Polly wants a cracker." "You rascals, what are you doing here, I did not tell you to come here." "Mamma." "Hello boys, can't catch me." "Can Oliver come in?" "What."

Among his habits, Oliver, has that of swearing. Here he seems to select his man. Twelve report on this trait, most of whom say that it is at a "well known minister of the town." One says that Oliver preaches. Nine say he laughs, several of whom record the noise he makes. Five report him as a singer, his part being bass. He cannot key his voice to the correct pitch, so produces discords when he sings with the children during the school exercises. Oliver scolds.

This crow has a wide range of feelings. He pities the weak. He becomes very angry. Sometimes he is very jolly. One boy says he is jealous. He has his friends as well as a few whom he hates. A large number report on this.

Oliver seems to have a sense of sympathy, which may best be shown by his expression when he saw the pall-bearers carrying a corpse into the church. As Oliver sat in a tree he was heard to exclaim: "Poor man, poor man." When the corpse was brought from the church and placed in the hearse, Oliver exclaimed:—"Good bye, poor man, good bye."

Oliver has a sense of right and wrong. He steals, and is sorry for it. He hides. Quite a number, 27, report that he has keen power of discrimination. They relate an incident of his hatred for a little girl eight years old. The brother wished to have revenge on Oliver for the abuse the bird imposes upon his sister. To deceive the bird, the brother disguises in the sister's clothing, but Oliver is shrewd enough to observe the difference, and does not disturb the brother.

Another instance shows what may be termed his supreme sagacity. In order to relieve herself of his company, which she considered a nuisance, a lady soaked some grain in whiskey which was afterwards fed him that he might be caught in this intoxicated condition. The grain made the bird drunk, but in this condition he was wise enough to keep concealed on the roof of a house, away from reach of those who might wish to do him damage. One of the girls thinks he exercises considerable power of selection even of his diet, saying that in this respect he is an epicurean. One girl saw him enter the schoolroom,

take a piece of crayon, and write on the blackboard. Several saw him rap on the window of a kitchen for another egg after he had tried one and found it frozen.

He dislikes anything red, as articles of clothing, hair, etc.

Mr. Monroe calls attention to the fact that "33% of the boys and 48% of the girls mention that some of the town people regard him as a nuisance, for the following reasons:—'He awakes people early in the morning by pecking at windows and hallooing;' 'he destroys flower beds;' 'he flies off with children's caps;' 'he interrupts lessons at school;' 'he steals things from open windows;' and 'he annoys the delivery men of the grocer and butcher by pecking open bags of sugar, cases of eggs, and bundles of meat.' "

On this point the essays show that these are not the feelings of the children, for they are almost unanimous in offering a sympathetic excuse for each wrong deed. Mr. Monroe's study concurs with mine on this observation.

The greatest interest of a personal character is shown by the younger children. To them he is a genuine companion, having a comparatively strong personality. They think less of his being a nuisance, the girls giving signs of earlier recognition of this point than the boys. Perhaps the girls more frequently suggest the color of his feathers, his claws, and his bill, while the boys oftener notice his daily rhythms.

In partial explanation of the interest of the children in the bird may be offered the unconscious element, from association, growing out of the similarity of the psychic processes of the child and the bird. Prof. Shaler, in "Domesticated Animals," offers the same idea for domestication in general. The bird, in turn, has shown his adaptability by the abandonment of fear and rage which were in the wild life, essential to existence. This completely changed his desire for companionship as shown by his dislike, and perhaps fear, for a new crow placed in his company.

No laws can be formulated from this single instance, but a suggestion may here be offered that fear being overcome, and natural modes of life as opposed to imprisonment, so that freedom may be sustained, established, educability of wild life into helpful relationship to man may early be expected. The essays show how upon such friendly relations, aided much by long forming instincts, the highest evolution of all life may be materially assisted.

NOTE.—Bogaras, in *American Anthropologist*, October-Dec., 1902, pp. 644 and 675, points out the fact that generally among the primitives of northeastern Asia, and with American Indians the Raven talked, and interfering with his tongue prevented his power to speak.

CHILDREN'S IDEAS OF FIRE, HEAT, FROST AND COLD.¹

By G. STANLEY HALL and C. E. BROWNE.

This paper embodies the results of returns to the following set of questions sent to teachers and normal school students principally in this state and New Jersey.

TOPICAL SYLLABUS.

HEAT AND COLD.

I. Do you like fire gazing and reverie? Did you ever imagine faces, tongues, animals, or forms in the fire? Does gazing at fire start far-away reveries, not connected with fire? Describe cases of special love of fire; special aversion to fire.

II. How, as a child, did you regard smoke? Ashes? Noises of the fire? Have you ever observed any instances of ceremonial fires among children?

III. Did you like to play with fire as a child? Give instances and cases of special propensity for playing with fire among children.

IV. What was your first experience, so far as you can recall, with heat and cold? Give instances which you have observed.

V. What was your idea of Jack Frost? Ask the children who Jack Frost is; what he does, etc. Ask them to draw him, making no suggestions.

VI. Ask the children to draw pictures of some or all of the following: a snowflake, a snow storm, snow, a piece of ice, ice, fire and flame, a burning building, a very hot day, a very cold day, the sun on a hot day, the sun on a cold day, a burning match, smoke, what the child sees in the fire.

VII. Let the children each choose one of the following subjects and write about it; summer, winter, heat, cold, the sun, Jack Frost, ice, fire.

VIII. What were your childish ideas and feelings about the sun? Ask the children about the sun—its size, distance, what it does, where it goes, how it got into the sky, who made it, etc.; also its relation to the moon, stars and clouds.

IX. Ask the children which is worse, a hot, or a cold day. Also which mode of death they would prefer, if obliged to choose between them, burning or freezing.

X. Let them draw and describe a thermometer.

XI. Ask the children why the air shakes on a hot day over a hot stove.

XII. Ask why the cold turns water to ice; and heat, to steam.

XIII. Ask what would happen if it were to keep on growing slowly colder and colder; hotter and hotter.

Phylogenetic Thermo-Psychoses. That thermo-psychoses are very central phylogenetically appears to need no special proof.

¹This study was made with aid given by the Carnegie Institution which is hereby thankfully acknowledged.

Fire, almost daily operative in some or all of its phases in man's conscious experience, appears to be coetaneous with the history of the race. It plays an essential part in myth, religion, folklore, history, literature, science, manufacture, navigation, and the home. One of the most potent factors in human progress, it is also one of the greatest of destroyers. It is estimated that of insured property alone, over two hundred million dollars worth is annually destroyed by fire. What this means in terms of human suffering would be hard to estimate. With the present highly developed systems of insurance and means for fighting and control of conflagrations, actual loss of life and attendant human suffering have been much reduced. Although relatively more essential and varied in its uses, fire to-day comes into consciousness far less than with primitive man. The modern stove, hot air, hot water and steam heaters have relegated fire largely to the unconscious.

Origin of the Use of Fire. Historic man has never been without fire. The distribution of fire myths shows its wide spread if not universal use long before the dawn of history. Although there are some slight traces of fire in the miocene age of the tertiary epoch,¹ it is not until the quarterary epoch that the first real evidence of man appears. There is abundant evidence not only of man, but also of his use of fire from the earliest part of this epoch. Contemporary with the Irish elk, the cave-bear, and the age of polished stone, are found pieces of pottery blackened by smoke, hearths, bones partly or completely carbonized, ashes and cinders.² With fire prehistoric man burned the bodies of his dead, charred the posts on which his lake-dwelling was to be built to preserve them from decay, and hollowed out the body of a tree for his canoe. He knew how to cook his food, warm and light his hut. As, with primitive man, hunger and thirst are the natural enemies of his existence, and his chief source of misery or happiness, fire, food and water became some of his earliest gods.³ The fire especially comes to take a principal place in his life though water worship seems to have preceded that of fire.⁴ Besides warming him and giving him light at night, fire made his food taste better and digest easier. The mysterious nature of the blazing fire, its apparent spontaneous creation, its decomposing power, and perpetual self motion, place it far above the other elements or natural forces as an object of his veneration and awe. Thus primitive man was a fire-using, fire-worshipping animal. This element, which was such a mighty force in his

¹Joly: *Man Before Metals*, pp. 175-180.

²*Ibid.*, p. 196.

³Brinton: *Myths of the New World*, p. 144.

⁴Grimm: *Teutonic Mythology*, Vol. II, p. 602.

hands, was an object of dread to all other animals. Indeed, no other single character separated early man from the animal more than his use of fire.

How primitive man first got his knowledge of fire we can only guess, although mythology is very ample and explicit on this point. The Maoris, one of the aboriginal tribes of New Zealand, tell of one Maui, who had fire given him by his old, blind grandmother, Mahuika, who drew it from her finger nails. Wishing for more fire it was a second time drawn from her big-toe. These two fires proved so strong that everything melted before them. Even Maui and his grandmother would have burned up had not a deluge been sent from heaven which extinguished the fire save a few sparks which Mahuika shut up in the trees whence men are able to draw them now.¹ In Victoria, Australia, the natives tell of a beautiful maiden who went about killing snakes with a staff which one day snapped in two, and as it broke fire burst out of it. Here a "serpent killer was a fire bringer."² In the Persian *Shahnamah* fire was also discovered by a dragon fighter. The hero hurls a great rock at the dragon, which, missing its mark, strikes and splinters another rock. According to the record, "Light shone from the dark pebble, and the heart of the rock flashed out in glory, and fire was seen for the first time in the world." North American legends tell of a great buffalo galloping across the plains. His hoofs striking the stones make sparks flit in the night and the prairie is set on fire; or of a panther striking with his claws as he scampers up a stony hill.³ Among the Greeks the most typical fire myth is that of Prometheus. He becomes the great benefactor of the human race. According to Æschylus mankind were long ages ago in utter and hopeless savagery. They had no settled places of abode, no notion of marriage or of the ties and duties which bind the members of the family together. They burrowed in the ground like the Digger Indians. Their food was scarcely better than that of the insect-eating Bushmen. They knew nothing of fire and did not perceive how far it could raise them above the beasts of the field. This was their original condition. Prometheus seeing their pitiable state was moved with compassion and stole fire from the house of Zeus, concealing it in a fennel stalk. He imparted the knowledge of it to men and taught them its uses.⁴

Primitive Methods of Obtaining Fire. The primitive method

¹ Reclus: *Enc. Brit.*, Vol. IX, p. 229.

² *Ibid.*, p. 229.

³ *Ibid.*, p. 229.

⁴ Cox: *Mythology of the Aryan Nations*, p. 429 *et seq.*

of obtaining fire seems to have been by the rubbing of two pieces of dry wood together.¹ The early Brahmans produced the sacred fire by the friction of a stick, the pramatha which the priest applied from right to left, and left to right in a fixed groove, made by the intersection of two pieces of wood. The "divine child," or fire, thus "generated," was the fire-god, Agni (Latin *ignis*). In the age of the lake-dwellings,² quartz and iron pyrites were used to produce a spark by striking one against the other. This method was employed by the savages of Tahiti, New Zealand, and the Sandwich Islands. The fire drill has been the most common instrument used for this purpose. In its simplest form, it consists of a stick, one end of which fits into a cavity hollowed in a piece of dry wood. The stick or drill is turned rapidly between the two hands and at the same time a downward pressure is exerted. In later use the turning of the drill was produced by pulling alternately either end of a string wound a few times around it. This instrument was in use in both North and South America, Australia, China, Sumatra, the Caroline Islands, Kamchatka and South Africa.³ It is still used by the Yenadis in Southern India⁴ and the Veddahs of Ceylon.⁵ A later means of producing fire was by the reflection of the sun's rays from a mirror. This method was common in Pliny's time.⁶ In China the use of the burning lens was common.⁷ The European and American method of starting a fire with flint, steel and tinder box; or sulphur tipped splints of wood, the "spunks," were superseded in the first quarter of the 19th century by the invention of friction matches.⁸ The consensus of opinion seems to be that there is no authentic account of a tribe without the knowledge of producing fire although a number of such stories are current.⁹

General Notions Concerning Fire. In myth generally fire is regarded as a living thing. To the early Roman it was a "devouring, insatiable beast"—a "*vorax flamma*." It licks with its tongue and eats all around it. The Edda makes fire a brother of the wind and sea. Sometimes compared to a red cock flying from house to house. An old Norwegian custom was that so long as a child remained unbaptized the fire must

¹ Tylor: Early History of Mankind, p. 237.

² Joly: Man before Metals, p. 189.

³ Tyler: Early History of Mankind, pp. 237-254.

⁴ Shartt: Transact. Eth. Soc., Vol. III, p. 376.

⁵ Bailey: Eth. Soc., 1863, p. 291, (cited by Tyler).

⁶ Pliny: XXXVI, 67, XXXVII, 10.

⁷ Davis: Vol. III, p. 51. (Cited by Tyler.)

⁸ Paton: Enc. Brit., Vol. XV, p. 625.

⁹ Tylor: Early History of Mankind, p. 236.

not be allowed to go out.¹ The Zend Avesta of Parsees contained minute and irksome prescriptions for keeping the hearth fire pure and bright. Nothing unclean was to be put into it and no indecent act committed before it. The Parsi must always say his prayers before a luminous object, hence the altars in the temples must always be bright with the holy fire, according to tradition, brought originally from heaven. Spitting in the fire, or sulling the sacred flame in any manner was punishable with death. The priests must always approach the fire half masked, lest their breath defile it, and never touch the sacred element with their hands but with holy instruments.²

A distinction was made by the ancients between friendly and malignant fire. Brimstone among the Greeks was friendly—it was sulphur *θεῖον*, "divine smoke." The malignant fire was represented by Norse Loki. Just as Loki was conceived as "breaking out," "getting loose," so the phrase was similarly used of fire. Our own very common phrase of "fire breaking out" probably goes back to some such origin. Fire is often spoken of as a powerful enemy that must be resisted with might and main. Tacitus tells how Ubii suppressed a fire that broke out of the ground spontaneously. Fire breaking out of the earth is also mentioned in the mythology of Iceland. A distinction was often made between freshly kindled fire and that which had been used. Only freshly kindled fire was thought fit for sacred uses. This was termed wild fire in contrast to the supposed tame or domestic fire in ordinary use. Many superstitions were prevalent concerning the supposed properties of wild fire. In many villages of Lower Saxony, especially in the mountains, it was common as a precaution against cattle plague to procure new fire and drive through it, first the pigs, next the cows, and last, the geese. Among the Celts and Teutons two fires were often kindled side by side and to pass unhurt between them was beneficial both for men and cattle.³

In India, Agni, the fire god of the old Vedic faith, is supporter of the universe. He is a tongue of fire through which the gods and men receive their portions of victims sacrificed. The hymns to Agni describe the common properties of fire which dies with a hiss when it touches water; grasps food in its jaws; Bright Faced Agni; sends forth moving and graceful smoke; never grows old; he scathes the forests with his tongue; he shears off the hair of the earth as with a razor; his back is

¹ Grimm: Teutonic Mythology, Vol. II, p. 601.

² Reclus: Enc. Brit., Vol. IX, p. 230; Internat. Cyc., Vol. XI, p. 345.

³ Grimm: Teutonic Mythology, Vol. II, p. 601.

black and he has many limbs; his hair is flames; he is engendered by two sticks, etc.¹ To Heracleitus the world was an ever living fire. The pure element of fire—which was one of the poles in the never ceasing flux in the universe—was to be found chiefly in the sun, which, like the other heavenly bodies, was a sort of bowl or pan, its concave side turned toward the world.² He also thought it secreted daily out of the earth, leaving it somewhat darker and colder, but was reabsorbed at night. It typified the relation of mind to body. So, too, life arises from and returns to earth. "All Greece confederated in making Delphi its central hearth whence new fire was fetched every year." On the prytaneum burned a perpetual fire, sacred to Hestia.³ Among the Romans, the well known lame god of fire, Vulcan, laboring at his sooty forge at Mt. Ætna, is the Greek fire-god, Hephaistos.⁴ Vesta, goddess of the Hearth, is the Greek Hestia. She represented the sacred and mysterious nature of fire and was the guardian angel of mankind. She was worshipped throughout Italy and also in Greece and Asia Minor.

In ancient times the family hearth was of far greater significance than at present. It was the family altar from which the father of the house was wont to offer up his daily prayers and sacrifices. Before it guests were entertained, agreements made and compacts entered into. Hence, Vesta is the goddess of fair dealing. She is represented as pure and undefiled. The sacred fire of Vesta was also a symbol of the fire of life which the ancients believed was kept burning within each human breast by the goddess. In the temple dedicated to her worship, virgins, the most beautiful and noblest of the Roman maidens, watched the sacred fire night and day, fanning the flame and adding new fuel as the old burned out.⁵

In the Hebrew scriptures fire is used both as a general symbol and also as representing Jehovah; as, Jehovah appearing to Moses in the burning bush,⁶ descending in fire on Mt. Sinai,⁷ etc. Fire was very commonly held to come down from heaven; as, fire descending from Sodom and Gomorrah,⁸ a fire came out from before the Lord,⁹ fire falling from heaven in answer to the Prophet's prayer,¹⁰ there went up a smoke out of his nostrils and fire out of his mouth,¹¹ upon the wicked he shall rain fire and brimstone,¹² clouds and darkness are around about Jehovah and fire goes before him,¹³ etc. Aside from its use

¹ Cox: *Mythology of the Aryan Nations*, p. 418 *et seq.*

² Burnet: *Early Greek Philosophy*, p. 153.

³ Reclus: *Enc. Brit.*, Vol. IX, p. 230.

⁴ Guerber: *Myths of Greece and Rome*, pp. 144-148.

⁵ Guerber: *Myths of Greece and Rome*, pp. 198-204.

⁶ Exod. 3:2.

⁸ Gen. 19:24.

¹⁰ I King, 18:38.

¹² Psa. 11:6.

⁷ Exod. 19:18.

⁹ Num. 16:35.

¹¹ II Sam. 22:9.

¹³ Psa. 97:2, 3.

sacrificially, its figurative use is perhaps most common; as, Jehovah is a consuming fire,¹ the third person of the Christian trinity is a tongue of fire,² the jealousy of the Lord burns like fire,³ his anger also burns like fire,⁴ wickedness burns like fire,⁵ his fury comes forth like fire,⁶ will blow upon you in the fire of my wrath,⁷ his eyes are lamps of fire,⁸ he is a wall of fire round about,⁹ the tongue is a fire which sets on fire the whole course of nature and is itself set on fire of hell, etc.¹⁰ Although there are many instances reported in the Bible of kindling and setting fires, there is no mention of the means employed in the starting of the fire. Tylor comments upon this peculiarity.¹¹

Among the Aztecs the rekindling of the sacred fire took place at the end of each cycle, which was of fifty-two years duration. The great feast of fire began on the last day of the cycle. In the evening all fires were extinguished in the houses and temples; earthen vessels were broken as if in preparation for the end of the world. Anxiously the people watch the tops of the mountains from their roofs, where bonfires will be kindled from the new fire if the gods show themselves propitious. When new fire appears the greatest happiness and joy prevails for it is a sign that there will be fire and light and life for another fifty-two years.¹²

Among the North American Indians the institution of perpetual fire prevailed almost universally. The savage knew that the fire was necessary to his life, were it lost he clearly foresaw the ruin of his race. At fixed seasons he therefore produced it either by friction or the flint, or else was careful to keep it always burning.¹³ An old Indian saying very often quoted to illustrate this point is that of an Iroquois chief in 1753. "It was a saying among our ancestors that when the fire on Onondaga goes out we shall no longer be a people."¹⁴ A prophet of the Shawnee Indians says, "Know that the life in your bodies and the fire on your hearth are one and the same thing, both proceed from one source."¹⁵ The principal feast of the Delawares was to their "grandfather the fire."¹⁶

To express the immortality of his gods the Algonkin said, "Their fire burns forever."¹⁷ At the fourth day of its life the

¹ Deut. 4:24.

⁴ Psa. 89:46.

⁷ Eze. 21:31.

¹⁰ Jas. 3:6.

² Acts 2:3.

⁵ Isa. 9:18.

⁸ Dan. 10:6.

³ Psa. 79:5.

⁶ Jer. 4:4.

⁹ Zech 2:5.

¹¹ Tylor: *Early History of Mankind*, p. 254.

¹² Biart: *The Aztecs*, p. 167.

¹³ Brinton: *Myths of the New World*, p. 168.

¹⁴ *Doc. History of New York Vol. II*, p. 634.

¹⁵ *Narrative of John Tanner*, p. 351.

¹⁶ Loskiel: *Ges. der Mis. der Evang. Brüder*, p. 55. (Cited by Brinton. *Ibid.*, 168 *et. seq.*)

¹⁷ *Narrative of John Tanner*, p. 161.

infant received a baptism of fire which had been lighted at his birth and kept burning to nourish his life.¹ The burning of the dead among the Algonkin, Ottawas, the Nicaraguans and the Caribs was a means to the higher life, the idea being that the soul of the departed would rise to heaven in the flames and smoke.² Among the tribes of upper California it was held that such as were not burned at death were turned into animals.³

The general subject of fire has been treated quite at length by a score or more of competent scholars and in many phases impracticable to introduce here. This very inadequate and syncopated survey of the history of fire and its psychoses may, however, serve to show something of the phylogenetic substratum that has developed in the race experience.

Turning now to the questionnaire: the answers are of two types; reminiscent, and direct. Of the reminiscent returns, there are 132, 128 being females and 4, males. From their relatively larger representation, the results, as far as they go, can only hold as typical of females. The average age is 19.9 years. To the direct returns we shall turn later. The numbers and ages of the children varies with the different topics; they will therefore be given separately under each.

In presenting data of this nature, or in accepting results, it should be borne constantly in mind that the numbers are in many cases, as in the present instance, very meager. Generalities built upon such insufficient data can not be too severely criticised. The difficulties connected with gathering data by questionnaire and the necessity of carefully sifting all data so obtained, must obviously make the statistical value of this method, in many cases, doubtful. The point of view, of the paper is, that while the numbers on which the data are based are too few to be of more than a suggestive statistical value, yet the qualitative nature of the data has a value quite apart from statistical considerations. To state phenomena faithfully, simply, however few the numbers, has a real value if one does not fall into the unpardonable sin of hasty and unfounded generalization.

The following list of animistic terms or descriptive and metaphorical words and phrases in common usage relating to fire will indicate that it still stands for a large block of varying experiences. The list, by no means exhaustive, was compiled from shorter lists given in the returns, the terms and phrases being those most familiar to the writers.

¹ Brinton: Nagualism, pp. 43-46.

² Oriedo: Hist. de Nicaragua, p. 49.

³ Presdt's Message and Docs., 1851, pt. III, p. 506. (Cited by Brinton, Myths of the New World, 169 *et. seq.*)

Terms and phrases applied to fire :

Angry, arms of, awful, alive, "ate its way through the wall."

Billow of, birth of, bursting, bright, boisterous, beautiful, bed of, born of the match, breath of fire, blazing, blue, brisk, burning, beating, bickering, buzzing, brutal.

Crackling, curling, column of, crying, crawling, consuming, clinging, climbing, cheery, cheerful, creeping, crafty, clink of, coursing, crouching, creeping, crashing, cruel, choking, cold, companion, companionable, company, comfortable, covering, cooling, cracking.

Dancing, devouring, dying, destroying, demons of, dreadful, devastator, deceitful, deathly, dazzling, darting, destructive, a demon.

Eating, expiring, "each coal a living breathing creature."

Flashing, flickering, flying, flaming, frantic, forked flame, "fire licks water," "fire eats coal," fiendish, forking, friendly, fierce, furious, fatal, fire dance, fascinates, feeding fire, frightful, fighting, frolicking, flaring, fantastic, fiery gulf, fiery tomb, fiery serpent.

Giddy, glowing, greedy, golden, gold, glaring, glorious, gasping, getting discouraged, gliding, green, gleeful, gentle, gleaming, growing.

Howling, hallooing, hungry, hissing, home of, hot, humming.

Jumping, joyous, jerks.

Kissing.

"Like a thief in the night," leaping, lapping, lake of, licking, laughing, live, low, leaping skyward, livens up, loud, lasting, lowly, livid, living, lively.

Mercy of, merciless, mocking, moaning, merry, merrily danced, mysterious, mad, monster, mighty.

Noise of.

Ocean of, origin of, overtaking.

Plunging, pursuing, pitting, playing, piping hot, passionate, powerful.

Red, roaring, running, retreating, racing, raging, raging sheet of, ravenous, river of, rising, rosy, rushing, "reaching out after," ruddy, relentless.

Sea of, stream of, streak of, sputtering, selfish, sneaking, swept, scouring, smouldering, shaft of, savage, surrounding, seething, searching, sweeping, screeching, scaring, snapping, smacking, snarling, scorning, surging, stealthy, spreading, "sparks dancing up the chimney," spitting, sheet of, steady, springing, shooting, splendor of, soothing, sucking, seat of, sissing, smoking, shining, singing.

Tongue of, tossing, terrible, teeth of, twisting, twirling, talking, thirsty.

Unyielding, unconquerable, unruly, understands.

Venomous.

Wave of, wall of, wreath of, wrapt in flames, writhing, winding, whistling, whispering, wild, wicked, whirring, wavering, wriggling, warm.

Yelling, yellow.

Zealous.

Of these terms and phrases, 237 in all, 58% + personify fire. 30% + of the terms indicate disgust or dislike of fire; while 18% + a liking for it. 47% + of the terms indicate spectacular as against 12% +, auditory characteristics. 22% — expressing some form of bodily movement.

Historically considered thermo-psychoses belong to the phylogenetic series. The ontogenetic aspect appears on the side of the individual as contrasted with the race. The detailed analysis of the returns is, therefore, ontogenetic. In comparing ever so roughly the individual with the race, questions of recapitulation can hardly be avoided. To what extent, if at all, does the individual recapitulate the stages through which the race has passed? Why? and what its pedagogic significance?

In the treatment of details which follows, the "+" sign should be appended to nearly all of the averages and percentages. But as the purpose of the paper is qualitative rather than statistical the "+" sign has been omitted.

GROUP I.

I. CHILDREN'S FIRST EXPERIENCE WITH HEAT.

Of the reminiscent returns 28% are positive. In each case some particular experience is recalled as the earliest. It is without exception, painful; and appears to be vividly reproduced in all its settings, as: a particular hot day when everything seemed to melt and wither; going to see a parade on an uncomfortably hot day; a particular day when the corn leaves rolled up and the grass looked burned and dry; crossing a bridge on the way home from school, the hot boards burning the bare feet; the day father was sun-struck; a hot day in July at a picnic; walking with bare feet on a hot sidewalk; the dust lying white and thick on the hot road; picking up a piece of hot lead; a hot day followed by a terrific thunder-storm; putting the thumb on a hot tea-kettle; on a hot flat-iron; the hand on a hot stone; seeing a building in flames; and so on. Among 50 boys, average age 5.2 years, and 60 girls, average age 5.09 years: the first experiences with heat are all painful and abrupt, except in two cases where the spectacular effects of the fire were the exciting factor. With 7 boys, however, average age 2.2 years, and 12 girls, average age 3 years, the experiences

are reported as less abrupt, but still unpleasant. Thus one says the "hot" made her sick. God was "bad" to make it so; she "did not like God." Another wanted to lie in water all day; one, that it was getting hot as a stove; and so on.

(a) *Ways in which the danger of burns and conflagrations are first learned.*

Total number of returns, 182. Boys, 79; girls, 103; average age, boys, 6.5 years; average age, girls, 5.6 years.

Burned hand or head on something hot, 39%. Do not know, 8%. Being told, 7%. Clothes caught fire, 5%. Hot liquid; hay, grass, meadows burned, each, 3%. Furniture, curtains burned, 2%.

Person being burned to death; match scratched on the hand; pictures, fire-bells, the red sky; another's being burned; lamp over-turned; each, 1%. Bumblebee's nest; fence burned; accident with fire-crackers; each, $\frac{5}{10}\%$ of 1%. In 42%, the effects are purely heat effects; while in 58%, the effects are due to spectacular and other factors connected with conflagrations and heat.

From the analysis of these data on early experiences with heat, it appears that a large class of individuals have in their mental background some pain-toned thermo-psychosis arising from early accidental contact with high temperature. The tendency or ease of recalling such experiences with all their pain effect undoubtedly produces the various degrees of dislike of fire. Where the early experience is extreme, or where the susceptibility of the individual to shock from such experiences is heightened by heredity or otherwise; or from these two combined, the subject may become a *fire hater* or a *fire dreader*. How large is the class of such individuals with some such early *soul scar*, or *soul scare* from which the organism does not fully recover, is an important question for the psychology of this subject.

2. *Likes and Dislikes of Fire.* From all the returns on this subject, reminiscent and those of children together, 324 cases of like or dislike of fire were noted. 98 of these were males, as against 226 females. Of the males, 85% express a liking for fire; while 15% dislike it. Of the females, 84% like fire, as against 16% which do not. Restricting these cases to children under 10 years of age, the percentages are somewhat different.

Total number of cases 78, 39 boys and 39 girls. 72% of the boys like; 28% dislike fire. Of the girls 56% like; 44% dislike fire.

(a) *Special Love and Special Aversion to Fire.* Among all the reports of likes and dislike of fire, 13% show a marked or special love of fire or an intense aversion to it. 19% of the

males and 10% of the females are in this class. Of the males 95% have a special liking for fire, as against 5% that have a special aversion to it. Of the females 29% special liking; 71% special aversion.

The following cases, which are quite typical, illustrate this class.

"Knowing I shall be burned I have a strong desire to put my hand on a hot stove."

One was much afraid of lighted lamps and could not bear to see them. Told her mother that when she "got big and married" she was going to bed at six so she would not have to have any lamps in the house.

A little girl of five will tremble when a match is struck and cries at the sight of a bonfire.

One has a constant fear of being burned to death or of seeing some one else burned. Would not think of going to bed so long as there was a lighted lamp in the house. Dreams about fire.

These instances of like and dislike of fire are further illustrations of the now well-established fact of pyrotropism. Both its negative and positive phase are indicated. The returns show that, while the distinction is not so well marked with mature individuals as in children, males tend to be positively pyrotropic, females, negatively pyrotropic; or that males tend to pyromania, females, to pyrophobia.

Pyromania. Directly in line with and growing out positive pyrotropism is pyromania with its well-known history of incendiarism. The line of demarcation between the criminal and purely pathological incendiary is vague. The older codes of law did not distinguish the pathological element and arson was often a capital offense. In Scotland "fire raising" was punishable with death if demanded by the public prosecutor.¹ In modern usage the pathological side is more commonly emphasized. Pyromania, Ger. Feuerlust, Brandstiftungsmonomanie, Fr. Monomanie incendiaire, is defined as a morbid impulse to burn. Meckel was the first to use the term impulsive incendiarism (Brandstiftungstrieb) and to describe it as a new disorder. Platner describes "feuerlust" as a sort of delight taken in seeing fire burn with apparent lack of motive. He found it very common in imbeciles and also frequently accompanying sexual disturbances in young females. He accounted for pyromania by supposing a condition, "amentia occula" in which feeling and morale were disordered while the intellect remained intact. Henke regarded the frequent tendency to incendiarism among adolescents to arise from organic disturbances at, or just before puberty.

With females the curve for pyromania rises abruptly at puberty and is often accompanied by derangements in the repro-

¹ International Cyc., Vol. I, p. 751.

ductive system. A typical case is that of adolescent girl suffering from sexual debility. During menstruation she was often disturbed at night by voices which seemed to whisper "Set on fire. Set on fire."

The largest class of incendiaries are congenital imbeciles. The next largest class are melancholiacs. Here setting fires seems to be resorted to for the purpose of relieving the general feeling of uneasiness and anxiety with which the patient often suffers. An apparent mental relief often accompanies the commission of crime with such persons.

Flemming and others are inclined to discard the instinctive interpretation of incendiarism, holding that, instead of an irresistible impulse with absence of motive, there are nearly always normal motives. Among the most common of such motives are—revenge, fear, anger, hatred and nostalgia.

Pyrophobia is the inhibitory side of pyrotropism. If we take the evidence of the returns it is much less common than pyromania. (See studies of fears).¹ "Mild pyrophobia appears in caution about sparks and matches; dread of every bright fire; of the noise of lighting a match or the sight of it; of the word fire; the sound of crackling or sight of smoke from a chimney is feared. It may be associated with the wind; with dread of jumping and falling; with hell and judgment. Fire may rain from above or come up out of the fiery center of the earth, etc."

Heliotropism. Pyro- or heliotropism also appears to be fundamental in the animal world. The most noted instances of it have been observed among the lower forms; plants, insects, annelids, etc.²

The tropisms are classifications, not explanations of the facts. Such classifications leave the facts as much in mystery as ever, but it is clearly defined and localized mystery. Classification in this sense is the first step in explanation.

3. *Fire-playing Propensity*. The propensity for playing with fire seems from the reports, to be well marked in children as early as the sixth or seventh year. But it appears to be almost twice as common in the case of boys as among girls. From 148 returns of fire-playing, 103 are boys; 45 girls. The average age of the boys is 6.5 years; of the girls 6.7 years. From 71 cases noted in the reminiscent returns, as directly observed by the writers, there were 36 boys and 35 girls. Of the boys 53%

¹ *Am. Jour. Psych.*, Vol. VIII., p. 181.

² Loeb, Jaques: *Der Heliotropismus der Thier, und seine Uebereinstimmung mit dem Heliotropismus der Pflanzen*. Würzburg, 1890, pp. 118. Parker and Aikin: *Influence of Light on Earthworms, etc.*, *Am. Jour. Physiol.*, Vol. V., 1891, pp. 151-157. Smith A. C.: *Ibid.*, Vol. VI., March, 1902, pp. 459-486.

played with fire; 47% did not. Of the girls, 34% played; 66% did not.

The delight in fire-playing shows itself most commonly in building bonfires, 24% of all the instances. The next most common reported is that of "swinging around" or rotating about the vertical axis with burning sticks or papers in the hands, 16%. Then in order follow:—Putting of sticks, straws, etc., into the fire to see them burn, 12%. Building fires in houses and other buildings, 8%. Setting buildings on fires, 7%. Setting curtains, bedding, carpets on fire, 3%. Building fires for baking or roasting; also in pans and cans; each, 2%. Setting fire to portico, hay stack, in the fields, taking matches to bed, each 1%. Heating pokers in the fire, $\frac{5}{10}$ of 1%. In 14% of these cases among the boys, and 4% among the girls, the building of fires was accompanied by other activities; as, running, jumping, whirling the fire around, and yelling. Interesting analogies are found in many fantastic dances and orgies of the North American Indians about their camp fires. The medieval Easter fires of Northern, and the mid summer fires of Southern Germany are also analogous. Grimm says of Easter-fires "men and maids, and all who come, dance exulting and singing, hats are waved, handkerchiefs thrown into the fire; by turns they sang Easter hymns, grasping each other's hands and at the Hallelujahs clashed their rods together."¹ Mid-summer fires were similar in the main. The fire is first lighted and blessed by the priest. There is singing and prayer so long as it burns. "When the flame goes out, the children jump over the glimmering coals; formerly grown up people did the same."²

In Greece it was common for women to build bonfires on Mid-Summer Eve over which they jumped crying, "I leave my sins."³ In Ireland when St. John's Eve fire burned low the young men stripped to the waist and leaped over and through the flames. He who braved the hottest flame was held to be the greatest victor over the powers of evil.⁴

That the fire-playing propensity in a considerable percentage of cases becomes intense, seems to be indicated by the terms of endearment applied to it by those reporting. In 66% of the cases tabulated such phrases occur. The most common are: great fondness, especially, extremely, very fond of, 30%. The next most common are: never satisfied unless, continually, always, every opportunity, 19%. Then follow—fond of, 12%;

¹Grimm: Teutonic Mythology, Vol. II, p. 615.

²*Ibid.*, p. 617.

³*Ibid.*, p. 623.

⁴Crooks: Pop. Religion and Folk-lore of northern India, Vol. I, p. 20.

loves, 11%. Special liking for; likes very much; special, great love, 7%. Delights, 6%. Great propensity; great desire for; likes; each, 3%. Perfect passion; craze; wild; great pleasure; very anxious; each, 1%. 80% of these terms are applied to girls; 61% to boys. Putting this with the fact that a little more than twice as many boys as girls were reported as playing with fire, it would seem to indicate that while girls play with fire about half as frequently as boys, yet when they do play, the passion for it, numerically, is stronger than in boys. The history of incendiarism shows that setting of fires sometimes occurs among adolescent girls as a sort of epidemic. A notable instance of this occurred in Normandy in 1830. Barns, granges and vineyards, covering large areas, were destroyed by fire.¹ The perpetrators were found to be exclusively girls. Confessions showed that their only purpose was to see the light.

This group of rubrics which we have been considering, while following pretty well defined lines, is less specialized than that now to be treated.

GROUP II.

I. FACES AND FORMS SEEN IN FIRE.

Reminiscent returns, 132, 22% of which are negative, leaving 102, or 78% as positive. Beside these are returns of 12 boys average age 6.2 years, and 5 girls, average age 8.5 years. In these cases individual differences are so numerous that no adequate presentation can be given without quoting from the returns.

M., 8 yrs., loves to draw his chair close up to the fire and sit gazing into it. He says he sees "big elephants, alligators, cats and dogs."

F., sees the sky as it looks after a rain.

M., 6, sees one of Buffalo Bill's Indians; while his brother two years younger, sees a duck with its head toward the chimney and its back toward him.

M., 9, will sit gazing into the fire until his face is scarlet with the heat, so absorbed as not to hear when spoken to.

F., 10, saw a "little angel with lots of flowers in her hands."

M., 5, "little men with slippers on dancing."

"Fire is a companion and understands what I am thinking about."

"If I had during the day been naughty, I never would go near the fire places, for I was sure if I did the devil and all the drunken men in town would be after me."

Another sees flowers such as lilies, roses, and pansies.

"I saw some of the characters of which I had been reading. Very often it seemed as if the faces were those whose characters I very much disliked, and that they were mocking me."

"Houses handsomely furnished."

One used to see "faces and birds and dogs and horses. I used to

¹ *Loc. cit.*

see cats and all the animals I was in the habit of playing with, but never any other kinds. A dear little playmate died and I used to see her face in the flames."

Another, "castles, faces and animals."

Another often sees the "summer time with the hot sun pouring down. Sometimes the shining streets and golden gates of heaven. Often faces, generally of old people, and of animals, generally dogs. Sometimes a deep gorge with a dashing, foaming river running through it."

Still another, "various animals and bird forms, grotesque faces, representing either giants or goblins. The irregular glowing of the coals seemed like fairy torches."

One, the letters of the alphabet. Once she made out the letters W—C—I.

"As a child I was very fond of fire gazing and often threw bits of paper and wood into the fire to watch them burn. I imagined that they were soldiers on a battlefield and that those that went out were those who were wounded and died. I imagined that the flames were some sort of indistinct animals chasing each other. As I looked at the stove from the outside when the slides were open, I imagined it to be a city with the houses on the streets illuminated."

One thought she could see the forms of Indians around the fire.

"When the coals were bright and hot I then imagined I saw all sorts of wild animals shaking their heads and tails. Sometimes I saw numerous little figures hand in hand dancing."

"The sparks were birds as they flew up the chimney." Sometimes thought there were "people in the fire."

"All sorts of animals were walking around. Some very fierce looking. There were faces also constantly changing." Sometimes fancied she could see "brownies dancing back and forth."

Another, "the forms of animals, the appearance of houses, especially castles and cathedrals, with their domes and spires. Sometimes faces of people, usually hideous," which frightened her.

"Jack climbing the beanstalk."

"I was very fond of gazing and wandering about water, especially large bodies, as lakes, rivers, the ocean, etc. I always was very sad and it made me think of dead people. Again, I pictured huge fishes, eels and snakes in the water with many, many white bones at the bottom, on the sand."

After hearing the Bible story of Christ casting out devils, she "thought of the little devils as having entered the fire and so making up the flames."

One thinks of fire as "hell" and sees "its inhabitants continually writhing in the flames, fighting and springing away from the fire in seeming agony and making horrible faces at each other."

Another, "old men with long beards tied fast to each other."

One says, "when the fire burned slowly and quietly, I fancied people working very busily, building up when the flames would rise higher than usually, then tearing down—all the time changing. When the fire burned rapidly, it seemed like a battle which raged fiercely, and finally when it ended, everything was left cold and still."

To one, the flames appeared to "lick the isinglass," as though they hated her and would like to get out to harm her. Sometimes they seemed to take the forms of animals on the isinglass, usually asymmetrical, "horrible looking beasts."

Another says, "I saw heads of people, snakes coiled up, birds, soldiers, dogs in different positions; a flock of sheep and lambs skipping about. Also flowers; as, roses, lilies, and sunflowers. Fruit; as,

apples, peaches, and bananas. I also saw a ship sailing and several houses near each other."

"When gazing into the fire sad scenes connected with my friends and myself will come before me."

"An imaginary ocean having large rocks and crags, casting their shadows upon the water."

"Streets with palaces on each side and people walking through them."

"Home scenes which were sometimes cheerful, but often sad."

"Rooms all furnished which seemed to be cottage rooms in the evening lighted by a blazing open fire which I could not see."

One says she could look into the fire and imagine that the "wood was a log-house and that the Indians were burning it. The smoke would seem to take the forms of children running away and trying to hide." The red part of the flame looked "like blood."

Another, "I could usually see the face of my mother in the flames, and then sometimes the heads of dogs and cats; occasionally such objects as pitchers, chairs," etc.

"I saw little birds flying, snakes coiled up, and donkeys racing. I also saw roses, lilies and pansies; clusters of grapes and cherries. I would frequently imagine on a windy night I saw a ship tossing in great, large blue waves."

"Wolves were running about with their long red tongues hanging out of their mouths."

"Cats, dogs, wild cats, at times, peered at me with their great eyes, until I was frightened, thinking they might jump out at me."

"I fancied that I saw fairies in the fire who danced and flew. They waved their hands, shook their heads, rustled their skirts, etc. Sometimes they threw little balls into the air which burst into little stars. Sometimes I saw a great many taking hold of hands and dancing round and round and stars shooting off of their crowns and wands. Sometimes they seemed to be climbing or flying upwards. Their faces were always bright and childish. They all had golden hair.

Sometimes I fancied I saw burning buildings in the fire.

Sometimes I seemed to see ugly men with whips which they cracked often and every time they did so a million little stars flew off the lashes of the whips.

I seemed sometimes to see lions that lashed their tails about and every time a quantity of stars flew up. Horses trampled about on the golden ground and stars flew up."

One used to think she saw fairies in the flames with their long flowing robes and white wings.

To another the blue flame of the coal was a spirit from some other world.

One, a raft with three men on it floating into an immense cave; and so on.

From the returns faces appear to be seen most commonly, occurring in 20% of the instances. Men are reported as seen in 9% of the cases. Then follow—tongues; houses; each 7%. Fairies, 6%. Trees; imaginary forms; birds; each 3%. Horses; bears; dogs; each 2%. Tigers; mountains; landscapes; woods; flames; ships; clouds; lions; snakes; each 1%. Also numerous other animate objects as,—wild men, people, children, sheep, soldiers, cats, squirrel, rats, spiders, goat, cows, pigs, chickens, donkey, etc. Among inanimate objects—fruits, rocks, sky, barn, water, furniture, wagon, doll, hat, circle, let-

ters, ball, top, cap, farm, moon, stars, battle, camp, hell, table, chairs, volcanoes, box, colors, train, etc.

Total number of objects reported, 253. 65% are animate; 35% inanimate.

In the seeing of faces and forms, and especially in fire dreaming and reverie well marked symptoms of hypnosis or auto-suggestion are prevalent; as, the "spell," forgetting who and where they are, unmindful of the presence of others, self-absorption, etc. The play of form and color half hypnotizes the mind; just to sit and watch the fire starts dreamy reveries."¹ According to Guyau the child is hypnotizable in a high degree. Very young children are characterized by aïdeism, absence of ideas; and monoïdeism, domination of a single idea. All children, says Dr. Chamberlain, are remarkably open to suggestion and autosuggestion.² The very large and important role that hypnosis plays among primitive peoples is well brought out by Stoll.³ Primitive man comes into very intimate rapport with fire which impresses him even more than it does the child. The blazing camp fire must have been very fruitful in conjuring up grotesque forms and images which grew in vividness and proportion by comparisons and additions in which the family as a whole took part. Extending later to the tribe and ultimately woven into story and passing from tribe to tribe new additions and subtractions produced the finished myth which had its initial impulse at the fireside. Fire gods, especially when objectified; as, Agni, Loki, etc., may have arisen almost spontaneously from gazing into the fire, by a process of suggestion. This hypothesis is, of course, only the suggestion of similar reactions to fire among children and may, *or may not* have been true of primitive man.

In recent times one of the most typical of classic monsters, the Chimaera, has been proven to have originated in very close connection with fire. The valley in Lycia, according to Strabo, where most of the devastations of the monster occurred, was overlooked by a volcanic mountain called Chimaera. Pliny says of this mountain, "Mount Chimaera burns in Phasilis with a certain immortal flame shining by day and by night." A number of travellers within the past century have verified this account by finding flames of natural gas still issuing from crevices of a mountain in this region.⁴ Smith and other modern commentators agree that "the origin of this fire breathing monster must be sought probably in volcano of the name of Chim-

¹ *Loc. cit.*

² Chamberlain: *The Child*, p. 305.

³ *Suggestion und Hypnotismus in der Völkerpsychologie*, pp. 523.

⁴ Emerson: *Geological Myths*. Science, Vol. IV, pp. 329-332.

aera in Phaselis, in Lycia."¹ Servius explains the myth as follows: "The flames issue from the summit of the mountain, and there are lions in the region under the peak; the middle parts of the hill abound with goats, and the lower with serpents."

The traditional enchantment of the fireside story is also suggestive and may owe its charm largely to the fact of pictorial illustrations in the fire accompanying the words of the tale. Among the many typical instances of this is a picture of early Roman life where the whole family is portrayed as gathering about the fire and spending the long winter evenings in story telling.²

Another typical family scene is that of early life in Brittany. "In the lonely farm house after the evening meal, prayers are said and the life in Breton of the saint of the day read, all the family assemble with servants and laborers around the old-fashioned hearth where the fire of oaken logs, spirts and blazes defying wind and rain or snow without." The talk of oxen and horses and work gives way to tales of giants, goblins or witches and often of ghosts.³ The magic ointment of fairy tales which when applied to the eyes opened them to a new world of fairies, pixies, brownies, imps, etc., is⁴ very analogous to seeing faces and forms in the fire and may have been a sort of symbol for it. After clearing the eyes with this salve "a hovel or a cavern becomes a palace, whose inhabitants, however ugly they may be, are attired like princesses and courtiers and are served with vessels of silver and gold." One unhappy woman after an application of the ointment beheld "herself surrounded by fearful flames; the ladies and gentlemen looked like devils, and the children appeared like the most hideous imps of hell."⁵

That fire pictures are easily and vividly recalled after a long lapse of time was shown by the reminiscent returns. This point is still further brought by the drawings of children. Some of the most typical of these which ought to be reproduced here in fac-simile are of salamanders, shooting the chutes, children in bed, in a steaming bath, animals in a snowstorm, people blown about in a wind, mountains, the soul rising from the body, a deer's head, map of Massachusetts, children

¹Smith: Dict. of Classic Antiq., Vol. I, p. 694.

²"Gesta Romanorum," Introd. p. xxv. (Cited by Hartland, Science of Fairy Tales, p. 9.)

³Luzel, "Veillées," (cited by Hartland, Science of Fairy Tales, p. 8.)

⁴Hartland: The Science of Fairy Tales, p. 59 *et. seq.*

⁵Sébillat, "Contes," Vol. II, p. 34; "Reme des Trad. Pop.," Vol. III. (Cited by Hartland, the Science of Fairy Tales, p. 63.)

drowned and floating in the bottom of the sea, an army, a book and lamp, horse, birds, monstrous animals, etc. These drawings were often so unique and detailed as to suggest vivid illusions.

2. FIRE-DREAMING AND REVERIE.

Almost inseparably connected with the seeing of faces and forms, is the phenomenon of fire-dreaming and reverie. In many cases it is spoken of as "building air-castles." The difference between fire-dreaming and the seeing of objects seems to be one of degree. 79% of those seeing faces or forms in the fire also had dreams and reveries in connection with fire-gazing.

Thus one says that when she saw a ship in the fire it made her think of the people, country, and things of distant lands. She would at such times wonder about the "ocean's greatness, the wrecking of vessels and drowning of people; of whales in the ocean," which to her were "so dreadful, because they were sometimes the cause of shipwrecks."

Another says—"When I saw the ship (in fire) sailing in the deep blue waves, I thought of the great oceans, the distant countries, and the people in those countries, I could picture Europe and imagined I saw crowds of people that I knew travelling among the Europeans. I imagined the large coals to be distant cities."

"When I was a child, I used to like to sit by the fire, and dream. Just at dusk, before the lamp was lighted, and when everything was still, I used to slip away, and taking a seat near the fire, I would so often think how cozy and warm it was, and picture the people who were perhaps suffering that cold night. I would think of the dreary, cheerless homes, and so many people without a fire while I was enjoying the warm blaze with not a care or trouble. What great plans I made as to what I should do when I was older! I would relieve the suffering, and no one would be without the cheerful warmth of a fire."

One loved "to sit in the dark watching the logs of an open fire burn." If she has company it makes her "talkative and confidential;" if alone, she dreams of "all sorts of pleasant experiences and imagines happy scenes."

"When about eight years old, my chum and I would lie on the floor before the open grate and gaze at the fire the whole evening. We have never built such air castles as we did before that grate. When alone I would look at it by the hour, but when one of the logs fell my heart would almost stand still. The spell was broken and I was so disturbed that I would leave the fire immediately."

"I would think of what I would do when I should become old enough to care for myself. Sometimes I would think of what I would do if I were very rich; how I would go to college and after that spend several years travelling both in my country and in Europe."

Used to think of what she had done during the day and would do when older. She often thought of herself as "in a foreign country travelling to see the places" she had heard travellers tell of.

Another says—"One time my sister was playing the piano very softly. I was in front of the fire and I seemed to see myself come out on the stage and astonish the audience by my wonderful playing. The audience encored me and I felt so happy that my face flushed. I was very much startled when my sister spoke to me and my air castle floated away."

Another says—"A feeling of pity would come over me for those little girls whom my imagination pictured as standing out in the cold snow with an old shawl over their heads and with long thin faces and deep set eyes. They were looking in at some window where all was comfort and coziness."

"Sometimes I see myself in a far city among strange people. Again I am in the country playing games as I used to do long ago;" and so on.

The character of fire dreaming seems to indicate it is "good for the soul." From the instances given the dreams are *all happy*; there are dreams of *ambition*; of *travel*; foreign countries; great things like the *ocean*. The dreams appear to be mostly of the *future*; frequently of the *past*; but never of the present. There are dreams of helping the *poor*, the *cold*, and the *destitute*. From these data it would seem that a recent German writer is right in insisting that schoolhouses should be built with open fire places as an incentive to fire dreaming. On the pedagogic side fire gazing is shown by the great personal variation in forms seen to be one of the best educators of the imagination.

3. NOISES OF THE FIRE.

From the returns children appear most generally to regard the noises of the fire as made by animals or insects. Often the wood or coal is alive and cries, therefore, when the fire burns it. Again, they often associate the noises with fire crackers, torpedoes, guns, etc.

The degree or extent of being impressed by noises of the fire, as compared with the seeing of faces in it, appears to be a little more than half; as 49% of the total number of reminiscent returns and 55% of those seeing faces and forms are also positive for fire-noises. The remaining 51% of the reminiscent returns are unimpressed. The rest of the data consists of 8 returns, 4 from boys, average age 4 years, and 4 girls, average age 9 years. Individual variation here, too, is marked and further illustrates the point of view of this paper—that individual treatment of a small number of cases may be valuable even if it does not justify sweeping generalities.

A boy ten years old used to think the noises were made by animals that were fastened in the wood and that they were making the noises because they were being burned.

To a girl, eighteen, it used to be a man jumping after all the pretty fairies to scare them away.

A girl of twelve always thought it was the cry of some insect. She felt sorry because she thought it would never cry unless it was being hurt.

"I always dreaded the noises made by fire and thought that the roaring and crackling was the most dangerous part of the fire. When a new fire was made I would always sit near by and watch it, and when the crackling of the burning wood and coal had ceased, then I considered all danger passed and my mind would be at rest."

To a boy of four the fire is singing.

Another says it is a gun going off.

The "wood is having some fun—is laughing."

"A bing-bang going off."

"Like the rattle of the leaves when they fall in the autumn and are tossed about by the wind; like the roaring of the wind."

"The noises of the fire seemed to me to be a battle between those people whose faces I could see in it."

"I always thought the fairies were singing and the old men shouting when the fire cracked."

The noises of the fire made one think of "lots of witches, all clad in gray, with gray bonnets on, scolding each other and fighting over their bread and milk."

To one it was the "creaking of the limbs of trees in a forest. When there was a loud crack a tree had fallen."

One supposed that when the stove became very hot it cracked and caused the noise.

"Coal and wood crying and laughing as it was being burned."

One says, "I used to think of it as a great forest. The noises were the great trees cracking in the wind. I also thought there were wild animals; as bears and wolves howling."

"To me the hissing of the fire was that of snakes."

To another "the fire was angry."

The noises were "made by little crickets in the logs."

"Something alive in the stove that wanted to get out."

One thought it was fairies talking and screaming to one another and chasing horses through the flames.

One says—"I used to think the hissing which came from the fire was caused by snakes which had crept into the wood for the winter. They were angry at the great heat, hence the hissing noise. When the wood fell as it burned I thought it was the combat between the angry fire and the snake and that the cracking noise was the breaking of the backbone of the snake."

The noises are draughts of air through holes in the wood.

To one the fire was unhappy and complaining about something.

To another it was "happy people laughing."

"The wood and coal fighting with the heat and blaze."

The noise of the soldiers' guns which had been seen in the fire.

One would never go near the fire when it snapped and cracked for fear something would jump out at her—and so on.

Many expressions of sympathy or pity occur in connection with fire noises. 56% show this characteristic, while 40% interpret the noises as cheerful or happy. Individual differences are brought out in the following:—

Total interpretations, 58%; Noises personified, 75%.

Fire is angry; alive; each, 10%; Worms or insects crying, 8%.

Worms squealing; wood or coal crying and laughing; each 5%

Animal making noise; laughter of fairies; man jumping;

wood and coal fighting against heat; wood and coal

complaining; spirits; each

3%

Also others: as, fire talking; snakes; something trying to jump out; fire is happy; bad beast; Jack Frost; last groan of coal and wood; etc.

Of the noises not personified, the most common interpretation

is that of fire crackers, occurring in 10% of all the cases. There are also a number of others; as, gunpowder, wind, battle noise, noise of drums, guns being discharged, etc.

An analogous instance among many others of primitive man being impressed by the noises of the fire occurs in the Rig Veda. There the crackling of the burning twigs is held to be the voice of the gods. The same notion also prevails to this day in Borneo.¹

GROUP III.

I. CHILDREN'S IDEAS OF SMOKE.

Reminiscent returns 65, 49% of which are positive—all having some peculiar notion about smoke. Also returns from 6 boys, average age 4.8 years; and 8 girls, average age 7.3 years. Here, too, individual differences are numerous. Thus—

A boy of four says "there are two kinds of smoke; one is cigar, the other cloud smoke." Another boy of five regards smoke with great curiosity if at a distance, but is afraid of it when near.

It is clouds coming down from the sky.

"Just like steam only dirty."

One says—"I imagined smoke to be steam which arose from the various dishes which my 'fire people' were preparing for their meals."

Another thought God took the smoke to heaven and made it into clouds, but she could not understand where God got his water as there was none in the smoke.

One thought the smoke similar to fire only it did not blaze as the fire did.

Another supposed that the black smoke from engines and mills formed the black clouds; and the light smoke from the chimneys, the white fleecy clouds.

One thought of it as the robes of fairies, waving and intertwining as they mingled in their dances.

"I always had a great horror of smoke because it seemed as if I should be smothered to death if I did not get free from the smell of it."

To one it was fairies flying away when tired of dancing.

"If I was going anywhere or anything was going to happen on a certain day and I desired very much to have the day pleasant I would go down and look at the smoke from the smoke stack of the engine; if three rings of smoke disappeared into the clouds without breaking it would be a pleasant day. If they broke it would surely rain."

"I always thought the smoke made the clouds and if you could take a hold of it, it would feel like soapsuds."

One used to imagine that the engine was an immense horse. The smoke was its breath.

"The fairies coming of the fire and going to their homes in the sky."

"I always thought of smoke as the breath of the fire."

One used to think it formed Santa Claus with his big basket on his back.

Another, the wood did not like to be burned and that the smoke was a prayer to save it.

One believed that the smoke was the dust kicked up by the animals

¹ Brinton: Religion of Primitive People, p. 142.

(seen in fire) when they had been attacked by an enemy and were running away.

"I was always afraid of smoke because I thought it grew and would smother me."

One thought she would like "to go up there where the smoke went."

Another had a fear of being drawn up into the clouds by it.

"I thought every time smoke went out of the engines a new cloud was formed."

In 39% of the cases cited, smoke is regarded as clouds.¹ Then follow:— steam in 5% of the cases; fairies in 3%; dust, 2%; wind blows it away and it turns to nothing, 2%; the same thing as fire 2%. The single expressions are, breath of the engine; robes of fairies; a bird; follows in the same path the birds take; forms Santa Claus; ghosts; breath of the fire; carriage going to a funeral; prayer of the wood; stuff that comes down from the clouds; like soapsuds to feel of; scorched air; thin air; what makes the engine go; and is alive. In 10% of the cases it is supposed to determine good or bad weather.

Fear or horror of smoke is expressed in 4% of the cases; choked or smothered 3%; hates the smell of it, 1%; saddened and chilled, 1%; while only 5% express a distinct liking for it.

The very common notion among children of considering smoke and the clouds as the same thing has a number striking analogies among Indians. Fawks, in 1895, found among the Indians of Arizona a peculiar habit of smoking as a sort of ceremony. A large pipe was filled with spruce twigs and other ingredients. When lighted a dense cloud of smoke arose. This "smoke cloud" the Indians believed ascended to the sky and caused rain.² Brinton also makes reference to ceremonial smoking in which the first puff is always to the sky.³

2. CHILDREN'S IDEAS OF ASHES.

Of the reminiscent returns 24% are positive or regard ashes in some special way. Also 6 boys, average age 3.8 years, and 3 girls, average age 6 years. From the returns it would seem as if children most commonly associated ashes with death and sadness.

In 34% of the cases cited this idea is expressed.

Thus one says "I regarded ashes with sadness because they seemed so lifeless and so incapable of anything; so light that the faintest breath could move them from their place with no power of returning."

Ashes gave me the idea that the fire was dying.

"I regarded ashes as the coals that had died. They were once alive and glowing and now they were cold and dead."

¹ Hall and Wallin found 58 out of 122 cases reported supposed the clouds to be made of smoke. *Am. Jour. Psych.*, Jan., 1903.

² 17th An. Rep. Bur. of Am. Ethnol., 1895-6, p. 734.

³ Brinton: *The Myths of the New World*, p. 88.

"There was only a vague shuddering feeling of going out some how, somewhere into darkness."

"Ashes always seemed cold and dead; something repulsive about them."

"The ashes made me feel sad and lonely. They seemed to say that all was cold and dead."

"Ashes always made me think of something cold and dying."

"When I saw the ashes in the stove I thought the wood or coal had died and the ashes was all that remained of them."

The next most common idea appears to be that ashes are made on purpose to spread on roads and paths, scour teakettles, etc., as expressed in 7% of the cases; or that it is a part of the wood or coal that will not burn, also 7% of the cases. 4% considered ashes as dust; and 4% delighted to play and roll in ashes. Individual differences also are comparatively numerous.

One says, "at bed time, according to custom, the living embers were taken out and placed one side. They were then completely covered with ashes or the fire was 'raked' as the process was called. I was always delighted to perform this task, for to me the embers were children being put to bed, and the ashes were the bed clothes with which they were covered. When there were not enough of these so-called bed clothes to keep the children covered the air got to them and these children of mine were dead in the morning."

Another says, "I always thought that the good coal was good children and wouldn't get burned, while the fine ashes and large cinders was the bad wood, after it was burned."

To one ashes were such dusty and dirty things that she had a dread of getting near them.

To another ashes were the substance of which man was made.

"I thought of ashes as being concealed inside of a piece of wood and when ashes began to appear, the outside covering strangely disappeared up the chimney, leaving the ashes behind."

A fear of setting fire to something in one case was always connected with ashes.

One used to think of ashes as naughty children that ran away and got lost.

"I always thought that the fire was in the coal and after the fire got out that was the ashes."

One thought that ashes were cold fire and if you heat them again they would make a hot fire.

"I thought of ashes just as if they were hot coals, so much so that I would not even touch them."

"Ashes were something that could not be burned and they were found in great quantities in both wood and coal."

"I had seen my brother sifting ashes and I thought the ashes must certainly fly all over the world; although I had no idea how large the world was."

"To one ashes were wood softened by fire, but she did not think of it in connection with coal at all."

One says, "the ashes made me feel lonesome and I wanted to leave the fire-place. It seemed to me as if that was all that was left of the men (seen in fire) who had been fighting; and the thought made me shiver."

3. *The Ceremonial fires of Children.*

There is some indication in the returns that children to a slight extent use, or play with fire ceremonially. $\frac{9}{10}$ of 1% of the reminiscent returns only show this phase.

One was in the habit of making collections of paper dolls; when the collection became large the oldest ones were burned.

One says, "once in a great while the children had them when I was young but I never took part in them, I thought they were not right. I had an odd feeling about it being irreligious, or it was making light of sacred things and we should not do it."

Another says, "when about six years old I had a ceremonial fire. My doll baby had been sick and died. So my brother and I prepared to burn her. We had quite a long ceremony and then burned her. I felt very sorry and don't think I ever burned another."

Another says, "when one of my teeth came out I used to cover it with salt, and throw it into the fire to make sure of my getting a new one."

"At school I took part in a ceremony in which we burned special letters."

One used to select paper dolls she did not care for and lay them on other papers making believe that they were on a "funeral-pile" and she was a "cruel Indian."

One burned a doll she disliked very much and then had a funeral for it.

"One day I thought I would make a great sacrifice. So I kindled a fire and went into the house and got some three hundred cards and burned them. I thought a great deal of them and this was a great sacrifice."

Another says, "I had a little dog that was run over and after he was buried I continually wanted to dig him up and burn him."

IV. CHILDREN'S IDEAS OF THE SUN.

Of the 132 reminiscent returns 56% are positive, 44% negative. The term "positive" is applied to returns where the notion expressed is clearly not that of geography. Returns characterized by such terms as, the sun rising in the east and setting in the west; going round the world; giving light and heat; being a ball of fire; very large; a long distance off; going to China and the other side of the earth; and the like, were thrown out as obviously not the child's own idea. Returns of this nature were classified as negative. Beside the reminiscent returns 77 children were reported in connection with this topic. 30 of these were boys, average age 6.9 years; 47 girls, average age 7.5 years. A slightly lower per cent. of the children's reports are negative than in the reminiscent returns, 73% being positive. The percentage of negative returns for boys in proportion to their number is relatively larger than that of girls. While 46%+ of the boys are negative, only 29% of the girls are so reported. The average age of those reported as negative is also slightly higher than those reported as positive; as, boys average age 7.4 as against 6.9 years; girls, average age 8.6 as

against 7.5 years. Individual variation here is large. To quote from the reminiscent returns:—

One used to think the sun was a large star which gave light during the daytime and rested on a hill-top at night.

Another thought that when the sun rose and set he was very near the earth, and if she stood on the other side of the distant mountains she could touch him as he went down or came up.

One used to think the moon and the sun the same thing. She could not understand how it could change places so quickly.

"The sun seemed about as large as a dinner plate, and the world seemed shaped like a house and the sky formed the roof while we stayed on the floor. The sun seemed to pass over just under the roof and out of sight during the day, then while we were asleep I thought it must pass under us and get over on the other side where I saw it in the morning."

"The sun always seemed to me very large and warm, and I liked to think he was the stars' father; the moon was their mother. I used to wonder what kept them all up in the sky. I imagined the sun went under the earth every night."

"The sun seemed to me about as large as a very large snowball. Could not see why it stayed up in the sky and used to be afraid it might come down sometime near where I lived."

One used to think the sun was driven back into the east again, after setting, by horses very early in the morning before she was awake.

Another regarded the sun as a light which remained lighted during the day but which went out gradually each night.

"I thought the sun travelled back during the night over the same path it took during the day, but it could not be seen because it was hidden by the clouds."

"I thought that the sun was something like a great big gold dollar that watched everything which we did. I thought there was water behind the horizon, and that when it set, it sailed off on this water. I thought that it was very near. That the stars were the children of the sun. The biggest stars were the oldest children. The moon was something which laughed at us."

One thought it a mass of fire which went out at night when it was dark.

One thought the sun about three feet in diameter. It was about as hot as ordinary fire and God made a new every night and each morning put it in the sky.

Another considered it about as big as a dinner plate. She was never able to understand how it got its heat, for it was only a round paste-board disc gilded and swung about the sky by means of a pulley. There was another similar disc, the moon, covered with silver gilding, which chased it about.

One supposed the sun to be held up by a string from above, but could not understand why she could not see the string. When the sun set it dropped over the edge of the earth and in some way got across to the other edge where it came up in the morning.

"It seemed to me that the sun travelled around the earth and that the moon chased it, because as the sun went down the moon came up."

Another imagined it was stuck up with glue and something pushed it along.

To one the sun came out in the morning and stayed out all day and went to bed at night. It was about as big as a dinner plate and about as hot as fire. It was the moon's brother and the stars were the little brothers and sisters. She also thought when about four years old that the sun was a hole in the sky through which the light of Heaven shone.

Another thought the sun was father and the moon was mother, and the stars were their children.

One thought the sun rose in the morning and was very, very large, but grew smaller as it reached noon, and then larger again toward sunset.

"I thought the sun was a big brother to the moon and that the stars were the little babies and would become big boys and girls."

To one the sun was held in the sky by the clouds. At night they covered it over and it burned low.

"I thought the sun was about the size of our teakettle but very, very, very hot. At night I thought he changed into the moon. When he was pleased with the little children I thought he shone especially bright, but when angry would hide away, so when a rainy day came I tried to behave my very best so he would come out and smile upon me. The clouds I thought were his servants and the stars his little grandchildren."

"I fancied that the sun was of the same material as gold and about as big as a dinner plate. I thought that it moved over us in the daytime and went back to the east in the night. I thought God made it and that it had a light in it or around it like a lamp."

One thought it must be held up by chains. At night the clouds covered it over so it might be dark.

Another was always puzzled as to whether the sun went back the same way during the night, or whether it went under the surface of the earth.

One thought it went back at night when no one was looking.

"I thought the sun about as big as a wash tub and that it was something like a giant who wore a heavy armor. Through the day he was marching, but on cloudy days fighting. At night his armor was divided into the stars. He himself travelled back as the moon."

"I alwas thought the sun was the father and the moon the mother and the stars the little children. I thought the father wore a fiery garment which gave us light and when I first saw it set in the ocean I thought the light would be put out and we would have no more light."

The returns taken directly from children are of the same general type as these just quoted.

Thus a boy five, says the sun is father of the earth, the moon is the brother and the stars are the sisters.

A girl of six says that at night the sun goes down under the earth to heaven.

A boy of six thinks the sun about as hot as a coal-stove and that the good man made a big fire and keeps it burning all the time. The sun and the earth are the same thing. The earth sends the sun up into the sky. The sun comes back to the earth every night and goes out from it each morning.

Another boy of the same age says the clouds keep it from falling down.

A girl of seven says the sun lives in the clouds. "The moon does not shine much in winter, but I guess it would like to make the sun go down so it could shine longer. The sun has n't any "man in the moon" like the moon. The stars are green and the sun is red, but it gets yellow, Oh! a horrid yellow! after it is in the sky a long time. It almost makes me sick, the yellow, I mean. The earth is white and the sun is red. The earth is two or three times as big as the sun. The sun comes up in the morning behind the three houses over the lot. It sleeps in the clouds and when it wakes up it comes right up over the trees and makes everything warm. When it gets tired it goes into the clouds again."

Another girl of five says, "the sun is bigger and hotter than the moon. The stars are pieces of the sun which shine at night and then go into the sun again when it gets daylight. When the sun sets it goes behind the trees and when it rises it comes up above the trees."

Another says, "the sun goes into the water. It is just warm. It is the crown of God's head."

One thinks God told the sun to go into the sky and then it went. She also thinks it is made of gold.

A five year old girl says, "the sun is mamma, the moon is papa. At night it flies home and sees its mamma. It comes back shining in the morning. The sun goes into its house. The house is made of dirt. The clouds go home. The clouds carry the sun over there where it shines. The clouds live with the sun. They are sister and brother. The stars are sons of the sun. They stay home and sleep, and at night come out shining. The stars live in another house than the sun.

The sun is as big as the bottom of a tumbler. The moon is the sun's sister. The stars are brothers of the sun. Somebody put the ladder up to the sky and then put the sun up there. A carpenter made the sun. There is a door in the sky where the sun goes in."

Another says, "The sun is as big as a dollar and about as hot as the stove. The clouds are the bed of the sun. The sun and the moon are both the same. The moon is the big sheep and the stars are the little lambs. The sun was made by getting yellow trunks and putting them together and then making nose, mouth, and eyes. Jesus hung on to the edge of the clouds and put the sun up there."

A boy says, "The sun comes up out of the ground in the morning and goes across the sky and then down into the ground again."

One thinks the sun is a big ball which the angels took up into the sky.

A girl three years old said of a sunset, "Did n't God paint it beautiful?"

Another child of the same age says the sun is something in the sky that "goes out" at night and "makes it all dark."

On the phylogenetic side analogies are very striking and very numerous. To the ancients the earth was an island surrounded by the ocean. The sun rises out of the ocean, travels across the sky and sinks into the ocean at night. Homer speaks of the gates of the sun in the west. The sun is borne across the sky in a chariot drawn by four horses. He has a magnificent house or palace in the east. He gets back into the east by sailing half round the earth in a golden boat. He is the god who sees and hears everything, etc.¹

Among the north American Indians notions concerning the sun are very many. The sun is the wigwam of the Great Spirit among the Algonkins. They do not pray to the sun but to the old man who lives there. Various relations exist between the sun and moon. Sometimes he is husband and the moon his companion, etc.²

In general among the Indians the sun is connected with light

¹ Smith's Dictionary, Classical Antiq., Vol. II, p. 375.

² Ling Roth: Natives of Sarawak, Vol. II, App., p. cxcviii. (Cited by Brinton, Religion of Primitive Peoples, p. 141.)

but not identified with it. The light comes with the dawn and precedes the sun. The light god is not the sun god but its maker or cause.¹ Their creation myths generally represent the sun as having been made by the old people; kindled and kept going by the first men; freed from some cave by a friendly deity; started on its journey by the light god, etc.² The Tribes of the Northwest say that before the sun or anything was created there lived an original giant raven. One day this raven found the sun and put it in the sky where it has been ever since.

With the Kootenays it is either the coyote or the chicken hawk that manufactures the sun out of a ball of grease and sets it in the sky to pursue its course. The Brazilian Indian says the sun is a ball of bright feathers which some mysterious being shows during the day and covers up with a pot at night; and so on.³

We have inserted these few data concerning the sun here to show how far the primitive mind fails to connect the sun with the phenomena of heat and light.

We now turn to primitive ideas of cold.

V. CHILDREN'S FIRST EXPERIENCES WITH COLD.

Of the reminiscent returns, 132 in number, 35% do recall some special early experience with cold which is remembered as the first. This per cent. is a trifle higher than the corresponding instances of recalling first experiences with heat, which was positive in 28%. In the psychoses arising from coldness, as was found in thermo-psychoses, there are two types—pain toned, and pleasure toned. In the psychralgic psychoses the association complex appears to be in the background of consciousness while the temperature is strongly sensed. In the psychredonic psychoses as in thermo-psychoses, other factors of the association complex often quite overbalance the purely cold sensation and the experience becomes pleasurable. In 63%, the pain element is paramount as against 17% of the instances reported, where the pleasure element is the principal thing recalled, due to various associations of cold; as, a new sled at Christmas; going to ride on a cold day, the horse becoming white with frost; being rolled in a snowbank; the pure white snow sparkling in the moonlight and creaking under our feet; the beauty and silent motion of the falling snow; a sled ride, the snow piled high on each side of the path; the

¹ Brinton: *Myths of the New World*, p. 166.

² *Ibid.*, p. 167.

³ Von den Steinen, *Naturvölker Zentral Braziliens*, p. 359. (Cited by Brinton, *Myths of the New World*, p. 166.)

snow looked warm and soft; tumbling in drifts and rolling down snow banks, etc.

In the remaining 19% of relatively neutral cases, the associations of winter are recalled exclusively, but the pain and pleasure element seems lacking. If these are percentages of types it would seem to indicate that painful sensations, at least in psychro-psychoses, are almost four times as likely to be recalled as pleasurable experiences; and that pleasurable and neutral experiences are almost equal in their tendency to be reproduced.

Expressions of curiosity or surprise occur in 12% of the cases. The following are typical of the reminiscent returns.

"I have a faint recollection of making snowballs when a child about four years, bringing them into the house to save them and the surprise I felt on seeing one small lump of snow and a large wet spot on the floor. I also remember catching snowflakes in my hand and trying to keep them from melting."

One tried to warm snowballs in a tin basin on the stove. She was much surprised on returning to find only water in the basin and thought somebody had taken them and put the water in their place.

Another was surprised to find that cold water would burn and warm chilled fingers the same as fire.

"My first experience with extreme cold was in trying to lift an iron latch one bitter cold morning. My hand stuck to the latch and I thought the latch had something sticky on it and wondered why I felt the pain afterward."

"The first time I remember snow was one day when my father carried me out to the sleigh, my little brother came running up to me with a snowball, I held out my hands for it, but one of my mittens came off, and I never shall forget the sensation I felt as the cold snow came in contact with my hand, and how I let it fall instantly, and commenced to cry, I thought it had burned me."

In addition to the reminiscent returns, the cases of 33 children are reported. 16 of these are boys, average age 3.8 years; 17 are girls, average age 3.4 years. Of these instances, 39% are painful; 27% pleasurable; 33% neutral. The ratio of the excess of pain-experiences over pleasure-experiences in the reminiscent returns to the corresponding excess of pain over pleasure-experiences in the cases cited in the children's reports is 2.5. The suggestion from this comparison appears to be that the excess of pain over pleasure with children is not quite half as great as represented by recalled experiences of adults with cold. Colgrove has shown that the class of individuals that remember pain-toned experiences best is nearly as large as the class that best recall pleasurable experiences. When, however, the pain-toned experience is intense or "vivid" it is far more easily reproduced in memory than a merely pleasure-toned experience. That psychalgic experiences are intense and "vivid" and also far more reproduceable

in memory than psychredonic experiences, as the returns suggest, appears to agree perfectly with Colgrove's results.¹

The main types of first reaction to cold are illustrated by the following quotations taken from the children's returns.

A boy of 6 years says, "Jack Frost bited me all over."

A girl 8 years, was sure the world was coming to an end when she saw the snow for the first time.

To another it was flour that God had sprinkled over the ground.

"Where does all this cotton come from? It is cold cotton."

The snow is "sugar," "white dirt," "salt."

The ground is covered with a coat of "whitewash."

A boy of 8, thought the old woman in the moon was dropping feathers from a goose.

A boy of 2, thought the snow was hot.

One wanted to hold her nose because she was afraid the cold would make it break off.

"The cold wind made him cry and run."

It is not nice. Feels "shivery." Her hands "burn" with the cold.

One thought that ice was glass.

Another that it was "paper which hurts." To one it was candy and she began to eat it. An icicle is a "cold pencil," etc.

In the children's reports 57% contain expressions of surprise or wonder, nearly five times the corresponding per cent. in the reminiscent returns.

The pain caused by high and low temperatures does not appear to be differentiated at first by the child. The cold "burns" him, just the same as the heat. There also appears among children to be a tendency to personify cold—the cold bites, etc. *Apriori* instances of caution are very few, occurring in only 6% of the cases. In the remaining 94% there was no hesitancy or fear of touching the snow or ice, but in most cases the sight of it brought the impulse to touch it or take hold of it, or to run into it.

VI. JACK FROST.

Just as fire is the chief agent or feature of thermo-psychoses, so for the child, the legendary Jack Frost appears to take the central place in psychro-psychoses. Judged from the per cent. of positive returns he is nearly as important and impressive as the fire itself; 75% of the reminiscent returns being positive for Jack Frost as against 78% positive for the seeing of faces and forms in the fire. Personal variation is large as a few typical cases will show.

One thought of Jack Frost as an "invisible person who came and pinched our hands and feet for a long while and then ran away, and then after he had pinched a great many people came back to me again."

"I always thought of Jack Frost as a misshapen dwarf with a large head, very red face and white hair."

¹*Am. Jour. Psych.*, Vol. X, pp. 228-255.

"I thought of Jack Frost as a large man dressed in white garments whose chief delight was to bite little boys' and girls' noses."

Jack Frost was a very wicked man that caused a great deal of destruction in general and delighted in biting off people's fingers, and noses and toes.

"I imagined Jack Frost as a kind fairy so small as to be almost invisible, perfectly white, and making his pictures by running up and down the windows." He was kind hearted and loved children.

To one "Jack Frost was a kind of cold devil as Satan was a hot devil."

Jack Frost was a "tiny man" good and kind to little children.

"I always thought Jack Frost was like Santa Claus. Instead of carrying a pack on his back, he carried a pail and brush and painted all the windows as he went past."

"A little, thin old man, with white hair and white whiskers. He made pictures on the windows and put the frost on the ground."

An invisible being, who, when little boys and girls went out on cold days, would bite. I thought he lived somewhere in the air and only descended on cold days.

"A very little man—almost a dwarf, who seemed to fly all over the land and spread a white covering over everything—by means of his breath. He was dressed all in white, with a white cap, and all his clothing seemed to glisten like diamond dust."

"Somewhat like a Brownie, he wore a pointed cap and had very large eyes. I thought he was very kind unless we children were naughty, then he was likely to come in the night and freeze our toes. In winter he lived in a snowbank and in summer he lived in the ground."

"A man who could make cold weather, snow and ice at will."

"I thought of Jack Frost as of decided temperament, just, honest, kind and generous. He seemed to be a short, plump man, with a gray beard, blue eyes, very jolly and good humored. To me it seemed he had power to withhold or send cold weather, but he always did everything in kindness even though it appeared otherwise. When a morning was unusually sharp, then I thought he had been very near me the night before."

One imagined him as coming around in the night and sprinkling a sort of flour on the ground and this rose up in the air making it very cold.

"He lived way up north amid the ice and snow in the same region with Santa Claus, and he was some relation of his. I imagined him as being very small and able to travel very fast."

"I used to think of Jack Frost as a very tall, thin man, with long, sharp fingers."

"A big white monster about the size of a mountain near our house and in which he had his home. He always made a very loud noise, and I thought sometimes he carried a paint brush and painted the windows when he was good natured,"

"A little fellow about six inches tall who looked like the devil's imps. He always had a gray suit and carried a paint brush with a very long handle. I imagined he lived in the mountains and could travel through the air much faster than any bird and he would light on the window and cling to it by curling his toes under."

"Very patient because he painted the windows over and over again each night and never seemed to tire."

"A little skinny fellow who helped Santa Claus."

"An old man that came around early in the morning and marked on the window, and if I was awake early I would get up and wrap in the quilt and wait to see him come to mark the window."

"I pictured him as coming to us with hands outstretched, putting his hands on all the windows and children's faces."

"Very cruel; I imagined him to be an old man with bent shoulders. He had a long gray beard. His hair curled over on his shoulders. His clothes were made of fur."

"I always thought of Jack Frost as a little white dwarf who rode over the snowdrifts, drawn by very small white rabbits in a little sleigh. I thought he did all his work on the windows with a funny little brush. It all seemed to be done in the night and I thought it represented the home and playthings of some other little girl. I have often tried to dig off the outside to see if he had scratched the glass. I thought Jack Frost was Santa Claus' little boy and that he was so small because his papa made him work so much nights. I do not know how I got this idea."

"An ugly old man who went about cracking water pitchers."

"A large black man that goes about before daylight."

One says, "When a child I thought of Jack Frost as being elf-like, gliding around at night, sleeping in a cave in the day. I thought when people were *good* he would paint the windows with pretty things, when we were *bad* he would not paint them at all. I was very much afraid he would nip or pinch my nose if I were bad."

To one, Jack Frost was a short, stout young boy who came around every stormy day and threw the snow about in the air.

To another he was a man with a red nose, and a cap on his head. He had a pipe in his mouth and carried a stick in his hand.

"Jack Frost seemed to me a queer little man, with a long peaked cap, I thought that he rode on the wind, and in the night his breath against the window-panes froze into queer shapes, sometimes he used a brush and painted with the vapor, shapes of trees, houses and hands."

"A short man, who lived in a small snow house, situated on a hill."

"A short, fat man, with a round, red face, always running. He came only in the winter time and had the power of turning everything white that he breathed on."

"Jack Frost was a great big icicle hanging from the roof of the house."

Beside the reminiscent returns, there were also 250 from children. Of these, 62 were from boys, average age 10 years, and 188 from girls, average age 7.5 years. From these figures it would appear that Jack Frost reaches his maximum influence somewhat younger in the case of girls, than with boys. The larger number of girls giving positive returns for Jack Frost would further seem to indicate that he is a far more important personage with girls than with boys. The following quotations are typical of the children's returns.

"Jack Frost is cold. Makes wood, trees, fields and flowers on window-panes."

Another says, he comes at night lest he be run over by day. He is a great big, black bug and stays in a hole.

"Jack Frost is a snowflake, but not the same as those of the snow storm."

"Jack Frost is a tall, thin man, black whiskers, carries a cane and everything he touches with it cracks."

"He belongs to Santa Claus family, lives in the icebergs, and comes at night and nips grass short, so we don't need the lawn mower."

"Very small man riding through air on snowbird. Carries ice sword with which he opens chestnut burrs."

"A man made of snow, big eyes, and was carried by wind. Ice on windows, his frozen breath; was out after dark making children freeze who came outside."

Little man with ice sword and if people did n't let him in, he would stick it in through the wall. Rides on snowbird. "Nobody" told him this.

Lives at North Pole, is old, and very fat with long whiskers, dressed in fur. Makes rivers freeze, paints on windows, nips toes of little girls and boys.

He is jolly, has icicles for whiskers and hair. Whenever she sees icicles on houses, knows that Jack Frost lost one of his hairs. Has an icicle cane and cloak of snow.

Pretty cold fellow gives people red noses. Does n't do anything good but brings snow.

Is roguish and bites noses. Makes it hail and snow, draws pretty pictures on windows, bites hard and so kills plants left out over night.

A fellow with pleasant face and with a bag of complexion powder.

"I don't think there is any such a man as Jack Frost."

Very strong fellow. Has all kinds of shapes, like trees, bushes, birds, persons, houses, stars, always very cold.

To one he looked like an owl and came out of the ground.

"Some kind of an animal and bit off noses, fingers and toes; came round only at night. Walked right through the door when it was closed."

"He looks like a pigeon."

"Jack Frost looks like snow on the roof, and he can make the ground hard; makes it cold and slippery and gets through the cracks."

A boys says that he brought the cold, and lives in a garret. Made noise (howling of the wind). Afraid of being caught by Jack Frost.

"Jack Frost is little. I like him. He lives in Heaven with God."

"He's waitin' to throw down more snow."

Again—he is a kind little fairy, makes trees and grasses look pretty and puts pretty things on the windows.

"Jack Frost paints windows with little ferns and leaves."

To 59% of the boys' returns and 27% of those of the girls, drawings of Jack Frost are added bringing out with great prominence some of his traits. These it would be interesting to reproduce. For instance, he rides a bird larger than he; carries a long spear, has a red nose, is covered with ice, is blowing a blast with distended cheeks. Skimming over the snow, his ear is frozen, his feet half melted, his hand is pinching a boy's nose or toe; he is melting, shaking down snow; only his hands and brush are seen above a drift, he is painting, his house is drawn, etc.

There are some marked sexual differences in tabulating the ideas of 234 children. Twenty girls and one boy make him resemble Santa Claus. Eighteen girls and no boys make him an elf or fairy. Girls make him small. He is more often pleasant, nice and jolly with girls, who give greater details about his dress. Boys tell more of his out-door work and life, and less often specify that he works by night. Only boys made him an indian or devil, rough, a hard worker; state that he

freezes the ground, makes sleighing, and only girls make him invisible and spirit-like, give him white hair, make him cross or to punish bad children, think him wholly bad, specify crust on the snow as his work; say he is quick or loves children.

There appears to be some sort of tendency in the child mind, as with the savage to demand some kind of *central agency* or *emanating source* for any kind of energy. The child apparently is not very much impressed with how the thing is done. He compensates for this deficiency seemingly by assuming a personal agency which accounts for everything. Brinton conceives animism or the universal conception of primitive man that conscious volition is the ultimate source of all action, the underlying principle.

Jack Frost in story and myth has a very voluminous literature. The following very few of the many accounts of Jack Frost are from Russian myths, by Ralston. To the Russian peasant, Jack Frost is as real a person as to the child. On Christmas Eve the oldest man in the family takes a spoonful of kissel, a kind of pudding, and putting his head through the window cries, "Frost, Frost, come and eat kissel. Frost, Frost, do not spoil our oats; drive our flax and hemp deep into the ground." The Tcheremisses are afraid of knocking the icicles off their houses, thinking if they should do so Jack Frost would get angry and freeze them to death. The frost is often described as a mighty smith that forges strong chains with which to bind the earth and the waters. An antique way of saying, the river is frozen over, was, "the old one has built a bridge without an ax or a knife." A peasant goes out and finds his field of buckwheat broken down. Knowing that Jack Frost has done this he sets out to find him to complain of his damage. After wandering about in the forest for a long time at last he comes to a hut made of ice and covered with snow and hung with icicles. Frost, an old man, dressed in white, answers to his knock, etc. In stories, generally, Jack Frost is a hero in some escapade, or he bestows gifts on good people and visits ills on bad people. He appears to be specially active in behalf of children that are made fun of or ridiculed by their companions, etc. He appears to have a special hatred of hypocrisy, pride, and selfishness.

Although the West Aryan nations are supposed by some authors to have originated in Central Asia, the climate and scenery of the north has had by far the greatest influence in shaping their beliefs. It is among the northern peoples that we find the cold personified as well as the fire by contrast. This phase appears to be far more often absent from the myths of southern races. The dangers incurred in hunting and fish-

ing, the cold, penetrating storms, the suffering and privation of long, cold winters made our ancestors think of cold and ice as malevolent spirits, while equally with the races of the south fire is deified and given a large place for its heat and light. Thus in northern cosmology earth was created from a mixture of fire and ice. Summer and winter are the rulers of the seasons. Summer inherited a gentle disposition and was beloved by all except winter who was his deadly enemy. Winter was a very disagreeable god; personified by the icy wind. As the cold winds always came from the north, these races pictured a giant clothed in fur and eagle plumes sitting at the extreme northern edge of the heavens. Whenever he raised his arms or wings the cold blasts darted forth and swept ruthlessly over the earth blighting all things with its icy breath. Uller, the winter god, is often represented as travelling on broad snowshoes or skates, clothed with thick furs. He supplants Odin during the winter months. In summer Odin drives him to the frozen north or tops of the Alps. Uller is very parsimonious and never bestows any gifts on men. He is also god of death. The people visited Uller's shrine in November and December to entreat him to send a thick covering of snow over all lands as a promise of good harvests.

Among the North American Indians myths of snow and winter occur, one of the most typical being in the Algonkin legends. The hero Glooskap goes very far north one day where all is ice. In a wigwam he finds a very great giant whose name is Winter. Glooskap entered the hut and sat down and the winter god gave him a pipe. He smoked, and the giant told stories of the olden time—the charm was on him, it was frost. He talked on and froze; Glooskap also slept and did not wake up for six months. Then the charm fled and he set out for home which was to the south. At every step it grew warmer and the flowers came up and began to talk to him. Soon he returned to the wigwam of Winter but now he had the summer in his bosom. Very soon the sweat rolled down Winter's face and then he began to melt and finally entirely disappeared as also did his wigwam. Then everything awoke; the grass grew and the fairies came out and the snow ran down to the rivers carrying the dead leaves. Such legends are legion in number.

VII. FACT AND EXPLANATION.

Total number of returns 216, of which 105 were from boys, average age 11.7 years; and 111 from girls, average age 11.4 years. From the character of the answers to the following questions almost without exception, it would appear that child-

ren of this age considered them entirely irrelevant. A few quotations will show the general nature of the answers.

Why Does Cold Turn Water to Ice?

Cold comes in contact with the water and gets into it. So we can keep it in the summer. Cold makes it harden. So we can go skating in the winter. God wants it to turn to ice. Cold turns water to snow, this freezes and makes ice. Jack Frost blows his breath on the water. Because it is cold. Because it freezes. Oxygen in it freezes. Because it is a cold vapor. Because the temperature is low. The cold goes right through the water and holds it there. The vapor comes together and freezes. Cold rains and it freezes. Because the moisture is around. Water can't go so fast when it gets cold, so the wind makes it freeze. Because the cold is so strong, etc.

Why Does the Heat Turn Water to Steam?

Because the heat makes it hot so that it will turn to steam. Water in the teakettle has to boil a little and then it turns to steam; steam and smoke are the same. Don't know how, never looked at it. Because the stove is hot. Because the water is so hot. By heating it. Because it boils. Water gets hot and that's what makes the steam come out. The water dries and that makes the steam. Because the air mixed with the water. Because heat is something like fire and when you put water on fire it makes steam. Because the heat is terrible hot. Steam is a mass of something or other like smoke, when cold things touch hot things they begin to fizzle and sizzle and steam comes. Because it thaws it out and melts it. Because it is so warm it turns the water to steam, then the steam turns into vapor. Water gets overheated and turns into steam, etc.

Why does the Air Shake on a Hot Day over a Hot Stove?

It is the sun moving. To keep us cool. The heat makes it. Cold air gives the hot air a chill. Heat dries the moisture and the oxygen. Because the cold oxygen gets heated. No cool air to cool it. Because it is cold and the warm shakes it. Heat dries it and the cold puts it in motion. Because it can't go down to the stove. Because there is no draft. Because of vapor coming out of houses on washing days. The heat is moving and makes it move with it. Air around it is hot and it has no place to go. Heat dries the moisture up. It shakes vapor-steam. Tries to get away from the hot place and can't. Hot air fights with the cold air. The earth shakes as it makes the air shake. The heat shakes because it is so thick. The wind is stronger than the heat. Tiny fairies in the air trying to run away from the sun. The cold air comes down and the warm air tries to get away, etc.

The general negative or vague character of these three groups of answers as to *how* the thing is done—what the *mechanics* of the phenomena in question are—would seem to indicate that the mechanical notions of the child up to about 12 years of age, at least, are practically nil. The numbers of the boys and also their average age being so near that of the girls, the indication is that boys up to this age show not the slightest superiority in mechanical insight or capacity over that of girls, both being equally deficient.

This same phase was also indicated in children's ideas of the

sun. While the fact of being impressed with the motions of the sun was very general, attempts to explain it were rare.

That the child is profoundly impressed up to the dawn of adolescence, with *facts* in the large, is indicated by the marked interest shown in every phase which the questionnaire covered; the fire itself, the noises of the fire, the smoke, the ashes, the snow, the ice and frost; but also that the explanation of facts from the adult standpoint finds little capacity for comprehension by the child.

The same phase also appears in children's drawings and descriptions of thermometers of which the following are typical.

(a) Description of the thermometer.

F., 14, 7—Line moves up and down. M., 11—Medicine in the tube. M., 10, F., 14—Color in the tube. F., 10—Silver rod in the tube. M., 13—Black glass. M., 12—Pointer. M., 11—Little finger. M., 12—Oil in glass, moves up and down. M., 8, F., 13—Tube filled with water. M., 11, F., 12—Mercury or alcohol. M., 8—Purple thing. M., 12—Little fluid. 2 M., 8—Stuff. M., 7—Boiled snow. 23 boys, 12 girls, quicksilver—little mark moves up and down, M., 7—Little silver thing. F., 8—"Silver-looking water." M., 7—Red glass. F., 7—Red water. M., 8—Red ink. F., 13—Red liquid. 8 boys, 4 girls—Made of wood, glass, or tin. 2 M., 8, 9—Figures mean heat and cold. 2 F., 11, 8—Little thing inside rises and falls. 3 M., 14, 13, 11—Heat causes to expand and cold to contract.

(b) What the Thermometer does.

3 boys, 4 girls. Tells the temperature of the weather. F., 12—Tells the heat of the temperature. 6 boys, 5 girls—Tells the temperature of the room, hot or cold place. 5 boys, 13 girls—Tells what kind of weather. 63 boys, 55 girls—Tells whether, how, or when, it is hot, warm, or cold. F., 13—Temperature affects the thermometer. 6 boys, 6 girls—Hot day it goes up—cold, down. 2 F., 13, 7—Tells or regulates the heat of the room. 3 boys, 8 girls—Tells the number of degrees the weather, air, or climate is. F., 8—Affects the weather in some way. M., 7—Change in thermometer regulates weather or temperature. M., 5—Tells the time of the heat. M., 7—Tells how hot you are and how cold you are. M., 9, F., 11, 10—Tells how much above and below zero it is. F., 13, 10—Used in sickness. M., 11—Can't explain it.

Some of the general descriptions are as follows:—

F., 9. The thermometer has a little bottle of water in it. Tells when it is cold and warm; tells time. It is a heat and cold tool—is pushed with our hands.

M., 8. Saw mercury go up when finger was placed on bulb. Asked what made it—answered "finger."

F., 8. Some kind of a wonderful thing which affected the weather; had a kind of awed feeling about it.

M., 8. Heat makes the temperature higher and higher—makes the stuff hot and that makes it go up.

F., 7. Black line in the middle pushed the heat up and made it real hot.

F., 5. Thing that tells how hot it is; and if there is a big thermometer, why its awful hot.

M., 7. Long glass tube in the middle in which is a piece of red

glass. When the red glass moves up the weather gets warmer; down, colder.

M., 8. Reason we have the thermometer is because we can tell the heat and cold.

M., 8. Thermometer tells when it is hot or cold as the clock tells time. Made of glass, tin and wood; glass tube filled with water.

F., 21. As a child—red liquid meant blood—thought they had the same temperature.

F., 9. Tells us the heat of the day so we'll know whether we're freezing or roasting to death.

F., 10. Is to tell if it is too warm or too cold in any place.

M., 14. To show how many degrees it is warm or cold. If the quick-silver stands below zero it is cold; if above, it is warm, etc.

Thus it appears that children as early as five years do understand that there is some connection between the weather and the thermometer. The child's first impression seems to be that the thermometer controls or regulates the weather. A considerable percentage of cases in boys and girls from five to eight years show this phase. From eight years on the notion of the weather affecting the thermometer appears to be well established. The child seems to be very much impressed with the fact as is shown by the descriptions, but HOW the weather affects the thermometer scarcely received a passing thought. This again emphasizes the point that the child's mechanical capacity is very slightly if at all developed up to at least 12 or 13 years.

Very analogous is the condition in primitive man and the savage. His notion of machinery is almost nil. He does not until very late pass the stage of a few simple tools; as, crude implements for cutting, smoothing, digging and perforating, a few simple devices for grasping and holding, and nearly any stone of convenient size for pounding, crushing and fracturing. With civilized man the age of mechanical invention *par excellence* also comes late, so late in fact, that if we are now living such a period, the past generation can almost be said to have seen its beginning.

(c) General Analysis of Drawings of the Thermometer.

78 boys, 45 girls thermometer drawn with mercury; 20 boys, 35 girls, without mercury. 33 boys, 17 girls, mercury in both bulb and tube. 7 boys, 8 girls, mercury only in bulb. 2 boys, perfect thermometer. 18 boys, 22 girls, drawn with case, tube and mercury tube extending all or part way, points poorly developed. 16 boys, 6 girls, the same with no points, bulb poorly developed. 6 boys, 1 girl, case, tube, and mercury only. 6 boys, 13 girls, case and no mercury, points and numbers poorly developed. 6 boys, 6 girls, case with mercury, tube, numbers extending part way. 4 boys, 5 girls, with mercury or tube or both; points and no numbers. 20 boys, 12 girls, with mercury, tube, marks and no numbers. 54 boys, 83 girls, case and numbers only. 3 boys, 1 girl, case only, etc.

This seems to further emphasize the point already noted

that the child is not a close observer but rather sees things in the large, and that his ideas of the simplest of all measurements of temperature are dim and hazy.

VIII. WHICH IS WORSE, A HOT OR A COLD DAY?

Of the total number of answers 215, 60% consider a hot as the worse, as against 39%, who think a cold day worse. 75% of those preferring a cold day to a hot, give reasons. Of these 80% give, as the sole reason, the unpleasant, disagreeable, or painful feelings experienced on a hot day; while in all but 14% of the reasons given, this idea is expressed. In the cases of those who dislike cold weather more than hot, these percentages are somewhat different. Here 63% also give reasons for their dislikes of cold. In 42% of these cases, the feeling element is the sole reason given; and is expressed in some form in 57%. Of the total number of answers to this question, 6% only find heat and cold equally disagreeable.

If Obligated to Choose, which would you Prefer, Freezing or Burning to Death?

The same idea is still further expressed in the answers to this question. Of the total number of replies, 133, 88% prefer freezing to burning, leaving 12% who would rather be burned. Here, also, for those preferring a death by cold, the feeling element is the principle and almost the only reason. Of those preferring burning to freezing, 58% give a reason. 70% of the reasons consider burning far more rapid and hence easier than freezing. Of the other reasons given, one would rather be burned, for then he would not have to be buried. Another, "rather burn because my soul might go to heaven." Another, "If I froze I would get squeezed up in a little lump like iron;" hence would rather burn, etc.

Why high temperature should be more painful than low temperature and how this apperception has evolved in the race is unexplained. The temperature norm lies much nearer the pain limit in its upper range than in its lower—that is, in lowering the temperature the pain limit is not reached nearly so soon as in ascending the scale from the somatic norm. In experimenting on the temperature and pain senses Pace found that heat began to be painful at 48° C.¹ His steady pain results were obtained with a temperature of about 55° C., while 60° C. was too uncomfortable for experimentation. Thus the pain limit is only about 10 (C.) degrees removed from the normal. To go down the scale from the bodily norm of temperature about 20 (C.) is required to reach the normal atmospheric

¹ Pace: Report of Second Annual Meet. of Am. Psych., p. 25.

temperature and the pain limit must lie considerably below this point. Thus the pain limit for low temperature is considerably more than twice as many (C.) degrees removed from the somatic temperature norm, and likely much more than three times as many (C.) degrees as lies between the norm and the upper pain limit. The organism of warm blooded animals is essentially heat manufacturing, and is comparatively poorly equipped for refrigeration. Cold can be resisted much better than heat.

Again children are much more carefully guarded from extremes of cold than of heat. These three facts may, in a degree, explain the apperception of heat as more painful than cold.

What would Happen if it kept on Slowly Growing Hotter and Hotter?

Ninety-eight returns, of which 43 are boys' average age 10.5 years; 55 girls' average age 11.5 years. The following tabulation shows the variety of the answers. It is arranged as near as possible like the order developed in the returns. These returns were gathered in mid-winter and the starting point is, therefore, with snow and ice.

- 1st. Ice and snow will melt; 2 boys, 5 girls.
- 2d. Could n't slide and coast; 1 boy.
- 3d. It would begin to rain; 2 boys, 1 girl.
- 4th. People will go to work; 2 boys, 1 girl.
- 5th. Thinner clothes; 2 boys, 6 girls.
- 6th. Plants, trees and birds will begin to grow; flowers will come; and birds and fruits; 8 boys, 8 girls.
- 7th. Everything will grow up to the North Pole; 1 boy.
- 8th. Rivers, brooks, springs, wells and ponds will dry up; 12 boys, 19 girls.
- 9th. Plants will not be able to grow any longer; 4 boys, 4 girls.
- 10th. Butter and soft things will melt; 2 girls.
- 11th. People will sweat; 1 boy, 1 girl.
- 12th. Faces and hands will get red; 1 girl.
- 13th. Scorch your hands; 1 boy.
- 14th. Faces will grow dark colored; 1 boy, 2 girls.
- 15th. Negroes' skins will grow black; 1 boy.
- 16th. People will store up food; 1 girl.
- 17th. Electric fans will be used; 1 boy, 1 girl.
- 18th. Will have to keep fanning all the time; 1 boy.
- 19th. Ice will have to be used; 2 boys.
- 20th. Animals will have to be sheared; 1 boy.
- 21st. Cannot go to school; 2 girls.
- 22d. Water will grow hot; 3 boys, 2 girls.
- 23d. People will stay out of doors; 2 girls.
- 24th. People will cook out of doors by means of the sun; 1 girl.
- 25th. Cannot eat meat; 1 boy.
- 26th. People will be unable to work; 2 boys, 5 girls.
- 27th. Stores will close; 1 boy.
- 28th. Vegetation will die; 11 boys, 15 girls.
- 29th. People will have diseases, as fevers, etc.; 3 boys, 5 girls.
- 30th. Dust will become thick; 1 girl.
- 31st. People will smother; 3 boys, 1 girl.

- 32d. People will roast ; 2 girls.
 33d. People will melt ; 3 girls.
 34th. People will get sun-stroke ; 1 girl.
 35th. Hen's eggs will cook in the nest ; 1 girl.
 36th. Volcanic eruptions will break out ; 1 girl.
 37th. The ocean will dry up ; 1 boy.
 38th. Animals will die :
 (a) of hunger ; 3 boys.
 (b) of thirst ; 2 boys, 1 girl.
 (c) of heat ; 4 boys, 10 girls.
 39th. Emigration to all sorts of cooler places ; ice houses, refrigerators, the country, North Pole, etc. ; 6 boys, 1 girl.
 40th. Earth will crack open ; 1 boy, 1 girl.
 41st. People will die :
 (a) of hunger ; 8 boys, 12 girls.
 (b) of thirst ; 4 boys, 7 girls.
 (c) of heat ; 17 boys, 16 girls.
 (d) of fever ; 3 boys, 2 girls.
 (e) of thick air ; 1 boy.
 42d. Everything will melt ; 1 boy, 2 girls.
 43d. World will come to an end ; 1 boy, 1 girl.
 44th. Everything will either burn at the last ; 12 boys, 10 girls ; or, the world will be left a desert ; 4 boys, 4 girls.
 45th. Finally, the sun will burn out ; 1 girl.
 Expressions of pity ; 1 boy, 13 girls.

In the development of this progressive universal catastrophe, the most marked reaction of the boys would seem to be that of emigration ; as 14% of the boys' returns develop this phase as against 1%+ of the girls'. The girls appear to vary from the boys in the development of the sentiment of pity ; shown in such expressions ; as, that would be a very sad thing to happen ; people will be glad to see the fruits, flowers, etc. ; hopes such a sad thing may never happen ; hopes God will send food to the starving people ; people will suffer ; it will be disagreeable ; no enjoyment for us to live ; I feel so sorry for the poor ; it would be terrible ; and the like. These expressions occur in 23% of the girls' returns as against 2% of the boys'.

What would Happen if it kept on Slowly Growing Colder and Colder?

The total number of answers to this question was 130, 53 of which were from boys, average age 10.3 years ; and 77 girls, average age 10.6 years. The answers are arranged as nearly as possible to the order developed in the returns. The starting point is mid-winter, the returns being gathered in February.

- 1st. People will salute each other when they meet with—"Turning cooler to-day !" 1 boy.
 2d. Caps will be pulled down over the ears ; 1 boy.
 3d. It will begin to freeze. Snow, ice, and frost will be everywhere ; 10 boys, 11 girls.
 4th. Nothing will be able to grow ; 9 boys, 5 girls.
 5th. No more rain will fall ; 1 boy, 2 girls.

- 6th. Rivers, lakes, ponds, springs and wells will freeze up; 20 boys, 18 girls.
- 7th. Have fun skating, sleighing, and coasting; 4 boys.
- 8th. Icebergs will be up in the north; 1 girl.
- 9th. People will catch cold; 1 girl.
- 10th. People will put on thicker clothes, wrap up, wear furs, etc.;
- 15 boys, 11 girls.
- 11th. Cannot go to school; 4 girls.
- 12th. Cannot go out; 9 boys, 9 girls.
- 13th. Sit by the fire and talk; 1 boy, 3 girls.
- 14th. People will begin to get thinner on the streets; 1 boy.
- 15th. Wagons cannot go about the streets; 1 girl.
- 16th. Trains will be blocked up by the ice; 1 girl.
- 17th. Birds and animals will migrate south; 2 boys, 5 girls.
- 18th. Flowers and delicate plants will freeze; 4 boys, 1 girl.
- 19th. Cabbages will freeze; 1 boy.
- 20th. Cattle will have to be fed often; 1 girl.
- 21st. All the water will freeze up so that there will be none to drink; 6 boys, 12 girls.
- 22d. People will have to melt snow and ice to get water; 4 boys.
- 23d. Coal miners will have to stop working; 1 girl.
- 24th. The south wind will freeze; 1 boy.
- 25th. Many vague fears will be common. People will begin to think the North Pole has sunken in and that we have shot round the globe to that point; 1 boy, 1 girl.
- 26th. People will start for the woods to get more wood to melt the snow and ice and will freeze on the way; 1 boy.
- 27th. Fuel will have to be piled constantly on the fire; 1 girl.
- 28th. Animals from the north will migrate here; 1 boy, 1 girl.
- 29th. People in the country will be unable to get anything to eat; 1 boy.
- 30th. Vegetation will die; 8 boys, 14 girls.
- 31st. Will have to eat strips of fat meat; 1 girl.
- 32d. Could not work out of doors; 3 boys, 4 girls.
- 33d. Shops and mills will have to "shut down;" 1 boy.
- 34th. Business will come to a standstill; 3 girls.
- 35th. Money will give out; 1 boy, 1 girl.
- 36th. The price of food will rise so high that nobody can buy it; 1 boy.
- 37th. Stores will close; 1 boy.
- 38th. There will be famine; 2 boys.
- 39th. Dense ignorance will prevail because the children cannot go to school; 1 girl.
- 40th. Trees will grow dwarfed; 1 girl.
- 41st. Fuel would be used at so rapid a rate that soon the forests would disappear and wood will cease; 1 boy, 2 girls.
- 42d. Be no oil to burn; 1 girl.
- 43d. Grain will freeze; 2 boys, 1 girl.
- 44th. Little children will be sick; 1 girl.
- 45th. People will be dwarfed; 1 girl.
- 46th. People will be sick; 2 boys.
- 47th. Commerce will stop; 2 boys, 1 girl.
- 48th. Navigation will cease; 7 boys, 1 girl.
- 49th. Water pipes will freeze and burst; 6 boys, 1 girl.
- 50th. Birds will die and there will be no more birds' songs in the morning; 1 boy, 2 girls.
- 51st. The rats will freeze out; 1 boy.
- 52d. Boys and girls will go south; 1 girl.

- 53d. It will then be a Klondike; 1 girl.
 54th. Be worse than a Klondike; 1 boy.
 55th. The mercury will freeze; 1 boy.
 56th. The wind will blow; 1 girl.
 57th. There will be blizzards; 1 boy 1 girl.
 58th. People will be imprisoned in their houses by the snow and ice; 1 boy.
 59th. The weight of the snow and ice will break down the houses; 1 boy.
 60th. Animals will die:
 (a) of cold; 11 boy, 13 girls.
 (b) of hunger; 2 girls.
 61st. The ocean will freeze solid; 1 boy.
 62d. People emigrate south; 1 girl.
 63d. No fire can burn—it would freeze; 2 boys.
 64th. People will be unable to breath because the air will get so thin; 2 boys.
 65th. People will get torpid; 1 boy.
 66th. Little children will freeze; 4 girls.
 67th. People will commit suicide to keep from starving; 1 boy.
 68th. People will die:
 (a) of cold; 41 boys, 47 girls.
 (b) of hunger; 9 boys, 13 girls.
 (c) of thirst; 3 boys, 4 girls.
 69th. Not a living thing will be left on earth; 3 boys, 1 girl.
 70th. Everything will freeze; 9 boys, 14 girls.
 71st. Freeze our bodies to nothing; 1 boy.
 72d. Iron bridges will draw up; 1 boy.
 73d. The dead will lie unburied; 1 girl.
 74th. The ruins of people's houses will crumble in decay; 1 boy.
 75th. Only the barren earth with snow piled high will be left to tell the story; 1 boy.
 76th. The mountains will crumble away; 1 boy.
 77th. The world will be left a barren plain with great rivers and oceans of ice; 1 boy, 2 girls.
 78th. Everything will be stiff; 1 girl.
 79th. Finally, the earth will be left a block of ice; 1 boy, 1 girl.
 80th. At the end the sun will cool off and all will be darkness; 1 girl.
 Expressions of pity; 1 boy, 6 girls.

Neither in the corresponding questions on progressive heat nor in these here considered, does the element of time seem to enter the child's ideas, except in the case of one boy of thirteen.

He says, that in 100 years everything on earth, except at the equator would freeze. It would take 1,000 years to freeze every living thing on earth including the equator.

These answers seem to warrant the conclusion that the child does have some notion of a wide range of temperature reaching far down the scale and also having a very decided effect on matter and the world in general as well as on life. This development, however, is clearly not the notion of any single child either in the case of progressive heat or cold. Each child contributes only a fraction of the notion as a whole; yet, however vague the notion of the individual child, the notion as a

whole is in the child-mind taken collectively. The fact that these individual fragments when put together make a logical system is suggestive of what likely is the way in which myth, legend and religion grow up with primitive man.

Another noticeable suggestion appears to be that facilities for resisting cold are much more effective than were developed in the corresponding answers on progressive heat. The movement is nearly twice as slow. Expressions of pity are far less numerous and the pain element is also much less apparently.

This seems to be quite in line with the current idea that high temperature is more painful than low temperature. This is emphasized by the answers, as we have seen, to the questions asking which is worse hot or cold weather; and which mode of death is preferable, burning or freezing.

The questions which brought out these last two sets of answers were suggested by the fact of the enormous range of temperature, now well established, as compared with the very narrow biological and even narrower normal or optimum range of man and the warm blooded animals.

The normal temperature of man varies from 36.25° to 37.5° C (97.2° - 99.5° F).¹ A temperature of 105° F is considered dangerous, often fatal. Below 96° F is a collapsed temperature, 95° F, likely to be fatal.² This temperature varies very slightly with external conditions. The normal temperature of other warm blooded animals is very near that of man. From the compilation of temperature as found by Gavarret the lowest was in the apes 35.5° to 39.7° C; the highest in birds generally, 44.3° C.³ Above these temperatures every-day experience has brought some notion of a higher range of temperature, as that of the flame, etc. The measurement of high temperatures has, however, until comparatively recent times, been considered as not only very difficult, but uncertain as well. High temperatures can now be controlled and measured with a fair degree of accuracy.

One of the most important investigations in high temperature was that of Osmond. He discovered two recalescent stages in iron; one taking place at about 750° C, the other at about 900° . A third transformation in iron was discovered by Ball at $1,300^{\circ}$ C.⁴ The boiling point of Bismuth has been found at $1,500^{\circ}$ C. The temperature of the electric arc is from $3,000^{\circ}$ to $4,000^{\circ}$ C;⁵ while the temperature of the sun, according to the formulæ of Stefan and Le Chatelier, is about

¹American Text-book of Physiol., p. 577.

²Testimony of nurses and physicians generally.

³Am. Text-book of Physiol., p. 576.

⁴Le Chatelier: High Temp. Measurements, p. iii of author's preface.

⁵Daniel: Text-book of Physics, p. 654.

8,000° C¹ (14,432° F). Comparatively recent development in liquifying gases has pushed the lower limit far down the scale.

Ozone has been found to liquify at—100° C, oxygen at—130° C, and nitrogen and carbon mon-oxide at—136° C. Oxygen has been found to boil at—184° C, carbon mon-oxide at—186° C, air at—192.2° C, nitrogen at—194.3° C, and finally hydrogen at—243.5° C, within practically 30 degrees of absolute zero (—273° C, —460° F), the theoretic death-point of matter. In the neighborhood of the lower limit of temperature, physical and chemical laws appear no longer to hold. The resistance of pure metal to electricity falls off. At —200° C yellow phosphorus and liquid oxygen show no signs of reaction; photographic action may take place at—180° C; but reduced by about 80%, etc. Devar expresses it thus: "At a temperature of—200° the molecules of matter seem to be drawing near, what might be called the "death of matter" so far as chemical action is concerned." From absolute zero—460° F to that of the sun at possibly 8,000° C or 14,432° F, the range is 14,892 (F) degrees. The variation in temperature is hardly more than 125 degrees (F) even in extreme conditions from the hottest summer day to the coldest winter day of the temperate zone. This climatic range would be less than 1% the range known to exist, while variation in temperature in the normal human body would be a little less than $\frac{1}{50}$ of 1% of this range.

That the child does have some notion of range of temperature reaching far beyond that of his immediate experience the returns clearly show; also that the child has some notion of its effect on matter. Where the child gets this idea and what its meaning the race consciousness is problematical.

Analogies occur in the prophecies of destruction of the world by fire which are very common in eastern countries.² The Christian doctrine of the final destruction of the earth by fire is also analogous.³

Some analogies of a world catastrophe by cold also appear in mythology. One of the most typical is perhaps that of the Ragnarök or Twilight of the Gods.⁴ "In the first place shall come winter during which the snow shall fall from the four corners of the world. The frosts will be severe, the wind piercing and the weather tempestuous. The sun shall impart no gladness. Three such winters shall pass without the intervening of a single summer. Then will follow three similar winters, during which war and discord shall prevail over the whole world. A

¹Le Chatelier: High Temperature Measurements, p. 194.

²Grimm: Teutonic Mythology, Vol. II, p. 804 *et seq.*

³I Peter. 3:10.

⁴Grimm: Teutonic Mythology, Vol. II, p. 813 *et seq.*

wolf shall devour the sun, and another wolf the moon. The stars shall be hurled from the heavens and the earth so violently shaken that trees will be uprooted and the mountains totter and tumble from their foundations," etc.

Such a prophecy may be a distant echo from the glacial or ice age through which man has undoubtedly passed, and according to many present-day geologists he is likely to again experience such a period. Leaving his warmer home he at least followed the retreating ice in his northward migrations.

IX. DRAWINGS.

As a supplementary way of obtaining children's ideas, they were asked to draw; 1, a hot day; 2, a cold day; 3, the sun on a hot and on a cold day; 4, a snow scene; 5, an ice scene; 6, to write a composition on A Summer—, and A Winter Day. In analyzing the data thus obtained the following points of comparison were noted.

(a) The feeling element expressed.

(b) The nature of the associations.

These are divided into the three following classes. 1. General or benal associations; as, in summer, hazy landscapes, blazing suns, dust, thunder, etc., which would be obvious to any one. 2. Particular or personal associations, which are local and individual; as, the home, the trees about it, work in the fields, the barnyard, the road to school, the schoolhouse itself, favorite haunts, prominent buildings, etc. 3. Indirect associations. These are derived in different ways by the child; in part from reading and instruction, and in part from stories and the imagination. This class finds its chief representation those pictures of an ice scene in which an arctic landscape takes the place of the more familiar objects.

(c) The development of sports and games.

(d) The effects of temperature on vegetation.

Although these points are not exhaustive they represent the main features developed and appear to form the fairest schedule for comparison, which is the chief object in view.

Total number of returns, 2,299. 47 per cent. of these are from boys; 53 per cent. from girls. The ages range from 3 to 17 years, with an average age of 11.3 years for the boys, and 11.4 years for the girls.

From an analysis of the drawings of a hot day it appears that the feeling element is paramount. This phase is by far the most commonly represented, and quite universally the feeling is shown as painful or unpleasant. The drawings that show this bring out very prominently great drops of sweat, fans, sunshades, a very large sun with many rays heavily drawn especially toward the persons. Summer drinks, wells, ham-

mocks, wilted trees and plants, mosquitoes, ice-cream stands. Total number of drawings of a hot day, 570; of these, 33% express the feeling element alone. In 54% it is the principal idea expressed and finds expression in some form in 67%.

Those that show association of wider range are a garden with many plants, a boat scene, a walk over a landscape, a thunder storm, a cyclone, rays from the sun like a thick shower of arrows, the sun itself sweating and showing a beard of rays reaching to the earth, harvesting, bathing, a farmyard, birds, animals, school scenes, summer industries, picnics, washing day, fishing, hunting, a very few tropical scenes. The sports and games of summer are almost entirely by boys, with swimming far in the lead, while the fan and hammock are hardly less prominent in the drawings of girls. Nearly all assume extreme intensity of heat as if most impressed by the exceptional. Diving leads all other activities for boys. In the drawings of a cold day, 560 in number, the percentage of the feeling element and the general associations, fall below those of heat. The percentage of sports and games rises above that of hot weather six or seven times. In other respects the differences are slight. Where in the drawings of a hot day we have luxurious vegetation, about the same percentage picture vegetation as dead or absent in the drawings of a cold day. The following percentage tables will show these contrasts.

DRAWINGS OF A HOT DAY.				DRAWINGS OF A COLD DAY.			
Total Number of Drawings, 570.				Total Number of Drawings, 560.			
	1	2	3		1	2	3
F.	33	54	67	F.	26	38	52
G. A.	6	11	33	G. A.	5	11	30
P. A.	1	2	15	P. A.	1	1	19
I. A.	$\frac{1}{10}$	$\frac{1}{10}$	0	I. A.	$\frac{3}{10}$	0	0
S.	$\frac{1}{10}$	1	3	S.	7	6	6
L. V.	4	10	12	D. V.	6	11	12

In the above, F. = feeling, G. A. = general association, P. A. = particular association, I. A. = indirect association, S. = sports and games, L. V. = luxuriance of vegetation, D. V. = dead vegetation. Column 1 = the only idea expressed. 2 = the principal idea expressed. 3 = the idea recurring as subordinate.

Many of the drawings of a cold day show only a landscape, or road, or house with no person in sight. Smoke from chim-

neys much in evidence. Of course snowstorms with relatively immense flakes, sometimes as large as the houses, are common and there are drifts almost covering the houses and house-tops. Country scenes, fires, much and usually very dark or black clothing abound, and by far most scenes are rural.

There also appears to be a slight difference in the psychoses expressed in the drawings of a snow scene and of an ice scene. The feeling element is slightly greater for the snow scene while it is considerably less than in the drawings of a cold day. Indirect associations are entirely lacking in the drawings of a snow scene; while sports and games in the drawings of an ice scene are about twice as common as those pictured in the snow scene, and about three times as common as those represented in the drawings of a cold day. The following tables of per cents. will show these differences.

DRAWINGS OF A SNOW SCENE.				DRAWINGS OF AN ICE SCENE.			
Total Number of Drawings, 320.				Total Number of Drawings, 297.			
	1	2	3		1	2	3
F.	0	$\frac{9}{10}$	18	F.	0	0	4
G. A.	10	9	44	G. A.	21	4	12
P. A.	$\frac{3}{10}$	3	42	P. A.	$\frac{3}{10}$	0	12
I. A.	0	0	0	I. A.	6	0	0
S.	10	7	8	S.	29	8	5
D. V.	1	10	20	D. V.	1	9	6

The following additional characteristics also appear: (a) 51 per cent. of the drawings picture the sun as larger on a hot day than on a cold day. (b) 20 per cent. represent the sun as clouded on a cold day in contrast to the sun on hot, drawn as in a clear sky. (c) $\frac{8}{10}$ of 1 per cent. represent the sun on a cold day as entirely removed from sight.

The tabulation of the compositions on the same schedule as that of the drawings gives the following results. (See p. 77.)

The sun on a hot day is commonly drawn larger, in heavier colors even though the color be black, with more, thicker, longer and heavier rays. In many pictures it is nearer and generally more in evidence. This and focalization of attention and effort upon some one point, *e. g.*, the flies, beer mug, snowballs, flakes, mittens, suspenders, skates, sled, dog, etc., which are either magnified, detailed or both, out of all harmony and proportion, betray at once the center of interest of the drawer and show

A HOT DAY. Total Number, 91.				A COLD DAY. Total Number, 107.			
	1	2	3		1	2	3
F.	42	61	77	F.	31	42	75
G. A.	3	5	13	G. A.	2	8	24
P. A.	4	2	1	P. A.	0	0	$\frac{9}{10}$
I. A.	4	0	2	I. A.	6	$\frac{9}{10}$	1
S.	1	4	18	S.	6	16	18
L. V.	2	3	6	D. V.	2	8	7

that the child's early efforts with the pencil, as Lukens and Barnes have shown, are to set forth what the mind and not what the eye sees. Hence the inside and outside of a house, three sides of a house, clothing and the body under it, etc., all set forth thought, not sense. No model is wanted. That would only confuse. There is no attempt to select a seasonal scene that is in any degree typical or symbolic, but any concrete experience or observation is focused on and even slightly general implications are few and late. In conceiving winter the child cannot get away from new skates with the latest fastenings, and summer centers in the diving board. No less than we marvel at the suggestibility and profusion of fancy before the blazing fire are we amazed at the mental poverty in ideas and the weakness of conceptual thinking, the almost animal inability to mould many facts into the unity of ideas when the child tries to render an account of what is involved in change of seasons, of temperature, the nature of heat, the place of the sun in our system. Almost up to puberty the contents of the child's mind upon these latter themes seems to consist chiefly of a few scattered images and memories of badly observed individual experiences with very few signs of anything that can be called reason or even real thought, save in the cheap texture of local and temporal association and even these are extremely restricted. A few impressions are scattered over a vast field as if sensations and motor reactions, or the so-called projection system, were not in order of development, and the processes that connect these unrelated centers of interest were yet to be developed. But although this is the sense age when images are most numerous and indelible, it seems anomalous that careful observation is rare, if not almost impossible. This is partly because it is so focused upon single details and partly free

fancy, which we conceive as the field where psychic heredity has its freest play.

In perhaps no respect does the ignorance of the child seem quite so utterly brutish and hopeless as in its conception of the sun. It is a hole, yellow paper pasted on to the sky, hung up by Jesus like a Chinese lantern, as big as a plate, very near, held up by clouds, turns nightly into the moon, slips around behind the clouds or under ground by night, is father of a family, gets up as we do when it is light, has little or no connection with seasons, but is a mere incident in the sky, sometimes getting almost as hot as fire, put out at night, bright if the child is good, hiding behind clouds if it has been naughty, etc. All this mental darkness only made more visible by here and there a glimmer of classical mythology or of modern science, a state of mind inconceivably below the crudest sun worshipper, a mizmaze of felted confusion and mental chaos.

The thermometer, too, is misconceived in nearly every imaginable way. It controls weather; a big thermometer suggesting great heat and a small one cold. It may measure time like a clock; the "stuff" in the tube is silver, ink, boiled snow, medicine; and the drawings show that, simple as it is itself, it is far less adequately represented than animals or other life forms. So, too, at an average age of eleven the commonest physical effects of heat in vaporizing and freezing water and causing hot air to vibrate over a stove, are animistically conceived or misconceived in fantastic ways that suggest only the naïve ingenuity of ignorance. Is the child's mind incapable of the simplest reasoning before puberty and is the effort to teach even the rudiments of science abortive till then? Should it be deferred till very late in the child's life as it came late in the history of the race and should all education be focused on humanistic themes and gradually widening to animals and plants, with all the sciences of mechanics and of inanimate nature deferred, and is the rank wild growth of fancy only in order now? Should the school accept this as the order of nature and of growth, or wage a yet more relentless war on superstition, de-animate and de-humanize nature, and push dynamic ideas upon the budding faculties; or, on the other hand, is there danger that if it do so the soul thus deflowered will ripen to dry factual views too early and become barren and senescent before its time, or else tend to revert to either mythic, or poetic or superstitious ideas in belated years, because robbed by untimely methods of its inalienable right to live out its childhood and youth to the uttermost, when they are in order?

Jack Frost seems to be the child's thermal correlate of Loki,

the heat sprite of Teutonic mythology. He appears to fill a real need of the childish soul and is vastly more plastic and less conventionalized than Santa Claus. He lives in snow-banks, icebergs, caves, with God, in the earth, sky, air, in the sun, is an icicle, a snow-man, snowflake, is invisible because he is so small, of mountainous bulk, six inches high, like an elf, Puck, a fairy, a brownie, a dwarf, an owl, a bug, a pigeon, a painter of the windows with pictures of trees, fields, animals, flowers, ferns and leaves, woods, caves, seas and many of its forms such as fancy sees in the fire, clouds and moon; makes them bad or good according to the children's conduct; etches them in or "breathes on things to make them white and stiff;" nips grass and flowers; pinches noses, fingers, toes, cheeks; carries a bag of complexion powder; howls in the wind on which he rides; drawn by rabbits, or flies on the backs of birds; can go through closed doors and windows; is a "cold devil;" is old; young; icicles are his whiskers; his hair and beard are white or powdered with snow; he opens nuts with an ice sword; wanders by night like a lost soul; sleeps by day; all he touches cracks; he controls the weather; is spiteful or roguish, wicked or kind; and is far more prominent in the life of girls than in that of boys.

Much of this is, of course, due to suggestion, but it is almost impossible not to believe that much is spontaneous and original in the fecund fancy of children. Why he is more commonly conceived than a heat sprite is probably not because there is no "cold sun" or central source of cold and the soul needs something concrete and so makes it, for the child mind does not conceive the sun as the one source and center of heat. Is it because there is no "cold fire" or chemical phenomena from which cold radiates like heat from the hearth, and that the mind therefore tends to create a nidus for the polar opposite of heat by some kind of unconscious process like that invoked by philologists to explain so much *e. g.* their principle of analogy? Perhaps the view most immediately suggested by our returns is that Jack Frost comes as near or nearer than anything else to being an independent modern creation of the child mind. Like every mythological personation it was helped on by many facts and suggestions from many sources and is not a creation *ex nihilo* any more than were those of antiquity or savagery. Yet here, perhaps, we have the best key within our very doors for unlocking the mysteries of racial myth-making. True its products here are very crude, rank, extremely diverse, and undomesticated by literature or art. Here for once children in our over illuminated age and land escaped the pedagogic grafters and put forth a fresh, vigorous, wild shoot that is indigenous and expresses their own soul and does not merely

reflect what adults have put into it. Better yet each makes his own Jack Frost, and he is still plastic, un-conventionalized, un-uniformitized, un-standardized. Leave him thus adult artists of child life, scribblers of baby creeds that no normal child can really take in without becoming more puerile like you and less truly and fully a child.

If one were to attempt a bold, comprehensive, systematic construction of a theory of the world based on what Bastian calls natural thinking, made up of thoughts nearest to sense, conforming to Avanarius's law of easiest and most economical mentation and including a pedagogy, a cult and a most natural because most naïve religion, he might well attempt to do so by developing and co-ordinating the suggestions now scattered and ineffective of this theme. Heraclitus, the obscure thinker of Ephesus, whose fragments since Lasalle have been composed and rearranged like sibylline leaves in many ways and made to teach many things, represents the highest product of indigenous Greek thought before the Socratic period started on the alien, politically motivated quest of ineluctable foundation on which to rebase the crumbling state. Beywater, Schuster, Bernays, Patrick, and above all Teichmüller, have re-revealed some of the grand features of his system, as geologists suggest the vague outlines of vast mountains now worn away from the hints of many clinal and anti-clinal strata. Both modern science and genetic psychology supply new hints as to what is partly lost and partly might have been, or indeed may yet be when the scientific imagination supplements facts by heroic hypotheses, as Plato supplemented his positive teachings by the great myths which still so appeal to the heart and in later theological ages had more influence than even his doctrines.

Confined in his own bodily life to a range of half a score of degrees of temperature, to transcend either of which is death, limits both of which animal forms greatly exceed, and in his environment to a meager hundred degrees, expanding his thermal knowledge in the experimental work of a Dewar downward, although still far above the absolute zero of 460° below zero F, to which so many lines converge and where all matter and energy die, and in the work of a Mouson upward, although yet much farther below the circa 15,000 degrees above zero conjectured for the sun, man's instincts bear abundant traces of experiences and intuitive intimation of the thermal ranges above and below him, as if we might again say with Heraclitus, "if one wander through all ways he will not reach the limits of the soul in so great depths does it hide," which Trendelenburg interprets to mean that the soul has unlimited power to know all because it is of the same nature as all things. It is itself a fiery particle secreted out of nature as the sun was daily secreted

out of the earth leaving it a little colder and darker, but re-absorbed at night like the soul at death, its activity a "degree of burning," glowing, kindling, or in our term combustion, its culture a second sun arising from helios as it from earth. As all things may follow the "way down" ("the death of fire is to become air, that of air to become water, that of water to become earth," or that of steam to become water and of water to become ice), or the way up in successive eons with reversion at some great epochal era so the light of reason may "burn high or burn low" as sense and matter prevail and we become sarcous, or spirit and wisdom predominate, and we become slowly transmuted, first into great men, then into deity, "or die the fiery death," for there is no rupture of continuity and we are *homousic* with both extremes. Ours is a thermodynamic world and there is a certain evolution and devolution measured on the thermometric scale.

Ontologically man is well oriented, sometimes it would seem over oriented, both ways along this scale. Inclining instinctively to his thermal optimum, if not actually predisposed by heredity, it needs but a touch of experience to disturb the balance and give him a mania or a phobia either way. Living far nearer the lower than the upper end of the scale, he is far more often pyrophobic than psychrophobic (*ψυχρον* = cold.) Thermalgic sensations are more intense than psychralgic. It is one experience usually and not a series of them that are recalled and that suffices. Thermohedonic and psychrohedonic sensations both invite variations from the norm or average, but stern limits are set just beyond. What would be the effect if the mean had always been preserved in every part, whether man would never then have intuited the wide ranges found in nature, is an epistemological puzzle that is utterly insoluble, inviting though it may be to a metaphysical mind. Without thermal experience life would be robbed of much thought, and metaphor, and science, and morals would lack many re-enforcements, there would be no hells of heat or cold, and life would be monotonous, if not indeed as impossible as are two dimensional beings. Local and general chills and fevers, dermal hot and cold spots, calentures and frigidities, partial hibernation and hastivation, give a language to æsthetics, ethics and religion hardly less than do darkness and light which created the eye for man, the child of the sun.

It is no wonder then that his culture period began with the control of fire and that its worship and its domestication are so important in his culture history. Through it he communicates with the gods in sacrifice. It is a symbol of purification and even spiritualization and etherization. The smoke of altars is incense inhaled by divine nostrils. Its tongue of flame laps

the burnt offering and was the emblem of the gift of the Holy Spirit. It is wild and may erupt spontaneously and wreak havoc when its god Loki breaks loose in volcanoes, storm, conflagration. Agni is less malignant and under the rule of Hestia it is tamed and pure, and the hearth is the heart of domestic life. It is maintained by perpetual ministration as a sign of immortality or rekindled at long intervals with sacred ceremonies. Among the Parsees it was so holy that its defilement was punished by death. When rekindled every fifty-two years in the Aztec mountains, it meant a renewed covenant with the gods that their devastating anger should not flame forth to man's destruction, shearing the forest hair of the earth. Many a myth of its origin, many a form of fire burial and many a type of baptism by fire show that this brother of the wind and sea has been both more friendly and more cruel to man than any of the elements. It is no wonder he is more profoundly pyrotactic than he knows and dominated unconsciously even in his migrations by reacting to thermal influences.

Since man tamed fire he has had but to do certain slight things at will—once work a chark or fire drill or apply a brand, now strike a match—to become a cause of great effects, viz., to obtain a strong retinal stimulus, banish night and darkness and slay its brood of fears, hear a crackling, roaring, reduce things great or small to ashes and smoke, or cause acute physical pain and perhaps death, and vast pecuniary loss, to witness intense activity and excitement, draw a crowd, get warm, etc., and singly or collectively these motives may develop the incendiary and even the pyromaniac. Fires are set merely to relieve *ennui* and monotony, or with the bonfire motive predominant. To burn something is often as strong an instinct as to kill something against which the inhibitory motives are powerless or, as in the feeble-minded and in children, undeveloped. Maturity, morality and civilization control this impulse as precautions and devices to fire itself, yet sometimes it breaks out in epidemic form. Pyrophobia is inevitable and is only the over ballast of precaution.

The charm of fire-gazing is a great school of the plastic imagination. The excitant is far more mobile than clouds and still more so than frost forms in the window pane. If the very *eigenlicht* of the retina starts the photistic forms that Galton and many others have described, how more than anything else in the physical world the incessant changes of fire are calculated to start suggestion, and the series of vivid pictures it presents to set up manifold trains of spontaneous reverie that hold the soul under a spell that is rudely broken, like sudden awakening if the embers fall or some outer interruption brings us back to

ourselves and to the present. Here are animals' faces, sky and sea scenes, clouds and ships, flowers, pixies, brownies, fairies, dwarfs, monsters, soldiers and battles, demons and angels, eyes, blood, landscapes, illustrations of stories, gods and demons, hell and heaven, dances, church service, chimeras, a hut becomes a palace, air castles, caves and mines of precious metals and diamonds, volcanoes, and everything in action and rapidly changing, flitting fears that creatures may break out or beauties vanish. The child hears the noises of every animal and insect; the fire creatures laugh, cry, sing, roar, moan; are angry, unhappy; leaves rustle and waves beat audibly; they or the very wood and coal scream in agony till we pity them, or are talking to each other; the whips crack; the guns go off in volleys; the hyenas and wolves growl; and children are rapt and absorbed almost to the point of hypnosis and many of these experiences are so vivid that they are recalled long after. Smoke, too, is dirty steam, baby clouds, fairy robes, soapsuds, the breath of the fire or of the animals in it, scorched or roasted air, live ghosts or birds. Ashes are death, cold, and corpse-like, no longer light and alive but dead and dark, wood or coal with the light and heat taken out of them, the clothes the baby brands are put to bed in when the fire is raked, cold fire, softened wood, the stuff we are all made of and what we shall all return to at last, and hence shivery and dreary. So with flushed face and spell-bound mind the world and life are all reflected in the soul, its moral lessons taught in this primal philosophy of the chimney corner, and the soul oriented to the beginning and end of all things. Happy the family and even the schoolroom that can still thus expose the youthful soul to these lessons, and without the open, blazing fireplace, which needs the story hour, no story can be quite complete.

Quite analogous to the old discussion between Locke and the Apriorists as to the origin of the content of the mind, whether it was innate or entered through the senses, is that which now divides biologists, viz., how far the momentum of heredity represented in the fertilized egg is modified by the later environment of the organism. This egg, on the extreme epigenetic hypothesis of *e. g.* Pflüger, has no more controlling relation to the later adult organism of an animal than the individual snowflake, in which it may have started, has on the size and form of an avalanche. The individual simply passes over the same road which his ancestors have travelled and is, therefore, impressed by the same experiences, because he is in the main similarly constituted. If this does not apply to the mind it would seem that after all these generations it would not be necessary for every child now to be burned in order to dread the fire, that the sight of it would not so strongly impel to

touch, and that there would not be so many pain effects in the background of consciousness. Thermalgic experiences are more intensive, and, although in our returns four times as often remembered, less expansive, recurrent, undifferentiated and general, and less particularized in time and place than thermo-hedonic effects. Still children usually need but one experience, as newly hatched chicks need but one peck at their own excrements, to teach forever after the lesson of avoidance. In view, too, of the facts that warm blooded animals are perhaps more than twice as near the heat-pain limit as to the cold-pain limit or threshold, that burns stand out far more distinctly in memory than local cold, these records seem favorable to the view of an epigenetic theory of psychic origin.

But the problem is by no means so simply disposed of. Man seems to have passed through the glacial age, and within the historic period his migrations have been more northward from tropical heat to temperate zones than *vice versa*. In the dermal surface the hot spots or points especially sensitized to heat are far more acute and more numerous than the cold spots or points sensitized to cold. Again, the study of morbid fears affords abundant records of highly developed cases where in a hot spell there was intense dread lest the weather should grow hotter and hotter till all would perish in a general conflagration, and cases are on record where on the first experience of snow and winter there was horror lest snow and ice and cold should increase till at last all life would perish from the globe. There are also converse cases. All this suggests that the larger thermal orientation of brain and mind was more disposed to transcend the limits of personal experience than is the immediate sensuous orientation that is shocked when first "burned" by touching snow and ice, or hot objects. Even the glow of radiant heat that grows intense on approach to give warning does not prevent contact, yet the soul later divines both extremes of heat and cold far transcending all individual if not ancestral experiences unless we take refuge in some desperate hypothesis of reminiscence that can hardly be called even protoplasmal because heat destroys protoplasm of reverberations in the echo chambers of the soul from the fiery nebulae in which we are told the world itself originated.

Perhaps it is all far simpler, viz., seeing what fire does for all that is burnable, and cold with all that is freezable; the bright child proceeds from these simple sense data, by its own intuitive reverie methods, to muse on what would happen to it if it were exposed to these processes, or if fire or cold were to break out from their bonds and include them and their homes, or become cosmic weather, and shudders. While the neurotic child becomes the victim of its own dreamery and develops phobias,

the normal child thus simply widens its thermal orientation. If in our theories we must exhaust the explanatory resources of personal experience before having recourse to hypotheses of remote phyletic experience, this perhaps ought to suffice. And yet, the Weismannean pure culture of germ plasm concepts that hark back to an immemorial past, that almost seem to forbid us to accept modern instances as an explanation if we can ex-cogitate a more primordial cause, will no doubt for some insist on the last word, and demand that we explain the origin of the psycho-physical apparatus that on so slight sensuous stimulus proceeds to the rapid, wider and ever wider orientations that have given us the whole splendid structure of thermodynamics. It is to thought and its momenta and not to sense, to the brain and not to haptic tests, that we are to look for stored effects of paleopsychic experiences in this as in all fields. Psychro-thermic agencies modified sense and created special organs to perceive these effects, but soul and cerebrum may have stored up long accumulated traces of all our remotest forebears felt, and these it is that scintillate in fancy, but are first adequately exploited and put to work in the pure and applied physics and chemistry of heat and may some day have their origin explained by genetic psychology.

Finally, we have at the very least in such questionnaire returns a kind of psychic anthropometry or examination papers, which show the educational results of all the teaching of the child's entire environment in this subject. We glimpse here the net resultant of all the scholastic and extra scholastic influences and the child's reaction to them. The child is also thus again seen to supplement some imperfect chapters in the history of psychogenesis in the race.

EARLY EDUCATION IN HAWAII.

By W. B. ELKIN, Honolulu.

Formal education in Hawaii began in 1820. In 1819 ere the missionary's voice had been heard in the land, the Hawaiian people, led by Keopuolani, the queen mother, and Kaahumanu, the queen regent, broke the tabus, abolished idolatry, burned the idols, and demolished the heathen temples. It is a matter of much interest that just as, in the Garden of Eden, the tabu was first violated by Eve, in the pursuit of knowledge, so on the Hawaiian Islands a religious and social revolution, the most singular in all history, was effected by women.

In 1820, when the first missionaries arrived, they found a people practically without religion. The missionaries were not at once allowed to land, as it was a custom among the people that no foreigners should live on the islands without the consent of the king and chiefs. These latter refused to give their consent, lest in course of time the missionaries should interfere with affairs of government, or dispossess the natives of their land,¹ fears that were only too well grounded, as later events proved. When the missionaries suggested that some of them should disembark at the port of Honolulu, the king significantly remarked:² "White men all prefer Oahu. I think the Americans would like to have that island." After much negotiation, and after waiting for nearly a fortnight, the missionaries received permission to remain on the island for one year, on condition of good behavior. Before the end of the year, however, they were not only invited to remain permanently, but were asked to send to America for more teachers. After landing, they straightway began to teach and to preach.

The history of education in the Hawaiian islands falls, roughly speaking, into four periods, and each period had its own distinctive class of schools. These were as follows: (1) Schools for the chiefs, 1820-25; (2) schools for the common people, 1825-35; (3) boarding schools for boys and girls,

¹Anderson: *The Hawaiian Islands*, pp. 50, 339; Jarves: *History of the Hawaiian or Sandwich Islands*, p. 221; Dibble: *History of the Sandwich Islands*, pp. 160-162.

²Bingham: *A Residence of Twenty-One Years in the Sandwich Islands*, p. 89.

1836-46; and (4) public schools, from 1846 to the present time. It is the object of this paper to give a brief account of the first three classes of schools.

1. The Schools for the Chiefs. The first contingent of missionaries established four stations, two on Hawaii, one on Oahu, and one on Kauai, and they instituted a school at each station. When reinforcements arrived, in 1823, a few additional stations and schools were established. These schools were attended by the chiefs, some of their retainers, and the children of a few foreign residents. The chiefs would not have allowed the common people to attend, even had there been accommodation. They said that they did not know whether or not education was a good thing. If it was good, they themselves should have it first; and if it were not good, it should not be given to the common people.

The members of the royal family and the nobles were exceedingly anxious to learn. Books and slates were substituted for musical instruments and hula dancing. It became customary for the chiefs and chiefesses to carry their slates about with them, while they took the greatest pleasure in writing, and reading what one another had written. Ellis says of Liholiho, the king;¹ "I have sat beside him at his desk sometimes from nine or ten o'clock in the morning, till nearly sunset, during which time his pen has not been out of his hand more than three-quarters of an hour, while he was at dinner." On occasion he would entertain a party of chiefs for hours together, "with accounts of different parts of the earth, describing the extensive lakes, the mountains, and mines of North and South America; the elephants and inhabitants of India; the houses, manufactures, etc., of England, with no small degree of accuracy."

The missionaries found the people of Hawaii without a written language, but "by diligent application, and the help of the elementary books in the dialects of the Society Islands and New Zealand" they soon reduced the language to writing. The first school books were portions of Scripture, Webster's spelling book, an arithmetic, and *Thoughts of the Chiefs*. But notwithstanding the great disadvantages under which the islanders labored, they made remarkable progress. Assisted by the phonetic system of spelling, some of them learned to read in a few days. Mr. and Mrs. Bingham brought a book to Kaahumanu. "They found her on her mats," says Mrs. Judd,² "stretched at full length, with a group of portly dames like herself, engaged in a game of cards, of which they were

¹*A Tour Through Hawaii*, p. 426.

²*Honolulu*, p. 15.

passionately fond. . . . The teachers waited patiently until the game was finished; they then requested the attention of her ladyship to a new paper, which they had brought her. She turned toward them and asked, 'What is it?' They gave her the little spelling-book in her own language, explaining how it could be made to talk to her, and some of the words it would speak. She listened, was deeply interested, pushed aside her cards, and was never known to resume them. . . . She was but a few days in mastering the art of reading, when she sent orders for books, to supply all her household."

2. The Schools for the Common People. When the chiefs realized, as they soon did, the value of education, they desired that the common people might share in its benefits. In 1825, Kaahumanu issued a proclamation declaring that as soon as schools are established, "all the people must learn." And in 1835 Hoapili, governor of Maui, "required all the children above four years of age, to attend school, and ordered that no man or woman, in his jurisdiction, unable to read, should have license to marry."¹ Soon after Kaahumanu's proclamation, schools were established in all parts of the islands. One instance will suffice to indicate the manner in which they were instituted.² Hoapili sent Moo, his pipe lighter, to Hawaii to establish schools in Puna. Moo opened a school in a central part of the district for all the people who could attend. Then as soon as some of the brighter pupils had learned to read, write, and solve simple problems in arithmetic, he sent them to open other schools in the surrounding villages. These teachers did likewise. And soon there was a school in every village throughout the district of Puna. At the same time a similar process was going on in every district throughout the islands. In a few years schools were established everywhere, and almost the entire adult population went to school. In 1832 there were 53,000 pupils, nearly all adults, in a population of 130,000.³

In some places the largest house in the village was taken for the school. In other places the people used the church for this purpose, or they put up a new building. These structures were ordinary grass houses. They were destitute of tables, desks, and chairs; except a few mats, they were entirely without furniture. Grass houses do not last long, and soon the roofs of many of these were so bad that in rainy weather the pupils were obliged to hold their slates vertically, in order that the descending rain might not erase the figures. But

¹ Bingham: *A Residence of Twenty-One Years*, etc., p. 474.

² Dibble: *History of the Sandwich Islands*, p. 246.

³ Anderson: *The Hawaiian Islands*, p. 254.

many of the people did not have slates or copy books on which to write. They wrote and ciphered on the floor, on sand, on stones, and on the leaves of the ti plant. In a certain school on Oahu the complete outfit consisted of "a single copy of elementary lessons in spelling and reading."¹

The teachers of these schools received no pay.² They taught either because they liked to teach, or because it was the wish of the chiefs. After a time grass houses were erected for them; they were given each a little plot of ground on which they might raise taro; and they were excused from paying the road tax, or performing the ordinary road work. They taught reading, spelling, writing, and arithmetic. They could not teach any other subjects. Indeed some of them could not teach this much. There were some teachers who, when giving instruction in reading, found it necessary to hold the book in the most favorable position for themselves. This was wrong side up for the pupils. Hence it resulted that certain people, when reading, held the book wrong side up, that having been its position when they first learned.

Although the schoolhouses were poor and ill equipped, and the teachers deficient in knowledge and training, the pupils in large measure made up for all these defects by their surprising zeal and diligence. As the people had their regular work to carry on, they could not well afford to go to school for more than a few hours each day. But such was their devotion to study that in some districts they went to school at six o'clock in the morning.³ At Waimanu a youth, Wahapuu, "learned to spell and read well, or to have mastered his spelling book, in the short space of five days."⁴ A boy on Kauai came to one of the missionaries to procure a book. "Who is your teacher?" asked the missionary. "My desire to learn," he replied; "my ear to hear, my eye to see, my hands to handle; from the sole of my foot to the crown of my head I love learning."⁵ But the one study which the early Hawaiians loved above all others was mathematics. So ardent were they in the pursuit of this subject, that a common mode of school discipline was to deprive them of the pleasure of studying it.

Lastly, what was the result? In a few years the people had learned all their teachers could teach them. Then the schools of the second period began to decline. On the death of Kaahumanu, the indomitable queen regent, in 1832, the attendance began to fall off, and in a few years the schools for adults had

¹ Bingham: *A Residence of Twenty-One Years in the S. I.* p. 257.

² *Ibid.*, pp. 337, 472.

³ Bingham: *A Residence of Twenty-One Years in the S. I.*, p. 337.

⁴ *Ibid.*, p. 297.

⁵ *Ibid.*, p. 257.

practically disappeared. But they had done their work. All the people had learned to read and write, and they had got a glimpse into the magic realm of mathematics, with its fascinating enchantments, and wonder-working power.

3. The Boarding Schools for Boys and Girls. When the Hawaiian people had acquired all the instruction that the native teachers could offer, the missionaries saw the necessity of establishing schools for the better education of teachers. And when the reaction against the Christian religion set in, after the death of Kaahumanu, the missionaries perceived the importance of having a native ministry. For this twofold object, the training of teachers, and the education of a native ministry,—as well as for the sake of higher education generally,—the boarding schools were established. A boarding school had been opened at Honolulu soon after the arrival of the missionaries, but not until the fourth decade did they become common. Boarding schools were established on Hawaii, Maui, Oahu, and Kauai. The most important of these was the Lahainaluna Seminary, which was opened in 1831.

For the first few years of its existence, the Lahainaluna Seminary represented the transition stage between the schools for the common people and the boarding schools. It was a school for adults, and they had to board themselves. Dibble,¹ the missionary historian, relates that at the General Meeting of the mission in June, 1831, "it was unanimously resolved to establish a Seminary for raising up teachers and other helpers in the missionary work." Some time after the General Meeting the site, then in a rude and barren state, was selected. There was "no schoolhouse, no apparatus and no school books properly so called; and what was more, there was no arrangement or appropriation by General Meeting to answer these demands." A shed made of poles and grass was put up to serve as a schoolhouse. "A house for the teacher and his family was constructed in the usual native way with poles and sticks and thatched with grass. With merely these preparations, the school went into operation as early as the 5th of September."

The students came from the different islands. They numbered 25 at the beginning of the year, and increased to 67 before the close. They were all adults, and many of them were married.² They had little or no means. They had to erect booths or grass huts to live in, cultivate taro and vegetable patches for food, and carry on their studies at the same time. Nor was this all. In a few weeks, under the direction of the teacher, they began the construction of a stone building, 50

¹*History of the Sandwich Islands*, p. 305.

²Dibble: *History of the Sandwich Islands*, p. 307.

feet by 26 inside. Building stone houses was not an easy matter in those days.¹ The students carried the stones on their backs, or in their arms. The customary method of obtaining mortar was for a number of men to go out in canoes some distance from the shore and dive for coral rock. If the piece of coral was too heavy for the diver to bring to the surface, he rolled it along the bottom of the sea to shallow water near the shore, rising occasionally to take breath; or else he came to the surface, took a rope and descending tied it round the piece of rock; then coming to the surface he hauled up the coral. When the students had obtained a sufficient quantity of coral, they went to the mountains and collected fire-wood to burn it. Their wives rendered assistance, carrying in calabashes sand and water for the mortar. When the walls of the house were built the students went again to the mountains for lumber. Many of the rafters they hauled with ropes, or carried on their shoulders from east Maui, a distance of 25 or 30 miles. The schoolhouse was finished and furnished before the end of the year. Meanwhile, these Hawaiians carried on their studies, and, with the assistance of their wives, supported themselves and their families. "Rarely has a school appeared more truly interesting," says Bingham,² "than that high school, at Lahainaluna. [The students were] withdrawn a mile and a half from the town which they overlooked, laboring at their new building, and pursuing their studies, often hungry, with almost no shelter from the sun and rain, no furniture, and very little school apparatus; when they held their slates in a perpendicular position to prevent the descending showers from washing out their questions, and refused to be dismissed till their lessons were completed." These were the men who became, in due time, the teachers, preachers, lawyers, and legislators of the Hawaiian kingdom.

As time passed the missionaries became convinced that an educated class of natives was necessary to the maintenance of a progressive Christian civilization on the islands, and that the best method of obtaining this result was to establish boarding schools for boys and girls. The boys should, in course of time, not only take the place of the foreign clergy and teachers, but become an enlightened professional class; and the girls should become their suitable help-meets. Accordingly, in 1836, when the A. B. C. F. M. granted some financial and personal aid, a change was made in the organization of the Lahainaluna Seminary. The institution gradually ceased to be a self-supporting

¹ Bingham: *A Residence of Twenty-One Years in the S. I.*, pp. 425, 427.

² *Op. cit.*, p. 473.

school for adults, and became a boarding school for boys. Soon afterwards, a number of boarding schools were established, notably the Preparatory School at Hilo, the Female Seminary at Wailuku, and the Family School for young chiefs at Honolulu,—the last named being maintained at public expense. Some of these schools continue to the present time.

The following is the programme for the Hilo Preparatory School, which may be taken as representative of the boarding schools for boys:¹ "The scholars rise at 5 o'clock, assemble for morning prayers at 5:15, breakfast at 6:15, labor from 7 to 8:30, attend school from 9 to 11:30, bathe, dine at 12:30, attend school from 1:30 to 4, labor from 4:30 to 5:45, sup at 6:15, attend evening prayers at 7, and extinguish their lights at 9." The exercises for the day at the Wailuku Female Seminary were as follows:² "At daylight, prayers, then one hour of light labor in the garden, breakfast, miscellaneous work; from 9 till 11 o'clock, school . . . in spinning, sewing, knitting, weaving, etc., then bathing and dinner; from 2 till 4, in the afternoon, school . . . in reading, writing, arithmetic, geography and other studies; from 4 to 5 labor in the open field with hoes and other implements for vigorous exercise, then supper and evening prayers. Wednesday afternoon is devoted to excursions and sea bathing." Such was the daily schedule for these simple children of nature, whose forefathers, for countless generations, had been accustomed to spend a large portion of their time basking in the sunshine, reclining in the shade of their palms and fruit trees, or disporting themselves in the cooling waves of the sea.

The discipline in these schools seems to have been severe, in some it was inhuman, and not a few of the reports make now painful reading. The nightmare of the detested tabu system still lingered in the restrictions of Jewish law. A pious visitor who saw the boys eat dinner at the Lahainaluna Seminary related:³ "They partook of their meal in perfect silence—rather a difficult requirement for a Hawaiian, one would suppose, but only the more necessary to be observed from their extremely loquacious habits." In the second Quarterly Report of the Boarding School at Wailuku we read:⁴ "The instructors feel that they have great occasion for gratitude to God for his special favors during the term. . . . Near the close of the term, the Holy Spirit was graciously sent down upon the seminary. Nearly all the little girls seemed to be more or less convicted of sin, of their ruined condition, and of their need of

¹Dibble: *History of the Sandwich Islands*, p. 325.

²*Ibid.*, p. 322.

³*Hawaiian Spectator*, I, p. 428.

⁴*Ibid.*, I, No. 2, p. 103.

mercy." A few weeks later nearly all the little girls were seriously ill. Five died, 12% of the total number in attendance during the year, and several others were obliged to leave school. The next year, according to Dibble, there was "much seriousness," and "considerable sickness." During the third year, "sickness made more alarming ravages than in any previous year. Five died. Twelve left on account of sickness, of whom a part died but the greater number recovered."¹ Dr. Judd, the missionary physician, was then called in. He recommended less confinement, and more exercise in the open air. Dibble characteristically remarked:² "It seemed impossible to restrain [the pupils] from rude and romping behavior and to confine them to those exercises deemed more proper for females, without serious injury to health. To require at once habits of civilization according to our notions of it, was evidently attended with great risk." Nevertheless, in 1843, the good principal of this school, evidently with pious satisfaction, wrote of these poor children:³ "So far as we know, all met to pray in little circles, every morning or evening, or both. They often arose long before the light of day, to engage in this blessed work. The taste for play seemed to vanish; and all appeared, in a greater or less degree, to feel that the salvation of their souls was the great thing to be attended to." That in some schools the health of the pupils seems to have been good is a pleasing testimony to the remarkable natural strength and vigor of the Hawaiian people.

In 1846 the Hawaiian government assumed the entire support of the common schools. And as these were modelled largely after the public schools of America an account of them need not be given here.

The result of the efforts in early education, in Hawaii, as above described, may be fairly understood from the following quotations. Rev. W. P. Alexander, in a sermon preached in the United States in 1859, said:⁴ "By a careful calculation from official documents I have come to the conclusion that as great a proportion of these islanders can read and write their own language as of any State in this Union; and the government spends a greater proportion of its revenue to educate the people than any other government in the world." And in 1860, when Mr. R. H. Dana, a lawyer from Boston, travelled in the islands he wrote:⁵ "The proportion of the inhabitants who can read and write is greater than in New England."

¹ Dibble: *History of the S. I.*, p. 321.

² *Ibid.*

³ Bingham: *Op. cit.*, p. 583.

⁴ Alexander: *Mission Life in Hawaii*, p. 175.

⁵ Anderson: *The Hawaiian Islands*, p. 99.

One now sees the islanders "going to school and public worship with more regularity than the people do at home; and the more elevated of them taking part in conducting the affairs of the constitutional monarchy under which they live."

Unfortunately for the welfare of the Hawaiians, as well as for the honor of Christian missions, the further results to be naturally expected from this bright and encouraging outlook did not materialize. In the course of a few years nearly all the early missionaries had died or retired; and nearly all their children, instead of carrying on the ministry of the word, had taken to serving tables. Since then the missionaries' children, with a few notable exceptions, have been busily engaged in exploiting the natural resources of the islands, rather than in teaching the people. It should be said, of course, that for a long time the descendants of the missionaries, in many ways, favored and helped the natives, a policy which seems to have been also for their own best interests. But it must be conceded that the interest which the missionary party now take in the natives is mainly indirect, and that generally speaking the rising generation is like the new Pharaoh who knew not Joseph.

It will be readily acknowledged that the changed attitude of the missionary party toward the natives has been, to some extent, forced upon them through stress of circumstances, in their competition with the non-missionary foreign element. It is these latter who must ever be held chiefly accountable for the ill treatment which the Hawaiians have received. And the indisputable fact remains that the foreigners, finding that the Hawaiian was a landselling and exceedingly accommodating individual, but not a sugar raising animal, resorted to China, Japan, and every other country under the sun, where there was a probability of getting cheap labor. Then the simple minded native, having weakly sold his birthright for a small mess of pottage, was left helpless on the roadside, while the grand chariot of Christian civilization sped triumphantly onward. The Hawaiian, in his native land, has been ruthlessly sacrificed to the financial interests of the all-devouring Anglo-Saxon.

But why, it may be asked, did the Hawaiians not use the light when they had received it? Why did they not, when they went to school and public worship with greater regularity than did the Americans, take an active part in the development of modern civilization? Many causes might be assigned, but the statement of two must suffice. One was the evil influence of depraved foreigners, a cause which has been universally recognized; the other was the inadequacy of the missionary education, a fact which has been universally ignored.

The diabolical criminality and shameless licentiousness of the foreign element is without parallel, and is almost beyond conception. The history of the islands teems with instances of a most revolting nature. "The extremity to which some of the foreigners pushed their point," says Stewart, in his *Private Journal*,¹ "and of the means resorted to, for its accomplishment; you may judge, from the fact, that the pupils of the first female school collected, at this place [Honolulu], by Mrs. Bingham—after being clothed, and brought, with much care and attention, to habits of neatness and propriety in their persons, and made themselves to be deeply interested in various useful instruction—were borne off, openly and forcibly by them, to become their mistresses, while the instructress herself, could answer the appeals made to her for protection, only *by her tears.*"

It is now well known that a race cannot be civilized in a generation. The Hawaiians were never really educated. They indeed made a noble and supreme effort, and their progress was surprising. But the education introduced to the islands by the New England missionaries, although it might be "a system baptized by the Holy Ghost,"—as Dibble characterized it,—had one very serious defect, when imposed upon a primitive people. It was essentially based on the conception of the miraculous, rather than on the conception of natural law. It is a most significant fact, in this connection, that during all the time that the Hawaiian people were dying out, when the population decreased from 130,000 in 1832, to about 38,000 in 1900, and when the Hawaiians were distinguishing themselves in law and politics, in education and religion, only one studied medicine and became a physician. The kahunas cured and killed people by prayer and fasting, and their "brother priests," the missionaries, followed all too closely their archaic example. Their works did not keep reasonable pace with their faith. If early education in Hawaii, instead of being based upon the Hebrew bible, had been based on natural law, on industry, and on commerce, the Hawaiian people would now be far more numerous and intelligent than they are, and would possess much more property, wealth, and political power than they do.

¹ P. 159.

NOTE ON CLOUD FANCIES.¹

Supplemental by G. S. H.

It seems not too strong a statement to say that there is nothing whatever that the fancy of children does not see in the clouds. Not only is everything on earth mirrored and transfigured there, everything read, reflected and pictured, but the factual and literary world is far transcended and many things with no earthly counterpart are revealed to the plastic imagination of which they are perhaps the chief school, inspirer, and in no small degree the creator. If instead of living at the bottom of a deep sea of air with such changing phenomena taking place above us, so in contrast with the fixity of earth, we can conceive human life possible on, *e. g.*, the airless moon, the soul would have been a very different and far more prosaic thing.

Not only is everything seen in cloud-land, but every known emotion and every sentiment is strongly played on by its scenery. Its vast repertory of effects has done much to make the life of feeling deep, rich, and variegated. The "moods of heaven's deep heart" are reflected in our own. They have inspired so much in myth and poetry that without cloud-psychoses both would be impoverished. We should have had no vision of Ezekiel or John; should have lost most of the best of the old Aryan myths and the Vedas and Bible prophecies would be impoverished; would have had no Niobe, Nephelē, swan maidens, golden fleece, Valkyries, harpies, a very different Odin, Walhall, Jove, Hermes, Polyphemus, Phryxos, Helle, Phaiakion ships, great roc, houris in the old Hindu heaven, no sphinx, Apollo, etc.

The child's imagery about clouds is not only rankly profuse, but sometimes of uncontrolled or almost delusional intensity. Many think they see real angels, faces of God, friends, landscapes, castles, Queen Mab's shining tent, volcanoes, chariots and horses, monsters, battles, caravans, swords, banners, hands, fish, Santa Claus, Indians, Dido, judgment day scenes, cities, Christ on his sparkling throne, geographical scenes, conflagrations, scenes in heaven, animals, flowers and trees, and things too grand, beautiful and fearful for earth. Distances are greatly

¹ See G. Stanley Hall and J. E. W. Wallin: How children and youth think and feel about clouds. *Ped. Sem.*, Dec., 1902.

underestimated, so that everything is near and the effects are immediate and almost reflex. They often want to go to, touch, roll, plunge into their downy substance, lie, sail off with them, follow the persons, or take part in the scenes they see in them.

With adolescence all this undergoes a characteristic change for those sensitized to clouds. Instead of wanting to soar away to, float with, embrace or be embraced by them, their lovely shapes inspire youth with a vague longing for greater beauty than earth affords. Transient as they are they stir suggestion in his soul of something nobler and purer than has been and arouse moral and æsthetic aspiration. Not physical contact or levitation, but inner exaltation, a hunger of soul for a larger and more glorious life, is now the normal reaction. Ideal constructions are suggested beyond the immediate presentation of sense. The thrills are of ethical expansion. The mind is led to regions of ineffable tranquility and of light unsullied till earth seems dull, gloomy, solitary. There is no more illusion, far less fear, but far more often lingering but perhaps sunset depression. Youth does not picture weather people or perhaps not even angels or God just behind the clouds, veiled by them from the sight of men as they do their work, and the heaven they suggest is no longer literal or just behind or in the clouds, for all the space ideas are vastated. Behindness is metamorphosed into symbolism. Even the colors that inundate and intoxicate the brain in such vast variety typify life. The color sense, nowhere so satisfied as in some cloudscapes, besides its sensuous beauty, has some mystic meaning, at least suggests some problem though it cannot be solved or even formulated. All its illusion is gone, but the fancy persists, and the feeling far more. The celestial picture gallery speaks to the heart more than to sense. Through the teens and early twenties the fantasies will fade and perhaps almost vanish, so that the effect is immediately upon the mood with diminishing constructive imagery. The transiency of these "ghostly silhouettes" suggests that man and all things, even the earth itself, will melt away and vanish. Words themselves cannot so mirror every emotion or mood from joy or brightness to depression and melancholy. They symbolize everything in life, and perhaps nothing can so elevate and expand the feelings. If the natural cloud tropism of this age is indulged, Ruskin, who more forcibly than any one else, has insisted that otherwise the imagination is dwarfed and sentiments crippled by disuse, thinks that genius often finds here the inspiration for its masterpieces. Thus in an added sense, "To the solid ground of nature's trusts the mind that builds for aye."

Nephelopsychoses, if such a word may be coined, are distinctly more prominent and numerous among girls than boys,

and as the female organism is more conservative this of itself suggests rapport with phylogeny. They take a deeper hold on the soul at adolescence, and the feelings, which are so deeply stirred by them, are older than the intellect and are the form in which the new momentum of heredity are expressed, and this again suggests race experience. Perhaps we can now in view of new data from child study compare, although with much vagueness and uncertainty, the two. In the early history of the race clouds were observed more intensively and protestively because they were thought to reveal the feelings of the divine powers toward men and to forecast future events. Cloud gazing was very likely a more serious and anxious business. Aboriginal people lived in the country, and its monotony and the absence of social excitement inclined to attentive scrutiny of the ever metamorphosing landscape above, while pastoral and agricultural life, because more dependent on the weather, increased interest in them as weather bearers. With the modern child they form a far smaller part of the environment; he is so well sheltered that weather is less important; because young his constructive faculties are less developed and so his concepts are less elaborated and the faculties involved are slowly lapsing to vestigial rudiments. Because living in an age when traditions on the subject are less evolved and dominant, his mind is freer, its creations more varied and fleeting, life about him is more interesting and distracting from the heavens, and he actually grows miopic in mind because he renounces looking upward which is etymologically the most characteristic act of man, *anthropos*. Powers that once entified and personated objects are atrophied, or if youth becomes a cloud gazer it is for pastime and not for business. Youth now knows and feels that clouds are always mere phenomena and appearance with nothing noumenal, and however ignorant he may be, all his nephelopsychoses are under the dominance of knowledge—enough of condensation and vaporization to kill this factor of mystery forever and his reaction is purely emotional.

Children wonder, fear, and admire impressive cloud-scenes. Youth feel nameless longings, awe, reverence, or is homesick for a great love and melted to tenderness, and rises from the thought of something behind the clouds to that of a power behind nature. The pleasure and pain and all the other sentiments suggested are often disproportionately great compared with the strength of the stimulus and that suggests inherited psychic vestiges from a long past. The child's images are in the foreground of the soul and are of some hundred different species and varieties in our less than four hundred persons with but few stable and uniform reactions. With youth the cloud language is addressed to the heart and its responses are no less

varied and voluminous. The child observes in its hasty and cursory way and reacts by pictures that a painter might attempt to portray. Youth, too, observes but more absent mindedly and in reverie, and its reactions only the poet's pen, not the brush, could seek to represent. One would conserve the visual glory by depicting it; the other would perpetuate the sentiment inspired by indicting. In the child the intensity of the emotions of fear and painful reaction are most disproportionate to the cause, and in youth suggest inherited vestiges from an age when man was at the mercy of uncontrolled forces in nature. In the youth joy, with perhaps often the rapture of woe, is incited by effects more felt than seen, suggesting that a prepotency of the subjective over the objective that dates to a later age when love was well on with its great work of casting out fear and was beginning to give nature a new language but had not yet found its own by focusing its wide ranging secondary psychic qualities on a chosen mate.

One of the most effective of all schools for the imagination at adolescence is clouds. Young children love to trace islands and seas; fancy mirrorings of distant terrestrial objects and scenes; think them souls, swords, ships, cattle, armies, God, angels, dead people, cities, heaven, etc., but in pubescence their influence is deeper and involves the heart. Special signs, words, Bible scenes are no more and perhaps less often recognized, and the child's wish that pretty clouds come down for them to stroke or lie in is less frequent; but reveries in which the soul is transported and lost to the present are more frequent. Very often special cloud experiences are indelible, and religious imagery is sometimes given a great reality, and faith a very material support. A girl of 17, one evening at the seashore, saw a cloud as if all the rivers in the world were hung up to dry like ribbons; could not bear to have it fade; and wanted to paint it. Another, when 13, saw a cloud at sunset beautifully tinted and the shape of an angel's wing, which brought to mind a young friend who had just died. A girl of 19, waiting for a train, saw a cloud like a lava river with a distant volcano, which changed to a sea of ice and then became a silver path leading from earth to heaven, which seemed like the straight and narrow way, which led to life eternal, and it was felt might be a special warning to her. Some can find no words to describe the beauty, ecstasy, or peace of cloud beauty. Others see patterns and tapestry of supernal tint and texture. Stories are reflected or illustrated in cloudscaapes. Boys sometimes develop a passion for sitting down and imagining things in the sky. Sometimes youth find themselves unconsciously so absorbed in watching the transformations that they involuntarily sigh or cry out with pain, when the pictures change or

fade. Some form settled habits of watching them not for fancy, but merely for the joy of color and form. Others are drawn toward celestial scenery or sea warnings of shipwrecks or sea angels and saints. A girl of 19 saw Jesus slowly ascending glad but glorious, and wished to rise with him. One saw the resurrection enacted and watched with awe to see it again. Another came to believe in heaven from seeing Christ with saints in white. Some trace all they have read of or think earnestly about, or imagine things they cannot see because wrapped in them. Day dreams in communion with clouds sometimes console in affliction; encourage high purpose and resolve; threaten or intimidate wrong; answer questions; reveal secrets; tell fortunes; teach aspiration and idealism; and even belief in the reality of souls and immortality.

Is there not abundant reason in all this to infer that in the soul of youth to-day there are still traces of the mythopoetic faculty, which in earlier and untaught races where imagination was uninhibited by knowledge and where pagan faiths were at their best, evolved the old Aryan deities which Max Müller and Cox have described, and which in their more evolved and humanly personified form constituted so many of the nature gods of ancient Greece and Rome? Now these faculties are earlier discredited and relegated to younger and perhaps ever younger years, so that they are less effective and less dominant; but the rudimentary organs of the soul, which produced them, are still there, and the question what the imagination in adults to-day would be, if man lived under a cloudless sky, is as suggestive and interesting as it is unanswerable. Clouds, too, give the mind a sense of the reality of the tenuous; contribute to turn man's thoughts and perhaps his prayers upward; and to give a sense of reality to heavenward things which a moon dweller could not know. Nothing makes the imagination so plastic; impels it through so polymorphic realms by suggestion. Cloud animals predominate for children, because animal shapes are more varied; but for youth, they more often suggest the many aspects of a higher life. We also here find the same contrast between sentiment and science. The feelings are not edified by learning that clouds are aqueous vapor or by memorizing their names or studying their laws in meteorology. Here, too, there is a light that goes out in the heart when the light of science is kindled in the mind, and we have many records of children who resist the first new adult knowledge with a vehemence that suggests the long warfare between science and religion, as rain comes to be understood as precipitation and not leakage from a sea above the firmament or the opening of heavenly windows.

THE EVOLUTION OF IDEALS.

By WILL GRANT CHAMBERS.

In view of the several excellent papers on this topic already in existence, it may seem to some that an apology is due from one who, at this late day, offers a new study on Children's Ideals for publication. The figure of threshing over old straw will no doubt be suggested, and perhaps with some justice. Indeed, there are those among the most careful students of children who have begun to urge the view that we have now done enough of the kind of work represented by this paper, that any further repetition of studies which have already given definite and unquestionable results is a mere waste of time and energy, that it is now time to carry on the work of child study on a higher plane, using the results already obtained for purposes of broader generalization and applying the principles thus reached to actual school conditions. It is time to end these narrow, scattering, local studies, they say, and to begin to take a broader view; we must not allow all our enthusiasm to be expended on this initial phase of the work. And above all, they conclude, it is now time for action. Child study has been carried on for a decade or two largely in the sphere of theory. The public is demanding some concrete evidence of its value, some more general practical application in the work of the schools. We should now turn our attention in this direction.

But are not the persons who argue thus involving themselves in the same contradiction that Mr. Herbert Spencer creates when in his famous chapter on "What Knowledge is of most Worth," after insisting that all education be founded on inductive science—that the collection of facts must precede the establishment of principles—he declares that the only history worth teaching is the philosophy of history. Spencer contradicts his fundamental principle of inductive teaching, by offering the generalizations of history before pupils can possibly have a sufficient foundation of concrete facts to understand those generalizations. And similarly it seems to the writer a contradiction to speak, at this stage of development, of abandoning these concrete studies to devote ourselves to broad, psychological generalizations, which shall be sound, and to the reduction of those generalizations to rules of procedure for practical teachers.

Professor Earl Barnes has compared the relation of child study to the science of psychology to that of horticulture to the science of botany.¹ There is no reason why the horticulturist should not be a careful experimenter or accurate observer of facts, or why he should not arrive at sound conclusions; "but his work is much more particular and circumscribed than that of the botanist. The difficulty comes when the horticulturist tries to reach general conclusions from a limited study, broken by the demands of a practical life." In the early days, no botanist would have been justified in writing a description of the plants of North America, based only on studies of the flora of certain parts of California, Minnesota, and New England. And even after the continent has been thoroughly explored and its entire flora scientifically catalogued and described, there is still a place for minute and painstaking studies of certain characteristics of the plants of a given locality. Is it not equally true that it would be unscientific to proclaim certain unqualified generalizations about children's ideals based only on studies of small groups of children in California, Minnesota, New Jersey, and England? And even when several such studies have established certain reasonably safe principles, does it follow that other investigations of the same kind can add nothing of value? By no means. No science is ever complete. And the most valuable increments often come from the persistent study of a well-worked field. "The science of Botany was not built up by studying the flora of one vicinity once, but the same study had to be repeated in all parts of the world. Only when such studies had been repeated many times, did it become possible to rise to the larger generalizations concerning the geographical distribution of plants and the effect of climate, soil and moisture upon their growth. In child study, each good experiment, carefully repeated, will help to broaden and perfect the original conclusions, and it will help build up data for sound generalizations as to the effects of race, institutions, beliefs, and educational practices." (No. 6, p. 40.)²

Of this same study it has been said "it should be multiplied a thousand times, in country and city, with rich and poor, with different nationalities, with different courses of study, with different sorts of teachers." (No. 6, p. 320.)

In addition to this general justification, it may be said that the present study represents a locality geographically new, and a society exceptionally heterogeneous; that it includes a greater

¹In his University Extension Lectures. Also in his Introduction to the "Bibliography of Child Study in the Pedagogical Library of the Board of Education of Philadelphia."

²Numbers thus used refer to the bibliography which concludes the paper.

number of children and covers a greater range in ages than any previous study; that it gives additional emphasis to conclusions hinted at before and presents a few new suggestions which alone should justify the study; that it gives comparative tables wherever the basis of classification is the same and the figures are accessible; and that a bibliography of the subject is added. An attempt has been made to bring together here the main results of all the studies of children's ideals conducted up to date.

New Castle, Pennsylvania, was chosen as the most desirable place for conducting this investigation for several reasons. (1) It represents a geographical area hitherto not studied. (2) It is an exceptionally fine type of the busy industrial city, being the center of extensive iron and steel manufactories of various kinds, containing the largest tin mill in the world as well as a smaller one and various allied industries, besides nail mills, glass factories, paper mills, paint houses, brickyards and stone quarries, and fostering a variety of manufactories of finer grades of merchandise and flourishing businesses of all sorts. (3) The great variety of commercial and industrial enterprises has drawn to the city a very heterogeneous population. Among the forty thousand inhabitants are large proportions of English, Welsh, Irish, Scotch, Germans, Italians, Negroes, Swedes, as well as smaller bodies of almost every people on earth. All grades of society, all occupations, all degrees of wealth and intelligence, all kinds of religion are represented. Probably no city of equal size in the country could give results that are so cosmopolitan. We have here Americanism in all stages of the process of evolution from the most diverse beginnings. (4) An accommodating school administration offered to conduct the necessary exercises and provide papers for the study.

Lists of careful directions were prepared concerning the giving of the exercise as a part of the regular composition work of the school and urging the usual cautions against explanations, suggestions, or illustrations on the part of the teacher, and against previous preparations, asking questions, exchanging opinions, and unusual attention to spelling and writing on the part of the pupils. To these lists were added the following directions to the pupils:

1. Write your name and age at the top of your paper.
2. Write an answer to this question: What person of whom you have heard or read would you most like to be? Why?

All the pupils of the city schools below the high school were asked to write the above composition at the same hour of the same day, so that there was absolutely no opportunity for preliminary discussion of the topic. The time selected was near

the close of the school year, so that most of the children in the lowest grade were able to express themselves in writing to some extent and were therefore included in the investigation. The papers were collected by the teachers and through the superintendent conveyed to the writer. Some 2,500 returns were received, about 150 of which (chiefly those of the youngest children and new immigrants) were either blank, illegible or otherwise unusable, and were thrown out in the beginning. The remainder, representing the answers of 1,146 boys and 1,187 girls, were gone through a number of times, carefully studied, and grouped and classified in a number of ways and with the minuteness of detail the tedium of which can be appreciated by those alone who are familiar with such work. A few of the results obtained from this study are here presented.

I.

The first classification of data undertaken was on the basis of ideals chosen. All blank and illegible papers having been rejected each remaining one contributed something to this classification. Only nine girls and thirteen boys out of the whole number, or less than 1%, declared that they would rather be themselves than any one else, and they were comprehended, almost entirely, between the ages of eleven and fifteen. The reasons given for preferring one's self to any other are varied. A few of the girls regard the question as a sacrilegious impeachment of God's decrees. (No. 3 b, p. 7.)

Girl, 15. I would rather be myself. God said, "Thou shalt not covet."

Girl, 13. Myself, because I think I ought not want to be anybody else.

Some of both sexes regard the impossibility of change as a justification of having no ideal:

Girl, 14. Myself, because I could not be no one else.

Boy, 12. Myself, because I cant be anybody else now.

A few give no reason, but all the rest prefer to be as they are because they are satisfied with their own lot. The boys predominate in this class:

Boy, 9. Myself, because I'm a boy.

Girl, 13. Myself, because I am good enough.

Girl, 11. Myself, because I am happy.

Boy, 12. Myself, because thing are about as I want them at home.

Boy, 13. Myself, because I would n't want to be any older or any one else.

Boy, 16. I envy no man of whom I have heard or read. I would rather be like I am.

One cannot help asking the question whether or not these

last quoted children are better off than though filled with unrest and discontent of their lot. Why should boys be better satisfied with their condition than girls? (No. 3 b, pp. 7-11.)

In the light of the pessimistic criticism directed against the morals of our civilization and the teaching of morality in our schools, one cannot help being surprised at the remarkably small number of unworthy ideals chosen by these children. Not a single choice of the girls could be regarded as base, although a few are not as ideal as we might desire them to be. Of the boys, six have named characters whose influence is wholly debasing, though in two instances their language is such as to indicate that they were trying to horrify the teacher, in another the reason given shows that they did not know the character chosen, and in all it was unquestionably that element in the person named which appealed strongly to a natural impulse in the boy that attracted him and not the bad in the man. The following are the choices:

Boy, 13. Mr. H———To have all the whiskey I want.

Boy, 9. Biddle boys. Because they are desperadoes.

Boy, 14. Jim Jeffries. Because there is lots of out-door work.

Boy, 13. Jim Jeffries. Because of his skill at boxing.

Boy, 14. Jim Jeffries or U. S. Grant, so you could fight.

Boy, 15. Jessie James. Writes great novels.

Some of the reasons given for choosing such characters as Buffalo Bill, or even Gen. Grant or Theodore Roosevelt, might be construed as degrading to character, but the writer regards them rather in the light of longings for the exercise of innate tendencies and natural instincts for the healthful exercise and development of which our modern life makes no adequate provision. Evil, as such, makes slight appeal to any boy. The doctrine of original sin receives but scanty recognition from any one who really understands child life, even in the lowest grade of society.

Three of the most evident tendencies brought out in the classification of ideals have been emphasized in all earlier investigations; viz., the constantly diminishing proportion of local characters and acquaintances chosen and a corresponding increase in the number of historical and other non-local celebrities. This study brought out three distinct "strands of tendency" which are shown in Fig. 1.

The class "local ideals" includes all those individuals who are personally known to the child,—parents, relatives, playmates, teachers, ministers, doctors, and others who have only a local reputation. All other choices are classed as "historical" or "contemporary" according as they were dead or living within the memory of the person choosing.

The diminishing tendency to choose an acquaintance ideal is but one example of a characteristic of child life that has been illustrated by almost every quantitative study. It depends on

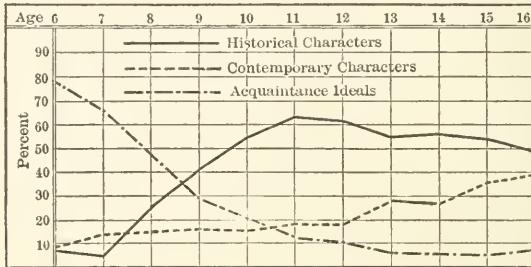


FIG. 1.

the simplicity of the young mind and on limited experience. It is the same principle which has recognition in the well known pedagogic maxims, "From known to unknown," "From concrete to abstract," and which underlies the Pestalozzian object lessons and number methods. Professor James,¹ President Hall,² and other psychologists have shown that the self is a very different conception to child and adult. In a true sense, the self is co-extensive with the field of interest. For the little child the world is centered in his own immediate comfort, in the satisfaction of his own desires. Only slowly does his world broaden out to include, first, nurse and parents, then relatives and frequent visitors, neighbors, playmates, schoolmates, teachers and more remote individuals. (No. 1, p. 89.) The development of altruism out of selfishness is simply an expansion of the self to include, as parts of itself, persons more and more remote.³ The growth of sympathy out of apparent cruelty illustrates the same law.⁴ If we conceive of mind as "experience functioning" it is easy to understand why, in choosing his ideals, a child should be limited to his circle of acquaintances. And it is equally easy to see why this tendency should vanish with broadening experience. Over 29% of the girls and about 36% of the boys in this study at the ages of 6 and 7 regard their playmates as the most enviable people in the world. Fathers and mothers and other near relatives are so regarded by about 4% of each.

¹ Principles of Psychology, Vol. I, Chapter 10.

² See "Some aspects of the Early Sense of Self," G. Stanley Hall, *American Journal of Psychology*, Vol. IX, No. 3, April, 1898, pp. 351-395.

³ Earl Barnes: Lecture on "The Growth of Personality," Chataqua Assembly Herald, July 15, 1902.

⁴ Earl Barnes: Lecture on "The Growth of Humane Feeling," Chataqua Assembly Herald, July 18, 1902.

Professor Barnes found the London children more backward than the Americans of Miss Darrah's study in the expansion of their ideals. (No. 1, p. 89.) Our results place the children of New Castle midway between the two. They begin with a larger proportion of acquaintance ideals, but exhibit a much more rapid expansion than either of the others. The following comparative tables may be of interest.

ACQUAINTANCE IDEALS.

Age	6	7	8	9	10	11	12	13	14	15	16
Minn. & Cal.		47%	36%	25%	22%	15%	11%	10%	7%	7%	8%
London		46	45	31	19	17	14				
New Jersey		65	53	46	35	31	27	17			
New Castle	78	66½	46	29	20	13	10	7½	5½	4	5

Which of these courses of development represents the most desirable or natural rate of growth it is impossible at this time to determine. We are greatly in need, as has been said, of a system of norms, determined by comparative studies of healthy, normal children under the most favorable conditions, which may be accepted as standards for comparison. This is one of the great needs that child study has yet to supply. If one were given to hasty generalization he might conclude from the above table that those children which reach school age with the largest proportion of acquaintance ideals are in the most hopeful condition, since they develop most rapidly and retain the smallest proportion at high school age. But a glance shows one that those standing second in the choice of acquaintances expand slowest of all, while those entering school with the most diversified ideals are practically equal in the rate of growth to those first mentioned. Nothing but a great number of similar studies will enable us to arrive at a safe decision as to the time when the pupal citizen should leave the cocoon of home environment and expand his wings for higher and broader visions.

It is of interest also to note that the girls in our study chose from 2% to 10% more acquaintance ideals, age for age, than did the boys. But we have come to associate that characteristic with primitive mind. Shall we conclude, then, that girls are less developed at a given age than boys? (No. 6, p. 237.) Or is it only another evidence of the conservatism of the female in any species? Other facts will suggest the same question later in this paper.

Just as the local ideals diminish in number the historical and contemporary ideals increase to take their place. A comparison of the courses of these two curves in Fig. 1 will show quite accurately the respective influences of school life and literature and out of school interests. Preference for historic characters has a rapid development after the age of seven, culminating at

eleven when it includes $61\frac{1}{2}$ per cent. of all the ideals mentioned. After that age there is a gradual drop in the curve until at the age of sixteen it shows 48% of the ideals to be still historic characters. The rapid development up to eleven corresponds to the period of preliminary instruction in history, of interesting stories and dramatic incidents, of patriotic poems and idealized biography. The enthusiasm of a new and interesting study colors the pupils' thoughts. Suddenly released from the bondage of present time and place the imagination leaps at a single bound to some heroic figure, surrounded by a halo of childish fancy, far back in the years ago. From the age of twelve a more serious, prosaic study of history is carried on. "The real Washington," and the "real Franklin" are more critically examined, weighed in the balance of a sensitive adolescent conscience, and often found wanting. Still, enough of the glory remains to keep the characters of history largely in the majority.

The curve of contemporary ideals has a very different course. It rises gradually, with hardly a single deviation, from 9% at six years to 39% at sixteen, receiving a decided increment throughout the last five years in which the popularity of historic ideals is waning. The allegiance of some is here changed from those who have made history to those who are making history. In a sense there is a partial return toward the earliest condition. Little children choose ideals present in both space and time; later they tend more and more to choose ideals remote in both space and time; finally there comes, in many, the partial return to a condition where those are preferred who are living now, but are remote in space. This curve symbolizes the influence of home life and other agencies out of school as well, perhaps, as a certain change of emphasis in school work. It shows the effect of conversations with parents and friends, of reading the newspapers, magazines, and other current literature, of political campaigns, industrial disturbances, religious revivals, and of all other social phenomena that contribute to the development of an expanding personality.

Others who have written on this topic have not kept the historical and contemporary characters separate, so that we have no good basis of comparison of these two tendencies with those of other studies. If, however, our contemporary and historical ideals are combined, the comparison gives us the following table.

HISTORICAL AND CONTEMPORARY IDEALS.

Age	6	7	8	9	10	11	12	13	14	15	16
Minn. & Cal.		14%	30%	50%	60%	68%	75%	76%	82%	82%	80%
London			21	15	28	45	53	56			
New Jersey		24	29	44	52	59	66	69			
New Castle	16%	19	39	54.5	65	80	78	83	83	90	87

Here again, the lack of an established norm prevents our passing judgment. All show the same tendency, though the rate of change is in no two cases the same. The apparent lack of interest in public characters on the part of the London pupils is very striking, though, as Professor Barnes says, a comparison of a lower social grade of English children with average Americans is manifestly unfair. Miss Darrah found (No. 1, p. 90) that at the age of fifteen 29% of her boys and 20% of her girls named contemporary persons. At the same age 32% of the boys and 39% of the girls contributing to this research preferred characters still living, thus showing a greater interest in public affairs than the former.

As in the choice of acquaintances the girls surpassed the boys, so in the preference for historical characters they lagged behind from 5% to 15%. In the selection of contemporaries, however, no sex differences were discoverable, the lines frequently crossing each other, but maintaining the same general direction. However, in this class, the boys' choices were chiefly politicians, warriors and capitalists while the girls' were writers, philanthropists, and prominent women.

Lists are here given of all ideals receiving more than one-half of one per cent. of the choices of each sex.

BOYS.		GIRLS.	
1. Washington	34%	1. Washington	24.5%
2. McKinley	7	2. McKinley	6.5
3. Lincoln	5.4	3. Longfellow	3
4. Roosevelt	5	4. Deity	2.7
5. Deity	2.6	5. Lincoln	2.4
6. Longfellow	2.2	6. Queen Victoria	} 2
		Martha Washington	
		Alice Roosevelt	
7. Carnegie	1.4	7. Roosevelt	1.6
8. Columbus } Edison }	1.1	8. Rosa Bonheur	} 1
9. Buffalo Bill	0.9	Louise Alcott	
10. Nathan Hale	0.7	9. Mrs. McKinley	} 0.8
		Helen Gould	
11. Daniel Boone	0.6	10. Columbus	0.7
12. U. S. Grant	0.5	11. Mozart	} 0.5
		Whittier	
13. Ben Franklin	0.4	Miss Stone	

Washington appears to be the great national hero, receiving the votes of one-third of the boys and one-fourth of the girls or more than four times as many as his nearest competitor.

Indeed, if we drop out acquaintance ideals, Deity, characters from books, general class, and the like, Washington receives almost as many votes as all others combined. Mr. Barnes found that 28% of the boys and 11% of the girls in his New Jersey study (No. 6, pp. 238, 239) chose Washington as their hero, while in some of the Trenton schools he was named by as many as 49% of the boys. In marked contrast with this is the condition revealed by the English studies. Miss Dodd shows (No. 3 b, p. 12) that so admirable a character as Queen Victoria, just at the end of her reign, was placed below Florence Nightingale and Mr. Gladstone in popularity, who received 16% and 15% respectively of the choices of the girls. The boys' preferences were also very scattering. Mr. Barnes's investigation exhibits the same condition. (No. 2, p. 6.) Queen Victoria is chosen by only 8% of the boys and 18% of the girls, being closely followed in popularity by Nelson, Gladstone, and more remotely by Florence Nightingale. There is no one character, or group of characters, that stand out in bold relief in the consciousness of English children as embodying all ideal virtues. Some one has well said that England has no national heroes. They do not even celebrate their holidays in honor of great personages, but prosaically give them such names as "bank holiday."

The question naturally suggests itself, "which is the more desirable condition, the great predominance of some one ideal, like Washington in the United States, or a great number of less prominent characters?" It seems to the writer that it depends largely upon whether the dominant ideal has been prematurely stamped upon the children or whether it has insinuated itself into the fibers of their being through a growing appreciation of its virtues. Prof. Barnes has already raised the same question in these words: (No. 6, p. 239.) "Is the personality of George Washington overworked in elementary education so that adults are tired of him? Is it well to use up our greatest Americans for nursery purposes?" A comparison of the preferences for Washington and Lincoln throughout the school years gives, it seems to me, a very pathetic answer to this question.

Age	6	7	8	9	10	11	12	13	14	15	16
Washington	5%	9%	15%	31%	38%	43%	39%	33%	28%	17%	16%
Lincoln	0	0	4	4	2	3	5	5	11	12	15

Washington is impressed upon little children at a time when they should be looking to their parents and playmates for ideals. And as a result the little ones give the same reasons for admiring "the father of his country" that they offer for emulating a neighbor's child. In order to have children appreciate an ideal outside of their experience, parents and nurses and even

teachers have to deck him in bright colors and endow him with childish virtues and sentimental attributes, as for example, the hatchet story. Consequently, almost in their babyhood, the little ones abandon their natural, helpful acquaintance ideals, and look to a distant, vague, imaginary character for guidance. Later, when from reading and experience the sugar coating is worn off they turn from their early idol in disgust. Is not that the story told by the decline in the popularity of Washington after the age of eleven? Compare with this the record of Lincoln in the above table. Babies know nothing of him. To most children entering school his name is strange. His character has not been lactated and peptonized for infant food. They come to their knowledge of him naturally, and as a result we find him gradually increasing in popularity until, among pupils of 16, he stands just 1% below Washington. This record seems to symbolize admirably the normal development of appreciation for national heroes. The same course of evolution is shown to be true in the curves of McKinley and Roosevelt (most strikingly with the boys) and of the general classes "Writers, Artists and Musicians," and "Foreign Ideals." There seems to be slight reason for doubting, then, that children's idealizing of Washington is altogether abnormal, and that it has done violence both to the character of that worthy hero and also to the development of the characters of thousands of embryonic American citizens. May not this lesson be turned to account in teaching a due estimate of and regard for our great national characters hereafter? Aside from all this, it is doubtful whether it is best for a nation to have one ideal that stands out so prominently above others as does Washington. If an ideal tends to shape the characters of all admirers to conform to its own type, it must follow that unless it is desirable to have all members of society shaped to the same model and striving for the same ends, there should be a goodly number and considerable variety of national heroes and heroines.

If we come now to study the influence of religious life in determining children's aspirations we are somewhat disappointed. Only about $2\frac{2}{3}\%$, equally divided between the sexes, express themselves as wishing to be God or Christ, the latter being more often named. Bible characters are named by less than one-half of one per cent. nearly all being girls. This is a much poorer showing than that of any other study. Miss Darrah's study found 5% of the children, chiefly below the age of twelve and confined almost entirely to Minnesota children, to name God and Christ. (No. 1, p. 92.) Prof. Barnes gives 4% of each sex as the proportion choosing Deity in the New Jersey study, while not a single individual named a Bible

character. (No. 6, p. 239.) Very different are the results of foreign studies in this respect. Mr. Young found the encouraging figures of 7% for boys and 13% for girls, as longing to be like Deity, in the Edinburg schools, though there was a marked falling off in both sexes after the age of eleven. Christ was named three times as often as God by the Scotch pupils. (No. 4.) Among the London children 7% of the boys and 14% of the girls, desired to be like God or Christ, while 4%, chiefly girls, named Bible characters as ideals. (No. 2, p. 7.) It is interesting to note that in every study it is the human side of Deity, Christ rather than God, that is preferred. Nearly all the reasons given for choosing Deity name purely human qualities. The following are representative:

- Boy, 6. Jesus beecas he loves me.
- Boy, 8. Jesus. Because he is a nice man.
- Boy, 9. God. He ones the hole world.
- Boy, 10. God is the grats man in the world.
- Girl, 8. God. Because he is gentle, kind and good.
- Girl, 15. Jesus. The only perfect person of whom I have ever read.

It is remarkable that the many admirable characters of the Bible exert so little influence on the development of character. We would expect Joshua, David, Samson, Samuel, Ruth, Esther, and Vashti to compete successfully with any characters of life or literature if children were brought to know them. And yet we find that more than four times as many characters are chosen from fiction and mythology as from The Book. Can it be possible that this study reveals the correct ratio between sacred and profane, religious and secular, influences brought to bear upon a developing soul? If so, a serious impeachment is brought against the church and Sunday school. Nor does the public school escape condemnation. It would seem that there is occasion for more concern than that manifested by the resolutions passed by the Summer School of the South at Nashville and by the National Educational Association at Minneapolis, last summer. Following a scholarly and earnest appeal before the N. E. A. by President Butler for the re-establishment of the Bible in our public schools the following paragraph was incorporated in its declaration of principles by the association.¹

“It is apparent that familiarity with the English Bible as a masterpiece of literature is rapidly decreasing among the pupils in our schools. This is a result of a conception which regards the Bible as a theological book merely, and thereby

¹ See Proceedings of N. E. A. for 1902, p. 27, or Educational Review, Sept., 1902, p. 314.

leads to its exclusion from the schools of some States as a subject of reading and study. We hope for such a change of public sentiment in this regard as will permit and encourage the reading and study of the English Bible, as a literary work of the highest and purest type, side by side with the poetry and prose which it has inspired and in large part formed. We do not urge this in the interest of sectarian instruction of any kind, but that this great book may ever be the teacher's aid in the interpretation of history and literature, law and life, an unrivaled agency in the development of true citizenship, as well as in the formation of pure literary style."

But the use of the Bible in the schools is not all that is necessary; for the State in which this study was made has not excluded it. The Bible is necessary. "Literature needs the Bible. History needs the Bible. Morality needs the Bible, but above all young men and maidens need it when they are seeking for an ideal to sway their life."¹ But that is only one phase of the matter. The real, serious fault lies deeper. The truth is that our religious teaching has not laid hold upon life. It has been repeatedly asserted and never refuted that the teaching in our Sunday schools is the poorest on earth. Much of it is without aim, system or method. Seldom is any attempt made to relate the instruction to the natural interests of the students. And most of all, parents and others do not make their Sunday instruction a part of their week day life. Sunday and its activities are kept separate from other days. The last popular novel, the labor disturbance, the election, the markets,—yes, even the school, is a frequent topic of conversation in the home, in the presence of the children, but seldom the Bible or the church. That is a thing apart, and the child soon comes to realize that it is. His ideals are formed, as all his thoughts are, from the material that contributes most largely to the up-building of his experience. The school may be blame-worthy, the church may be also culpable, but the chief fault lies with the home. The remedy can be found only in an intelligent and sympathetic co-operation of these three forces, with the home in the lead.

It might be well in this connection to call attention to the apparent unpopularity of teachers generally. One would expect that teachers, coming in constant and close contact with their pupils for a number of years and especially engaged in the development of their minds and characters, would stand high in the series of ideals. For some reason this is not true. Of the girls, 4½% name a teacher, while only 1½% of the boys make such a choice. The teacher should occupy a place

¹ Editorial, *Journal of Pedagogy*, September, 1902, p. 8.

in the evolution of ideals intermediate between the home and society at large. The school represents one of the first extensions of the child's world beyond the home. We would therefore expect the crest of the teacher curve to fall between the summits of the curves for home ideals and national ideals, say about the age of eight or nine. No such expectation is realized. The teacher is most popular at 6 and 7—when family and playmate ideals are oftenest mentioned—and rapidly declines in favor until the age of 11 for boys and 12 for girls, after which she is practically not mentioned. (No. 1, p. 92.) At no age does she receive as many as $\frac{1}{7}$ of the choices of girls or $\frac{1}{15}$ of the choices of boys. And yet the children studied here were all school children and their papers were written at the request, and in the presence of teachers. Moreover, with girls especially, teaching is a favorite profession. (No. 5.) Could there be a more convincing proof that our teachers, as a class, are not entering into that vital relationship with their pupils which the development of a sound, rugged, moral character demands; that they do not make themselves as necessary to the little ones as even their neighbors; that they are still kept as separate from participation in the real inner life of their "charges," as the school from their outdoor interests and activities? The lesson taught by this revelation is too patent to require comment.

Some of the ideals less frequently chosen bring out significant, but generally expected, sex differences. Military heroes and adventurers command the admiration of $5\frac{1}{2}\%$ of the boys as compared with $1\frac{1}{2}\%$ of the girls. The only girls naming such characters are included in the ages ten to thirteen, while the boys exhibit a constantly increasing preference culminating in $9\frac{1}{3}\%$ at the age of 16. (No. 3 b, p. 13.) Civil heroes, leaders in times of peace, receive but scanty recognition, 0.8% and 1.3% of the girls and boys respectively. Difficulty has been experienced by some (No. 6, p. 240) in separating the military class from the civil, and we consequently have no means of comparing the results with those of other studies. In this study all national heroes with conspicuous military records were classed as military and all others as civil, with the exception of Washington, Lincoln, McKinley, and Roosevelt, whose adherents seemed too numerous to permit their being sunk in general classes of choices. The personal element in each case seemed superior to either mere military or mere civic virtue. The figures for Washington and Lincoln have been given. McKinley was chosen by 6.4% of the girls and 6.7% of the boys; Roosevelt was preferred by 1.6% of the girls and 5% of the boys. A comparison of the "military curve" thus deter-

mined with that for warlike virtues, given later, shows that the military class does not include too many.

Of all the writers chosen, Longfellow is the most admired, receiving the votes of more than 3% of the girls and more than 2% of the boys. Others frequently mentioned are Whittier, Eugene Field, Seton-Thompson, Louise Alcott, and Mrs. H. B. Stowe. Shakespeare received not a single vote. Rosa Bonheur is the most popular artist, and Mozart, Paderewski, and Beethoven the best known musicians. Combining the figures for artists, authors and musicians, we get decided tendencies which illustrate quite accurately the comparative attitudes of the sexes toward the arts.

AUTHORS, ARTISTS, AND MUSICIANS.

Age	6	7	8	9	10	11	12	13	14	15	16
Girls	0	0	5½%	4%	4½%	13.5%	10.5%	11.5%	17.5%	17%	18.5%
Boys	0	0	4	1.5	3.5	4	5.5	3.5	7	4	3

The choice of philanthropists brings out a similar state. Slightly more than one-half of one per cent. of the boys desire to be benefactors of mankind, while more than 2½% of the girls manifest that desire. While slight at all ages, the tendency is an increasing one with both sexes. Helen Gould and Miss Stone are oftenest mentioned by the girls.

Financiers are more generally preferred by the boys than by the girls, 2.2% and 1% representing the respective interests. Carnegie is the great favorite, though Cecil Rhodes is most popular with the girls. The boys are also more interested in inventors than are the girls, only 0.4% of the latter naming them as compared with 1.6% of the former. If the figures of the boys are plotted a decidedly increasing tendency is revealed, culminating at 15 and 16. Edison is oftenest named.

Characters from books, mythology and popular superstitions are chosen by 2½% of the girls and 1½% of the boys. (No. 2, p. 7, and No. 6, p. 237.) Robinson Crusoe, Elsie Dinsmore, Little Red Riding Hood, Santa Claus, Atlas, Nick Carter, and Cinderella are representative of this class of ideals. More than 4½% of the boys and 5½% of the girls do not name an individual but some position or condition that they deem desirable. (No. 2, p. 5.) These were collated under the heading "general class." The following examples will suffice:

Boy, 6. A soldier. Because they are Brave.

Girl, 8. President. Because he gets lots of money.

Boy, 7. Baker. because I would get cakes and buns.

Boy, 8. A fairy, because I would like to change some things into other things.

Boy, 9. a apple because their sweet.

Girl, 9. Queen. I could rule the country.

Girl, 9. A President's wife. You could get lots of money.

Girl, 11. A snake charmer because they are traveling all the time. and they see all the cities and states and they see all over.

Boy, 11. Country fellow. You can go fishing and swimming.

A re-classification of the papers on the basis of American and foreign ideals reveals the following situation:

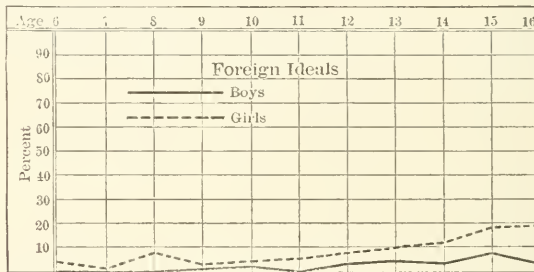


FIG. 2.

Figure 2 indicates that at every age girls choose more foreign ideals than boys and that the difference in tendency increases with age. What is the significance of the difference? In our discussion of acquaintance ideals the question was raised whether the choice by the girls of more local ideals indicates that they are less developed than boys. This figure seems to convey the opposite import. Broadened sympathies and diversified interests indicate developed mind. How can these conflicting tendencies be harmonized? It is probable that girls are not more cosmopolitan than boys, but that more of the things that tempt their ambition are foreign. The monarchies and aristocracies of Europe afford opportunities for women to shine socially and politically as they cannot in America. Then, too, the arts of literature, music, sculpture, and painting, which have a much greater interest for girls than boys, are best developed abroad. Europe is also the source of fashions of dress, of social customs and the like, which have an absorbing interest for the weaker half of our race. An examination of the girls' choices justifies this analysis of the situation. About 25% of the women and 20% of the men named by the girls are foreign. And of the foreign men chosen by them, 70% are devotees of the fine arts, while the women are either queens, or artists of some kind. On the other hand the careers which appeal to boys are quite as accessible at home as abroad; the activities of men bring them more often into competition than co-operation with foreigners; hence boys are less likely to choose foreign ideals than girls.

Miss Dodds mentions Napoleon, Patti and Hans Richter as chosen by English girls, and Kruger, Emperor of Germany, and Julius Cæsar as mentioned by boys, among foreigners. It will be noted that two of the girls' choices are artists. (No. 3, pp. 13, 14.)

Most studies of ideals have pointed out the striking difference of tendency in boys and girls, toward selecting an ideal of the opposite sex. In all alike, an insignificant proportion of the boys choose female ideals, and in the early years only. Very different are the girls in this respect. In Miss Dodd's study 34% of the girls explicitly stated that they would rather be men than women. (No. 3, p. 7.) In the New Jersey study 35% of the girls chose a male ideal and the proportion was greatest with the older girls. (No. 6, p. 240.) The tendencies revealed in two other studies are shown in the following table:

CHOICE OF MALE IDEALS BY GIRLS.

Age	7	8	9	10	11	12	13	14	15	16
Minn. & Cal.	46%	48%	52%	53%	58%	63%	62%	68%	68%	51%
London		13	10	16	17	12	14			

It will be noted that at no age do more than 1/6 of the London girls name a male ideal while on the average considerably more than 1/2 of the American girls choose a man. Which is the more desirable condition? Again, Professor Goddard has shown in his admirable study that in their negative ideals most girls of a more mature age also select men; that is, they not only test the quality of their lives by comparison with those of good men but also by contrast with the characters of bad men. They accept no standard of their own sex.

Mr. Goddard's Table (No. 7, p. 394) is as follows:

NEGATIVE IDEALS.

Age	15 & 16	17	18	19	20-28
Boys choose women	0%	3%	1%	0%	0%
Girls choose men	47	60	52	49	59

Again, Miss Darrah's investigation showed that the girls were within from 2% to 15% of naming as many "masculine virtues" as the boys, throughout the entire school period from seven to sixteen. (No. 1, p. 96.)

And finally the present study shows that 51.7% of the school girls of New Castle, as contrasted with 3 1/2% of the boys, choose ideals of the opposite sex. The lines of tendency are shown in Fig. 3.

What, now, is the meaning of all this mass of data? We are not surprised that a little boy should frequently find his ideal in his mother or grandmother or occasionally in a girl playmate; we do not wonder that a little girl should see in her

father or uncle or boy companion a combination of ideal qualities worthy of her aspiration. But can we prevent a feeling of surprise that this tendency in girls should steadily increase

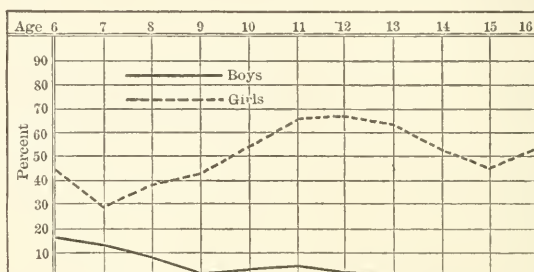


FIG. 3. OPPOSITE SEX CHOSEN.

through the years, and even during the years when the child is being made over into the woman remain sufficiently strong to include more than half of the sex. Can a girl become the best woman possible while holding before herself as an ideal of excellence the image of a man? That is the question we have to answer.

To the writer the situation is a much more serious and far reaching one, even than the above numerous evidences indicate. In no other phase of the study does such a great divergence of tendency show itself, not even in the citing of military virtues as justification for choice made. Miss Darrah concluded that "In the case of the girls, however, a divorce is evident between the ideals adopted and the line of life best suited to the interest of the race. The girl of to-day demands freedom, strength, independence, activity and recognition." She is inclined to put much of the blame on the kind of history taught in the schools. "Surely among the 'Pioneers of History,' enough women have played a part brave, strong, patriotic and wise so that material exists for commemoration. Far more than a 'Woman's Bible,' which appeals only to the mature, do we not need a 'Woman's History,' which shall become a factor in increasing this three-quarters of one per cent. who desire to become wives and mothers—which shall present ideals embodying the most attractive virtues, and still permitting a home." (No. 1, p. 98.) Professor Barnes suggests the nature of the situation in a series of pertinent questions: "Is it not true that with girls we are furnishing in our State schools, in both America and England, a totally inadequate line of womanly ideals? . . . Is it not also true that we are still using a curriculum developed largely in boys' schools for co-educational work? If you doubt it read any of our school histories. Are Calhoun and Stonewall Jackson the best ideals

to be held before girls? Have America and England produced no women to act as centers of growth for our girls?" (No. 2, p. 11 and No. 6, p. 240.) And in another place (No. 6, pp. 279, 280) he says: "If one picks up a text-book on American history he finds that out of four hundred pages not more than one page is devoted to the work of women. In a collection of some forty biographies recently prepared for school work, only one deals with a woman. In all the material of the curriculum this general proportion is maintained. . . . Is it not time that American histories intended for mixed schools should recognize the fact that women came with the men and that they have played important and heroic parts?" There is little doubt that the character of school books and school instruction have much to do with the condition. But the school mirrors the condition rather than causes it. It conforms to social movements rather than directs them. Behind all is the modern movement for the "emancipation of women." The reaction against the old restraint and limitations of all kinds has been so vigorous in America that the great body of the sex has been carried over to the other extreme. This reaction has been much less marked abroad, and there is correspondingly only a slight tendency for the girls to choose masculine ideals. (No. 2, pp. 10, 11.) The flooding of the various professions by women is an evidence of it. In the keen excitement of partaking of new liberties and enjoying new culture, woman has failed to distinguish between equality of opportunity and education with man, and identity. Becoming more and more jealous of her new prerogatives, she has insisted not only on having the same education but in entering upon the same life work. She has insisted not only on pursuing the same studies but on reciting in the same classes from kindergarten to university. To ask her to use different books or to hold up to her a different set of ideals would be construed at once as an attempt to reduce her to her former servitude (?). What else means the abandonment of the home for the office? What else means the formation of societies for the encouragement of motherhood? What else means the recent discussion and adoption of the plan of segregation by one of our foremost co-educational colleges? What else means the urgent demand for training in home economics in our colleges for women? What else mean a hundred other alarming manifestations that are beginning more and more to attract the attention of social philosophers? The question of co-education was believed to have been finally settled a generation ago. But it has been all unsettled by researches in adolescence as well as by studies of certain perplexing social problems, and the battle will have to be fought over again with, it is hoped, at least a modified result. A few

far-sighted prophets have read the handwriting on the wall and have called a halt in no uncertain tones. But the large mass of humanity is blind to the danger. President G. Stanley Hall has been among the first and most persistent in demanding, both by tongue and pen, a change in the education of women, adapting it both to their organic structure and to their functions in society. A few others have nobly seconded his efforts.¹ Miss Katherine E. Dolbear's suggestive little paper² should be read and pondered by every person interested in human progress. That can hardly be called an ideal education for women which permits 18 out of 100 college girls to state boldly that they would rather be men than women. (No 19, p. 3.)

It begins to appear that in her so-called emancipation woman cut loose from her old moorings, without anchors aboard, before she had selected any definite point as a destination. She has been drifting ever since without any well-defined ideals of her own, wildly clutching now at this, now at that condition, without any regard for consistency or natural adaptation. Biology teaches that the female of any species is the more conservative element. That variations are to be looked for in the male. Is there any evidence of conservatism in the condition just described? Is man or woman the greatest variant of the present time? Can the latter hope to reverse a fundamental law of life by an idle striving, or to bring anything but evil to the race in the attempt?

More than half of the girls choose male ideals because there is no definite body of ideals to which they can look as characteristic of the sex. Femininity seems on the verge of disintegration. Unless there is a change of trend we shall soon have a female sex without a female character. A vast majority of our teachers are women, and having vague or masculine ideals of their own, they prevent rather than encourage the development of a well-knit personality in the girls about them. The girls in this study name 104 ideals other than local as compared to 88 named by the boys. Moreover, of the 104, 49 were males. At every age from eight to sixteen, the girls name from three to twenty more ideals than the boys. All these facts indicate a condition of diffused interest, of lack of clear cut purpose, of need of integration. If concrete ideals are helpful to adults, how much more necessary must they be to characters in the process of formation, to serve as nuclei about which personalities may be organized, and as sources of perennial inspiration! The schools may take the lead in the

¹See, for example, "Plain Words on the Woman Question," by Grant Allen, *Popular Science Monthly*, Vol. XXXVI, p. 170.

²A Few Suggestions for the Education of Women, *Pedagogical Seminary*, Dec., 1901. Vol. VIII, pp. 548-555.

solution of this problem, by revising their books and methods of work and by supplying a better class of ideals for girls, but the evil is too deep-set to be removed by a single agency. It will have to become a matter of social consciousness; an intelligent public opinion will have to be educated to re-enforce the efforts of the school and give them the stamp of public approval before we may hope for any decided change.

It is greatly to be regretted that no studies have been made of the ideals of girls of more mature years, in order to discover what becomes of this strong tendency. The only attempt made in this direction thus far was based on papers written by fifty-two women and thirty-eight men, all teachers in attendance at an institute in Hunterdon County, N. J. Mr. Barnes, who examined the papers, expressed surprise that while the choices of ideals by the men continued the outgoing tendency shown in the answers of the older boys, the women exhibited a reversion to the more primitive type of acquaintance ideals. (No. 6, pp. 359, 360.) While there is no assurance that studies of a larger number of women would confirm this apparent reversal, it is what the writer would expect. Having formed ideals of life and service that are largely masculine, and having been disappointed in the realization of these ideals through natural limitations, or through hostile social conventionalities and traditions, there is nothing left for a woman but to fall back upon the ideals characteristic of her sex in its earliest years. Were the development along this line normal, disappointment at any stage would not result in so great a reversal.

Coming now to a closer inspection of the feminine ideals chosen by less than half of the girls, we find that they readily fall into two distinct groups; viz., women who are famous for their own position or achievement, and those who owe their greatness to some relationship to a great man.

Examples of these two classes are the following:

Famous women:

Girl, 8. Queen Victoria. Because she is honored and is queen of America.

Girl, 9. Miss Keller, because she is blind, deaf, and dumb and because she can write a good story of her life.

Girl, 10. Helen Gould, because she has a home for little orphans, and because she is kind.

Girl, 10. Mrs. Elizabeth Ross. Because she made the first red, white and blue flag.

Girl, 11. Miss Alcott, because she wrote such charming books.

Girl, 11. Queen Isabella. Because she helped Columbus get ships.

Girl, 13. Miss Sullivan. Because she taught Helen Kellar and I think I should have liked the work.

Girl, 14. Clara Barton, because she is a Red Cross nurse and saves a good many lives.

Girl, 15. Rev. Anna Shaw. She is a great temperance woman.

Girl, 16. George Eliott. A great writer.

Girl, 17. Jane Fox. Because she was one of the greatest detectives of the day.

Women related to great men:

Girl, 9. Miss Rockfeller, because she is rich.

Girl, 9. Lincoln's wife, because he was a president.

Girl, 9. Mrs. Washington. Because she never told a lie.

Girl, 10. Martha Washington. Because she was the president's wife.

Girl, 11. Alice Roosevelt, to live in Washington and travel across the ocean and to go from one country to another.

Girl, 13. Virgin Mary. To be one Mother of Christ.

Girl, 13. Mrs. Whittier. Because she was good.

Girl, 16. Mrs. Roosevelt. Because she is the president's wife.

The lines of tendency are shown in Fig. 4.

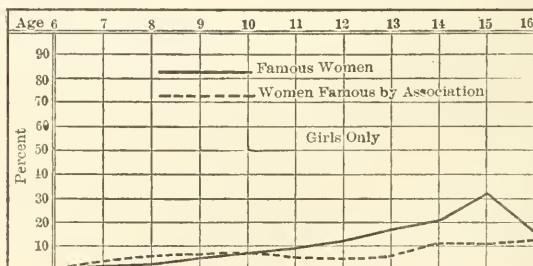


FIG. 4.

It is quite remarkable how completely this figure illustrates the tendency discussed in connection with Fig. 3. Up to the age of ten, girls choose about twice as many with reflected greatness as those great in their own merit. But after that age the proportion is almost exactly reversed. The opinion is not advanced here that women should not take as ideals women who have made themselves famous. Many of that class named in this study are most admirable examples of ideal womanhood. But this figure certainly emphasizes the truth of the statement that school and social training tend to make our girls long more for independence, freedom from restraint, strength, and personal recognition, than for the more modest sphere of home life and the sharing of another's honor. All

the studies of Vocational Ambitions bring out this tendency. (No. 5, p. 485; 19, p. 4; 12, p. 247; 11, p. 42; 15, p. 141. Compare, also, the figures of the English studies, No. 17, p. 249; 18, p. 262.) Both these tendencies, it will be noted, receive a noticeable impulse during the adolescent years, accompanied by quite a decided drop in the curve of choice of male ideals in Fig. 3. It is here that nature reasserts herself for a short time in spite of training, and reclaims some of the drifting ones for their manifest destiny. It must be admitted, in due justice, that there are too few ideals of the domestic type to tempt girls' ambition. Such characters as Queen Victoria have their domestic virtues so overshadowed by their political qualities that they receive scant recognition. And yet several of the girls of this study made special mention of Victoria's motherly ministrations in her home. Says one girl of thirteen:

"I would like to be Queen Victoria because she was good to all the poor and rich. She treated all her people the same, and she had a large family of children and she raised them like any other would the nurses did not have all the care of her children. She learn each one a trade for fear they would in need some day and they would have something to fall back on. neither did she neglect their education this showed how thoughtful she was."

Another, age fifteen, says:

"I would like to be like Queen Victoria because she was a good christian woman and very kind and knew how to mind her own business and knew how to bring up her children in the proper way."

It is of some significance that both of these girls were of English parentage. What we need in America is a more outspoken appreciation, even idealization, of the domestic and womanly virtues of the great ones among the weaker sex.

II.

In tabulating the reasons given for the ideals named, none of the classifications used in the earlier studies were found to be adequate. Indeed it was a very difficult matter to classify the reasons on any basis, as they shade so gradually into each other as to make distinct division lines almost impossible. However, the following classification was finally adopted, with the given results, and probably represents as well as any could the various kinds of motives.

REASONS FOR CHOICE.

Age	6	7	8	9	10	11	12	13	14	15	16	Total
No reason Good, Nice, Kind, etc. }	52%	41%	25%	15%	7%	0.7%	2%	7%	2%	3%	1%	12%
Material Possessions }	26	26	28	33	27	22	16	11	14	8	7	21
Personal Appearance, Conventional Traits, etc. }	4	7	7	7	9	7	5	6	5	5	3	6
Position, Honor, Fame, etc. }	4	5	3	3	1	0.7	0	1	0	0	0	2
Intellectual or Artistic Qualities }	0	2	11	17	19	23	20	16	15	19	17	16
Moral Qualities Civic or Political Qualities }	1	2	2	2	4	4	4	9	10	7	17	5
Military Qualities Power to do Things }	2	5	12	17	21	27	34	29	29	29	25	22
Desire to Help Others }	0	0.6	.75	1	2	4	4	6	10	8	13	4
Personal Liking Miscellaneous }	1	0.6	1	5	15	12	15	16	13	15	9	10
	1	3	5	3	4	11	12	8	8	11	8	7
Desire to Help Others }	2	0.6	.75	1	0.6	3	5	6	8	7	9	3
Personal Liking Miscellaneous }	1	6	5	1	2	0.3	0.7	0.4	0	0	0	2
	4	2	4	4	2	3	2	2	1	3	0	3

Plotting the most prominent tendencies we get the result shown in Fig. 5.

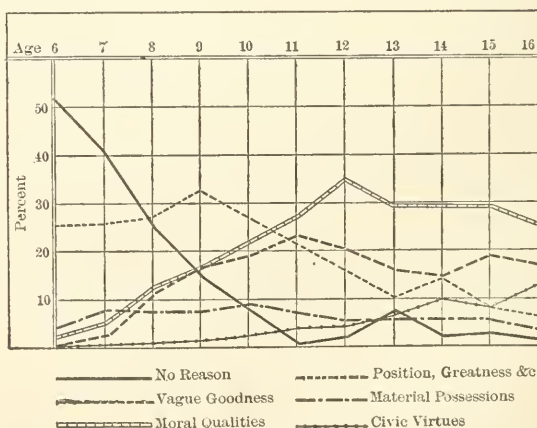


FIG. 5.

It is shown that at the age of six one-half of the children give no reason for their choice. This proportion rapidly diminishes to one-fourth at eight, and at the age of eleven and thereafter practically every one gives some justification for his choice. About 12% of all making choices, 11% of the girls and 13% of the boys, fail to give any reason for their ambition. Prof. Barnes found only 3% of the New Jersey pupils in this class, and about $\frac{2}{3}$ of them were boys. (No. 6, pp. 199, 200.) In his London study, however, 22% of the boys and

only 5% of the girls mention no reason. (No. 2, p. 7.) This great sex difference he accounts for by his theory that the girls are more servile than the boys and do what they are told. No such difference can be noted in the New Castle papers after the age of eight. A part of the great difference between the children of New Jersey and New Castle, in the number failing to give a reason, is no doubt due to the inclusion in the latter group of a large number of 5 and 6-year-old children.

A second rapidly diminishing tendency whose curve runs almost parallel with the first after the age of nine is the tendency to give some vague sort of reason which has been called "undifferentiated goodness." In the consciousness of children giving such reasons, the virtues are still in a state of solution and have not yet been crystallized out. Children are not accustomed to analyze a situation. They feel rather than think about their ideals as about everything. They take experiences as vague wholes which are later clarified and differentiated into related parts, as the power of analysis develops. Hence little folks can give no reason for admiring a certain character, or only a very general one, as "Washington, cose hes good," "My uncle. He is nice," "She is good, and she is kind," etc. 22% of the girls and 21% of the boys give such a reason, the girls being much in the lead during the first four years studied. This shows no inferiority on the part of the girls, for more of the boys fail to give a reason. The answers of 30% of the London children belonged to this class (No. 2, p. 7), showing them to be somewhat more backward in development than American children. Reference to the table or to figure 5 shows us that until the age of nine from three-fourths to two-thirds of the children either give no reason at all or some vague reason of this general class. (See also No. 8, p. 16, for the same tendency brought out in another English study, indicating superiority of American children at the same age.)

There is another class of reasons the study of which has afforded the keenest interest, and which has not, to my knowledge, been noticed in any earlier study. I refer to a kind of statement which is really not a reason at all, but some mere irrelevant, perhaps accidental, idea associated with the choice. Reference is made to such statements as:

Boy, 6. Miss ——. She lives in Sharon.

Girl, 6. Red Riding Hood. She took her grandmother pie cake.

Boy, 9. I like to be Willie Jones. Because they live in Canton, O.

Boy, 9. Prince Henry. His name was Henry and I like that name.

Boy, 12. George Washington. Because he was first in war, first in peace, and first in the hearts of his countrymen.

The statements of this kind constitute a ratio that rapidly diminishes with increasing age. The series, sexes combined is as follows:

Age	6	7	8	9	10	11	12	13	14	15	16
Irrelevant statements	11%	11%	7%	2%	3%	1%	2.5%	2.5%	0%	0%	0%

Have we not here a close parallel to the development of the concept of causality? What are cause and effect but two ideas always occurring in consciousness in the same inseparable sequence under the same conditions? One phenomenon is said to be the cause of another because it invariably happens in connection with it. The only way in which the real cause of an event can be learned is through extended experience which gradually discovers and rejects the accidental, adventitious, occasional associates and retains that one phenomenon out of association with which it is never known to occur. In the early stages of development any one of a number of associates may be given as a cause; very slowly are the unessential concomitants and antecedents lopped off and the so-called cause left. At the age of six, 11% of the children give as a cause of their choice a mere chance association. Their conception of causality is yet vague. It is not until the age of fourteen is reached that every reason given can be accepted as a real cause. Then, only, have all attained at least a practical working notion of causality.

A few apparently unable to pick out the details which would constitute a justification for their choice, or unwilling to lose an opportunity to convey a bit of information which they possess, narrate all they know of their hero. Of such are the writers of the following:

Boy, 13. Daniel Webster when he was a little boy and his brother ezekly caught a woodchuck and was going to kill it and Daniel was a fine little boy about fifteen years old and his first case was about a woodchuck. Daniel brother was going to kill the woodchuck, Daniel said to his brother ezekil let us go to our father and the boys when Daniel father said ezek you be a witness againsest the woodchuck and you Daniel you be a witness for the woodchuck and the case becan Ezekil was first to speak Ezekil said that the woodchuck was doing too much damage and the father said that right and next Daniel was called to speak Daniel said the poor thing wanes something to eat well we do. look at the poor trembling creature Daniel father said ezekil let that wood chuck go let the wood chuck go.

Girl, 13. I would like most to be like Ethelbert Nevin. I

think that Ethelbert Nevin wrote or composed some of the *sweetest* music ever I heard. Especially "Narcissus." I don't believe that I will ever get tired of listening to it. It is one of five pieces of music. These five go together, but I like "Narcissus" best. I have often wondered why he wasn't permitted to live longer.

Some are excellent examples of confusion. One sample will suffice:

Girl, nine. George Washington. Why because he was our first president he was the first in war first in peace. And he discovered America and the people thought that if they would go down South that the Ocean would be boiling and George Washington knew that when he got far enough that it would get cool.

No doubt some will be surprised at the comparative insignificance of the part played by the hope of material possessions in children's motives. We have been scornfully called a nation of shopkeepers, and it is the popular belief abroad that we care more for the almighty dollar than for our soul's salvation. Yet, but 6% of these school children hold the desire for wealth and its advantages above other hopes. We would expect this to be overwhelmingly a boy's motive, but there is not a striking difference in the sexes with reference to it, 5% of the girls and 7% of the boys belonging to this class. Figure 5 shows that desire for wealth is greatest at the age of ten and thereafter steadily diminishes. Considering the great prominence of wealth and the commercial interests of the city this is a very good showing, and an evidence that the schools have done something to draw children's attention away from the sordid material ambitions of many of the adult citizens. Professor Barnes found 10% of the London boys and 14% of the girls studied by him to have pecuniary ambitions back of their choices. (No. 2, p. 8.) In New Jersey he found 4½% of the boys and almost 6½% of the girls to belong to this class. In neither of these studies is any decided tendency toward increase or decrease discoverable. Miss Darrah's study, however, with the figures for the sexes combined, shows a decided drop in the curve from 10% at the age of seven to 2% at fifteen. But how shall we explain the predominance of the girls in Barnes's two studies? His own suggestion, in the case of the English girls, is that in shopping and marketing girls are more busy than boys and consequently come to have a clearer appreciation of the value and need of money. It is, perhaps, to be expected that a study of vocational interests would bring out a greater desire for wealth and its advantages than would a study of general ideals. Money is more closely associated with business than with ideal lives. A reference to the stud-

ies of prospective vocations shows the reality of the expectation. Mr. Taylor (No. 10), and Mr. Thurber (No. 11, p. 44) show the number actuated by desire to earn money, sexes combined, to rise from 24% at seven to 54% at twelve and then drop to 25% at fourteen. Mr. Jegi found that boys' ambition for wealth diminished from about 55% at eight to 45% at fourteen, and that the girls were, on the average, 15% below them. (No. 15, p. 142.) In Mrs. Willard's paper 26% of the boys and 16% of the girls choose occupations because of their money earning value. (No. 12, p. 247.) This comparison shows then that there is no uniformity in the attitude of the sexes toward material possessions, nor in the attitude of either sex at a given age. Perhaps a uniform basis of classification would bring some order out of the apparent chaos. That a study of vocational interest brings out the material motives more sharply than another is shown in a comparison of two other English studies. (No. 8, p. 13 and No. 18, p. 261.) The first line represents the number naming money as the motive for choosing an occupation among girls in London Board Schools. The second shows the number of children in the same kind of schools who mention material possessions as ideal qualities of the queen.

Ages	7	8	9	10	11	12	13	14
Girls					27%	36%	37%	46%
Girls and Boys	45%	42%	32%	25%	25	22	17	27

The tendencies are precisely opposite. It is evident that the time is not yet ripe for generalization on this topic.

We come now to several minor classes of motives which show no tendency to become prominent at any age, and which exhibit no marked differences of sex preference. Two per cent. of the girls and slightly more than one per cent. of the boys, speak of personal appearance or some conventional accomplishment. No one, except three girls of thirteen, refers to such qualities after the age of eleven. (Compare the great and increasing prominence of "manners" in the consciousness of English Children, No. 14, p. 147. Miss Darrah places between 3% and 4% of the children of her study in this class. No. 1, p. 90. Barnes found 4% of the London children to speak of personal appearance. (No. 2, p. 8.)

A personal liking for the ideal selected is given as a reason by 2% of the girls and 1½% of the boys, practically all before the age of ten. The power to do some particular thing is cited by 6% of the girls and over 7% of the boys as a sufficient vindication of their choice of ideal. (No. 6, pp. 199 and 200. Professor Barnes shows the New Jersey boys and girls to be much more desirous to do certain things. In this class he puts 12% of the girls and almost 10% of the boys. It is possible that a

difference of classification may account for the differences in result.) This characteristic is most marked in both sexes after the age of eleven. It is then that children begin to long to accomplish definite ends. The active side of citizenship appeals more and more to them, and they cast about to discover their mission. Examples of this type of reason are:

Boy, 7. Motorman on street car to race Jamy.

Boy, 12. Llewellyn Sweet. Because he plays ball all the time.

Boy, 13. Buffalo Bill. Ride horses lasso ponies be a good shot.

Boy, 12. Roosevelt, to fight the beef trust.

Girl, 11. I would like to be Louis May Alcott and write such nice helpful books to help some person and to have a warm spot for myself in every person heart.

About three per cent. of the reasons were so varied as to defy classification and were, therefore, grouped together as miscellaneous. This class runs, almost equally prominent, throughout the school years, probably diminishing slightly in the teens.

Among the increasing tendencies the preference for moral qualities is most prominent. It reaches its greatest intensity at the age of twelve, and then declines slightly through the following years.

This does not indicate a deterioration in the kind of qualities preferred but a differentiation. The general moral qualities give way somewhat to the more specific civic virtues and definite altruistic activities, which more than make up for the decline in the former. So that the general development is still in an upward direction. In the naming of moral qualities the sexes are about equal until the age of ten, after which the girls take the lead by 4% to 10% until at the age of fifteen they drop below the boys. This decline is probably accounted for by a decided rise in the girls' curves for civic virtues, love of position and intellectual qualities, all of which, be it noted, are ordinarily classed as masculine qualities, and which tend to sustain the contention that girls are striving unduly after masculine ideals. However, in general, the qualities selected by both sexes as characterizing their ideals are of a high order (See Dr. Goddard's list of qualities despised by young men and women. No. 7, p. 395.) and cannot but give one a roseate and optimistic outlook in a commercial and materialistic age. As none of the other writers on this topic has kept the moral qualities in a separate class, we have no means of comparing these results with others.

A conspicuous, increasing tendency, almost equally prominent in the answers of both sexes, is brought out in figure 5

by the curve representing the class "Position, Fame, Honor, etc." This tendency is seen to culminate at the age of eleven, indicating that after that age young people come to see more and more clearly that there are nobler elements in a great career than mere reputation. They learn to penetrate below the reputation and to pick out the qualities and activities that have created it. This class of reasons is more liberally used by the boys than by the girls, by from 5% to 10%, between the ages of nine and fourteen inclusive. At fifteen and sixteen reputation appeals more strongly to girls. The following table shows that the New Jersey children are less attracted than are those of either London or New Castle by the glamor of position and honor.

POSITION, HONOR, GREATNESS, ETC.

Age		6	7	8	9	10	11	12	13	14	15	16	Total
New Castle	{ Boys	0%	1%	11%	21%	21%	27%	22%	21%	20%	12%	15%	18%
	{ Girls	0	2	11	12	15	19	15	11	10	25	19	13
New Jersey	{ Boys		1	2	6	8.5	4	12	11				6.5
	{ Girls		1	1	7	7	6	11	11				6
London	{ Boys			16	9	16	24	27	23				
	{ Girls			10	6	13	22	29	31				20

Least prominent among the increasing tendencies represented in Figure 5 is that of civic and political virtues, but none shows a more persistent, uninterrupted increase. In none of the other studies has this class of motives been kept separate, though the desirability of a knowledge of the development of such a tendency must be apparent. Coincident with a decided decline in the curves for "general goodness," "moral qualities," and "position" there is a steady rise in the curve of "civic virtues," showing how the dawning consciousness of citizenship is making more and more demands for the application of the general moral virtues to the conditions of society at large and to the relations between the servants of the people in public life. It has been a matter of great satisfaction to the writer to note that a large proportion of the civic virtues referred to by the children of this study were in connection with the character of our great Lincoln. With these embryo citizens Lincoln is *par excellence* the model of perfect, patriotic, civic virtue, as Washington is of the goody-goody virtues of the younger ones. Certainly no better ideal could be held up to the rising generation of young Americans, to fire their enthusiasm for patriotism and loyalty to their country, in an age of unprecedented political corruption, than our first martyr-president. And the respect in which he is held by the older pupils, as compared with Washington has a direct bearing on what was said, on an earlier page, concerning the premature thrusting of ideals from without their field of experience and interest upon little chil-

dren. It is to be hoped that our other national heroes may be spared the fate of the unfortunate "father of his country."

It is also a matter of interest that the girls are practically the equals of the boys in the appreciation of the best qualities of citizenship. The lines of tendency take almost identical courses until the age of fourteen at and after which the boys take a considerable lead. But the number of each sex is woe-fully small—only 3% of the girls and 4% of the boys. Surely after eight or ten years spent in schools supported by the State, after having studied the history and government of their country, a much larger proportion of the pupils should regard civic and political virtues as the elements of greatest excellence in the characters of our national heroes. It would be very interesting and valuable to know just how much farther the differentiation of general goodness into specific social and civic virtues has gone by the end of the high school course. It is a source of constant regret that high school students were not included in this study. By confining his studies to papers written about Queen Victoria by London children (No. 8, p. 18), and about President McKinley by American children (No. 9, p. 29), Mr. Barnes got a considerably larger proportion of political virtues than the above. No doubt such a restriction in this study would have brought out a better showing.

All studies, both of ideals and vocational ambitions, have made much of the development of children's altruistic and philanthropic motives, of their expressions of desire to help others. Mrs. Willard found that 5½% of the boys and 9½% of the girls gave some form of philanthropy as a justification for their choice of occupation. (No. 12, pp. 246 and 251.) Miss Wykoff's study (No. 5, p. 486) reverses the proportion, the boys giving over 7% of altruistic desires and the girls but 5½%. Mr. Barnes's New Jersey study gives the meager figures of 1½% for boys and 2½% for girls. (No. 6, pp. 199, 200.) Other investigators find a marked altruistic tendency increasing rapidly with age and with the girls generally out-ranking the boys, as shown in the following table.

ALTRUISTIC TENDENCIES.

Age		8	9	10	11	12	13	14	Total
London	{ Boys	0%	2%	2%	9%	8%	15%	}	13%
	{ Girls	1	8	12	18	35	49		
Scotland	{ Boys	2	4	4	6	5	6	13	
	{ Girls	0	5	9	11	12	22	37	
Milwaukee	{ Boys	20	12	4	11	6	5	7.5	4.7
	{ Girls	14	21	12	34	16	25	30	9.7
New York (Sexes Combined)	{	4	8	15	25	37	39	36	
London (Girls only)	{	9	13	17	19	13	21		

We seem to be justified in drawing several conclusions from a comparison of these figures. (1) Girls are very much more altruistic than boys. Women are the great philanthropists. Were it not for them the amount and quality of our charity work would be scarcely worth mentioning. Occasionally some man on account of unusual resources and opportunities electrifies a nation by an act of munificence, but the very notoriety of the act proves its unusualness. Women are our every day, inconspicuous, practical altruists. (2) In so far as the boys' figures exhibit any tendency at all, it is toward an increase in altruistic motives with age. This is characteristic of the race as a whole, as it increases in civilization and culture. (3) With remarkable uniformity the world over, girls undergo a rapid expansion of their philanthropic and altruistic instincts, beginning at an early age. (4) A number of the studies, including one not used in the table (No. 13, p. 135), show a falling off in the altruistic tendency, about the age of 12 or 13, with a subsequent increase. This unexpected drop is probably not accidental. Prof. Barnes has suggested (No. 17, pp. 252, 253) that it could hardly be expected that the child's outgoing impulses should grow steadily until puberty without meeting a check from unsuccessful attempts to realize them, and giving up for a time in discouragement. His optimism and altruism recover with broader experience.

With all these conclusions the present study agrees. Figure 6, I, shows the greater philanthropy of the girls, the gradual increase in tendency in both sexes, the drop in the curve of the girls at thirteen and of the boys at fourteen. The percentages for both sexes are much lower than those of most studies quoted, constituting but 5% of the girls and less than 2% of the boys. The break in the girls' curve at fifteen is probably accidental. It will be noticed that many of the figures show a decided drop or rise at fifteen or sixteen. That is believed to be due to an insufficient number of papers for these ages (106 at fifteen and 75 at sixteen, sexes combined) and to the additional fact that persons of those ages still found in the grades, are of inferior intelligence and likely to exhibit a reversal of the natural tendency for the age.

Another class of reasons, presenting great sex differences, as would be expected, is the large group named "military," made up of all references to adventure, heroism, strategy, courage, and the like. As shown in Figure 6, III, boys have a constantly increasing admiration for military powers up to the age of fifteen, when fully one-third of them prefer it to other forms of renown. On the other hand the only girls who speak of that as a commendable virtue are included in the five years ten to fourteen. This period, it will be noted, is the age at

which history is being studied in schools and military success is made much of. It is probable that few American boys grow to maturity without at some period of their development having

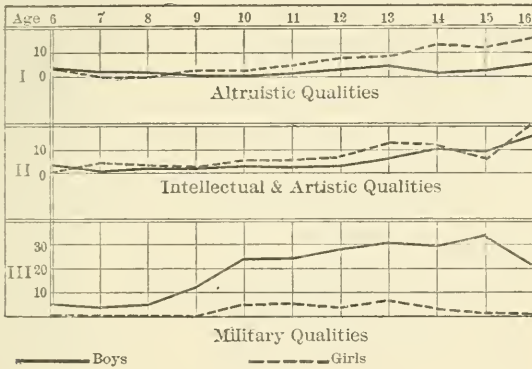


FIG. 6.

an ambition to be a soldier. The fighting spirit of the race persists in spite of our having adopted the arts of peace. In all, 18½% of the boys and 2% of the girls prefer military glory. Other studies have used a different basis of classification and do not therefore present any data for comparison. Mr. Young found "bravery" mentioned less with advancing age (from 40% at eight to 14% at fourteen), but he gives no other military qualities (No. 4). Miss Darrah's study contains the heading "Bravery, freedom, adventure, war" for which the figures run,—at seven 5%, at twelve 19%, at fifteen 13%. (No. 1, p. 90.)

In ideals selected by school children and written as a school exercise, it would be natural to expect a large percentage of intellectual and artistic traits to appear among the typical qualities. The expectation is not justified by this study: Only 3½% of the boys and 6% of the girls characterize their ideal as chosen because possessing such attainments. The curve representing the combined figures of the sexes rises quite gradually to 17% at the age of sixteen. Figure 6, II, indicates that the girls are superior to the boys in this characteristic by several per cent. throughout almost the entire school period. Professor Barnes gives 6% as the proportion representing this class of motives among the London Board School Children. (No. 2, p. 8.) Miss Darrah's study shows a decided increase of appreciation for "intellectual ability or accomplishment" as given in the series; seven years 3%, twelve years 10%, fifteen years 12%. Artistic qualities are not included. The New Jersey study reveals a decided sex difference (No. 6, pp. 199,

200); boys $3\frac{1}{2}\%$, girls 8% . In Dr. Goddard's study of "Negative Ideals" (No. 7, p. 395) the same slighting of intellectual powers is shown in the small number of students who include "neglected education" among the undesirable conditions of life. (See also No. 8, p. 17.) We are justified, then, in concluding from this and from other studies that (1) compared with other motives, intellectual and artistic ability plays an insignificant part in the selection of ideals; and (2) that girls esteem these qualities for their own sake much more highly than do boys.

In several recent studies the writer's attention has been drawn to a characteristic in the answers of many of the young children which, on reflection, he has concluded to be illustrative of a fundamental principle of child mind. The same characteristic appeared so striking in the present study that the significant answers were collated with a most convincing result. The characteristic referred to is the tendency of little folks to speak of a past event in the present tense, of a distant person or place as though right at hand. The younger the child the more does he tend to eliminate space and time—both past and future. The intensity of his emotional nature and the consequent vividness of his imagination cause the child to launch himself right into the midst of a remembered or suggested situation. The only reality to him is the present experience. He can only think of the coming birthday party or visit to the country as he, in imagination, projects himself into that situation and actually lives it. Similarly he can think of his ideals and speak of them only as living now and in close personal relationship with himself. A few examples of this kind of answers are given:

- Girl, 6. Washington. Cose hes good.
- Boy, 7. McKinley. Because he vots.
- Girl, 7. Washington. Because he has white hair.
- Girl, 7. Queen Victoria. Cose she is good.
- Boy, 8. Lincoln, Becos he is a presantdent.
- Boy, 8. Samson. Because he is the strongest man in the world.
- Girl, 8. Mother of Jesus. Because she is a good woman.
- Girl, 8. Martha Washington. She is the preasants daughter.
- Boy, 9. Daniel Webster, because he is the greatest lawyer in the United States, and he is a very fine person.
- Boy, 10. Roberson crussow. Yhy he goes out hunting he lives in a cave he catches dears and all cinds of animals.
- Girl, 11. George Washington's mother. Because she is always kind.

In order to discover what proportion of the answers for each

age were of this type, all the papers referring to characters not living at the time of choice were carefully gone over and the tense of every verb noted. Many of the statements contained no verb and no other sign to indicate whether they referred to past or present time. Examples of this class are: "Dr. Talmage. The best writer in the world." "George Washington to no lot of things." "Raphael. Very good painter and sculptor." "John Marshall. Supreme Court." All such replies were excluded. Only those which definitely used a present or past tense were counted, and using the total as a basis the percentage of the present tenses for each age was computed. The line of tendency discovered is shown in Fig. 7.

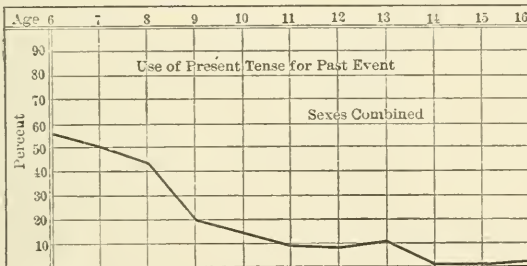


FIG. 7.

Unless the figures have been misinterpreted, there could hardly be found a more convincing demonstration of the gradual evolution of a true perspective in locating events in time and space. The principle is true of both sexes though the girls give a somewhat larger percentage of answers of this kind at almost every age than do the boys, as we would expect from their more emotional and imaginative organization. Indeed it is very significant that during the ages from eleven to thirteen inclusive, when the girls' curves for "intellectual and artistic qualities" (Fig. 6, II), "altruistic tendencies" (Fig. 6, I), and "Writers, Artists and Musicians" (table, page 115),—all dependent on emotional and imaginative characteristics—make their first decided deviation from the boys' curves, then also their tendency to speak of historic ideals as living now shows a decided rise over that of the boys.

It may seem to some that perhaps the use of the present tense in the cases just discussed is purely accidental and has no psychological significance. If that be true we should expect to find an equally large percentage of statements using a past tense to describe characters still living, and we would expect such percentage to be largest in the earliest years. Now, a careful examination of the papers discovers only three girls and five boys making such statements, and with two excep-

tions they are all beyond the thirteenth year. And in half of these cases the past tense refers to some past act of the person rather than to a trait of character or to his life as a whole, a perfectly correct usage. We must, then, admit the proof of the principle.

This study has some very decided evidence to offer against the claim often urged by opponents of such investigations as this that children's answers are purely accidental, that they are determined by any passing interest or any unusual event that may occupy the child's attention, and that they are therefore worthless for purposes of generalization.

No encouragement of such a belief can be found in the papers of these children. It is not our purpose to deny that children are affected by what goes on around them. To deny that would be to assert that they are not social beings, if not, indeed, to deny that they are organisms. That they are influenced by environment every one will admit. That their choices of ideals are purely accidental the writer, at least, refuses to believe. The principle here insisted upon is that the choices of little boys and girls are determined by laws just as inflexible and inevitable as those which underlie the deliberations of the average adult. If this be untrue, then the greatest proportion of accidental choices should be made by those who are most plastic to environmental influences, who are least able to think—the youngest children. Let us see how this works out.

A careful search for all choices, other than acquaintances, that could by any reasonable effort be construed as due to some temporary interest or accidental occurrence, reveals just fourteen different characters, named by fifty-two girls and twenty-seven boys, or about 3.4% of the total number. Moreover, instead of the greatest percentage of these choices being found among the youngest children, they are among the oldest, as shown in the following table:

PROBABLE ACCIDENTAL CHOICES.

Age	6	7	8	9	10	11	12	13	14	15	16	Total
Girls	4%	0%	0%	1%	1%	2%	4%	11%	12%	10%	19%	4.4%
Boys	0	2	0	1	2	2	2	5	5	4	6	2.3

There is no way of avoiding the conclusion that the tendency toward choosing an ideal determined by temporary interests increases through the adolescent period, and that girls are much more open to accidental suggestions than are boys. Some of the transitory conditions which may have determined some of the choices are the following: For some days before these papers were written all the bill boards of the city had been covered with flaming posters of horses, buffaloes, and Indians, announc-

ing the coming of Buffalo Bill's Wild West Show. Eleven boys chose Buffalo Bill as their ideal. The newspapers had been devoting their most conspicuous columns to descriptions of the christening of the Kaiser's yacht by Alice Roosevelt. Thirty-four girls, ages eleven to sixteen, named her. Miss Stone's story of her captivity in Macedonia was being published in McClure's Magazine. Five girls desired to be like her. Dr. Brown, a venerable minister had recently died, and his virtues were being much discussed. Fifteen girls and seven boys took him as their model. The circumstances probably suggesting the other choices were of the same general kind as those mentioned.

When we come to study the question, and to consider the susceptibility, even of adults, to the influence of enviroing conditions, the wonder is not that so many children have their decisions determined by accident or caprice, but rather that so few of them give evidence of haphazard choosing.

To none of the other objections against studies based on papers written by children does this study give any support. That even the youngest school children can express themselves in writing to some extent is shown in the fact that a majority of those as young as five and six years gave some ideal, though, of course, their reasons were crude or wanting. Almost without exception, the papers give evidence that the question was taken seriously by the writers, and that the answers represent their genuine attitude. The influence of suggestion seems to have been eliminated from these papers by the cautions given the teachers in advance, and by the absence of opportunity for conference by the pupils, and their ignorance of the use to be made of their compositions. That their choices are not momentary inspirations or "hit-and-miss" guesses is sufficiently shown by reference to any of the curves or tables in the preceding pages. The steadily rising or falling lines give no evidence of lawless or chaotic minds. Children naturally express what comes to the focus of consciousness or what is ingrained in their nervous systems; and in either case, what is there is there in obedience to some law.

GENERALIZATIONS AND APPLICATIONS.

It may be well, before concluding our paper, to summarize results. The data brought together in this study seem to justify the following conclusions:

1. There is a place for this study and for many other studies on ideals in all parts of the world. Child study is in the fact-gathering period and only the simplest generalizations are safe.
2. Less than 1% of the children have no ideal. This rep-

resents the number who regard their own lives and characters as desirable as any one's else.

3. Degrading ideals are almost entirely wanting. When one such is named it is for some quality or power which is not bad in itself.

4. With little children acquaintance ideals are largely in the majority, but give way rapidly to broader ones with advancing years. Girls choose more acquaintance ideals than boys.

5. Historic ideals increase in popularity, up to the age of eleven or twelve and then gradually decline to about 50% of the total number. They are the most popular type of ideals.

6. Contemporary ideals, other than acquaintance, have the most gradual and most unvarying increase in popularity throughout the whole school period. This tendency illustrates the expansion of the social and political consciousness much better than does the preference for historical characters.

7. The children contributing to this investigation show a more rapid expansion from acquaintance to national ideals than those of any other available study, foreign or American.

8. The children of the London studies, both in their larger preference for acquaintance ideals and in their less esteem for historical and contemporary heroes, show themselves less developed at each age than most American children.

9. We are greatly in need of norms or standards, determined by studies carried on under the most advantageous conditions, which shall serve as bases of comparison to determine normality of development.

10. Girls distribute their choices over a greater range of ideals than boys, but have no well defined group of favorite characters.

11. Washington is the great national hero of both sexes, receiving almost as many votes as all other famous characters combined. McKinley, Lincoln, Roosevelt and Longfellow are next in popularity in the order named.

12. It is a serious mistake to thrust national heroes or world heroes upon little children at a time when their interest is centered in their homes and acquaintances. Washington's character has been degraded by such treatment.

13. On the other hand, arrested development ensues if the child still clings to local ideals when his consciousness and personality should be expanding to include more and more of the world at large.

14. Deity and Bible characters occupy a small place among the ideals of American children. In this respect they are greatly inferior to both the English and Scotch children studied. The need for an awakening of Bible study in both home and school seems imperative.

15. Teachers are not popular as ideals, in spite of the fact that teaching has been proved to be a popular profession. Is it true that teachers are failing to get into their pupils' hearts and become essential parts of their lives?

16. Significant sex differences, dependent on differences of structure and function, appear in the choice of ideals. Girls name a larger proportion of writers, artists, musicians, philanthropists, and literary characters; boys select more soldiers and adventurers, financiers, and inventors.

17. Girls choose more foreign ideals than boys, because those qualities which appeal most to them are best developed abroad.

18. All studies combine to emphasize the appalling extent to which girls emulate male ideals, especially in the adolescent years. There can be no doubt that this tendency has promoted the disintegration of feminine character, and aggravated the excesses of the so-called "emancipation of women." The curricula, the books, and the instruction of our schools must be modified so as to supply a sufficient number of worthy feminine ideals for the girls, and in all places the peculiar womanly and domestic qualities of the sex must receive a more outspoken commendation and encouragement if the sex, and consequently the race, is to be restored to the condition of greatest health and progress.

19. Except in the earlier school years, girls tend more and more to prefer, among the women ideals, those characters which are great by their own merit rather than those who are known through their relationship to great men.

20. Little children give no reason, or at best a very vague one, for their choices. They are not able to analyze situations and in school work should not be required to give explanations or trace causal connections. Any chance associate serves them as a sufficient cause. English children are more primitive in this respect than Americans.

21. Material possessions constitute a very small proportion of children's motives in choosing their ideals, and the tendency so to choose diminishes slightly with age. The importance of wealth is much more marked in choosing a future occupation. There is no sex difference discoverable.

22. Personal appearance, conventional accomplishments, personal liking, and power to do some particular thing, seldom appear among children's justifications of their choices.

23. Moral qualities, honor, position, civic virtues, and altruistic ministrations are characteristics named by both sexes in ratios generally increasing with age. The girls lead in moral and altruistic qualities, the boys in the others.

24. Military motives are given almost without exception

by the boys alone and characterize almost one-fifth of their ideals. As a peace-loving nation we are under obligation to place more emphasis on statesmanship and the less showy civic virtues in the historical instruction of our boys.

25. Lincoln is the favorite embodiment of political and patriotic qualities with both sexes.

26. Intellectual and artistic qualities do not hold a conspicuous place in children's consciousness, although they are much more appreciated by girls than by boys. No doubt their association with school work, examinations, grades, and report cards makes these attributes of culture relatively unpopular. The school owes it to civilization and refinement to rescue these qualities from their position of insignificance in the scale of values of children's minds.

27. Young children tend to project themselves into any suggested or remembered situation and to actually live it. This characteristic furnishes justification for the dramatizing of songs, and stories in primary grades, for the occupations and games of the kindergarten, and suggests that most of the reading material for little ones should be written in the first person.

28. Children are much less influenced in their choice of ideals than is popularly supposed. Their choices seem to come from the real fibers of their nature as genuinely as do those of adults.

In conclusion, the writer desires to express his obligation to the superintendent and teachers of the public schools of New Castle, Pennsylvania, for furnishing the papers used in this study, and especially to his wife, Sunshine Foulke Chambers, who patiently bore a large part of the tedious work of classification and tabulation, and by suggestions and direct contribution added much to the value of the research.

BIBLIOGRAPHY.

I. Papers bearing directly on this study.

1. A Study of Children's Ideals, by ESTELLE M. DARRAH; *Popular Science Monthly*, May, 1898, Vol. 53, pp. 88-98.
This is the pioneer study on this topic, the first of scientific value, and it has marked out the lines on which practically all subsequent studies have been conducted. It is based on papers from 1,440 school children from San Mateo County, California, and St. Paul, Minnesota. While gathered from such diverse sources, the data are quite homogeneous except as to the choice of Deity as an ideal, in which the Minnesota children outnumber the Californians 73 to 4. Illustrated by diagrams.
2. Children's Ideals, by EARL BARNES; *Pedagogical Seminary*, April, 1900, Vol. 7, pp. 3-12.
This investigation is based on replies of 2,100 children of the London Board Schools to the same question used by Miss

Darrah, "What person of whom you have ever heard or read would you most wish to be like? Why?" It is of interest to American students for two reasons: first, because it gives a glimpse of the range of ideals aspired to by English children of the lower social strata; and second, because it points out resemblances and differences between their ideals and those of American children as revealed in Miss Darrah's study. A concise summary of conclusions and a suggestive discussion of pedagogical applications conclude the paper.

3. School Children's Ideals, by CATHERINE I. DODD; (a) National Review (London), February, 1900, Vol. 24, pp. 875-889. (b) Also reprinted in the Pennsylvania School Journal, July, 1900, Vol. 49, pp. 7-15.

An English study more valuable for its qualitative than its quantitative results. Its conclusions are drawn from papers written by less than 700 children in the public elementary schools of England, and seem somewhat colored by the author's personal convictions. Some interesting results are added by her having prefixed a question to that used by Professor Barnes and Miss Darrah, viz.: "Which would you rather be when you are grown up, a man or a woman, and why?" The inferiority of woman's position is strongly reflected in the answers of both boys and girls. Drunkenness is much more frequently referred to than in any kindred American study, as is also brutality to women and children. Much is made of the unusual replies while the value in the commonplace ones is overlooked. The conclusions are few and some far-fetched. The limited range of age—eleven to thirteen—of the children contributing is an additional defect of this study.

4. Report on "Children's Ideals" Test, by A. YOUNG, Esq. An unpublished collection of diagrams and explanatory notes in the possession of Professor Earl Barnes. A brief account of the same study was published in the Practical Teacher (London) about 1900.

The study grows out of the examination of the answers of 2,500 children, varying in age from eight to fourteen, in Scottish schools, to the question, "What person of whom you have heard or read would you most wish to resemble?" The more general conclusions of the other studies are confirmed, the Scottish children are shown to be more advanced in certain lines of growth than either American or English children, and several racial characteristics stand out in bold relief. The prominence of Deity among the ideals is quite unusual.

5. Children's Ideals, by ADELAIDE E. WYKOFF; *Pedagogical Seminary*, December, 1901, Vol. 8, pp. 482-494.

This paper might more properly have been entitled "Children's Vocational Ambitions," as it is an investigation of what children hope to be when grown up. It covers a geographical area different from any other study on the subject, being based on papers written by over 1,000 children of Brooklyn, Long Branch, N. J., and Melrose, Mass. President Hall speaks of the paper editorially as "confessedly limited in its scope and chiefly suggestive in its value."

6. A Type Study on Ideals, by EARL BARNES; *Studies in Education*, Vol. 2. (Published by the author at 4401 Sansom Street, Philadelphia.)

This is an admirable series of papers intended, as the title suggests, as a model to be used by teachers and others in pursuing similar investigations. The returns from 1,900 children,—1,200

boys and 700 girls,—in several New Jersey towns are worked up in detail, in order to show the method of work, and presented in nine brief chapters in successive numbers of the volume. Numerous tables are inserted, and the generalizations and applications, are, as usual, good. Unquestionably, it is the most complete and helpful study on the subject yet published. The minuteness with which details are worked out makes it a very useful model for those to follow who are unskilled in the technique of quantitative studies.

7. Negative Ideals, by HENRY H. GODDARD; Barnes's Studies in Education, Vol. 2, pp. 392-398.

This investigation constitutes a fitting conclusion to Barnes's series of papers just described (No. 6). It is an attempt to discover what kinds of individuals stand out in children's consciousness as characters to be shunned, and to what extent such negative ideals enter into character-building. The study was confined to students of normal school age and does not, therefore, give any generalizations for ages below fifteen. It is a very suggestive paper and raises some important questions.

II. Papers indirectly related to this study.

8. The Development of Children's Political Ideas, by EARL BARNES; Studies in Education, Vol. 2, pp. 5-24.

An excellent paper on the political ideas of English children, drawn from the papers of 122 boys and 595 girls who named Queen Victoria as their ideal, out of a total of 5,000 papers in the general study on ideals. The elements of character in great people which appeal to English children are well illustrated.

9. Political Ideas of American Children, by EARL BARNES; Studies in Education, Vol. 2, pp. 25-30.

A parallel study to No. 8, founded on answers of 1,800 children of New Jersey and Long Island to the question, asked soon after the president's assassination, "Would you wish to be like Mr. McKinley? Why?" The differences in the political notions of English and American children are interestingly shown.

10. Children's Hopes, by J. P. TAYLOR; Annual Report of the Superintendent of Public Instruction for New York, 1895-96.

A study of 2,000 papers written by children on "What I want to do when I'm a man (or woman) and why." This paper has not been accessible to the writer, but Professor Barnes says of it: Mr. Taylor used a cumbersome system of classification but his conclusions as to the effect of parents' occupation upon the child's choice, the growth of altruism, the growth of moral consideration and the general characteristics of the children's papers at successive ages, give the paper permanent value.

11. What Children Want to do when They are Men and Women, by CHARLES H. THURBER; Transactions of the Illinois Society for Child Study, Vol. 2, pp. 41-46.

This is a somewhat incomplete summary of the results of Mr. Taylor's study just referred to (No. 10).

12. Children's Ambitions, HATTIE MASON WILLARD; Barnes's Studies in Education, Vol. 1, pp. 243-253.

A brief study reaching the usual commonplace conclusions of other studies on the subject of future occupation.

13. A Study in Children's Social Environment, by SARAH A. YOUNG; Barnes's Studies in Education, Vol. 2, pp. 123-140.

Based on replies of 1,150 English children to the questions: If you could have just what you would like, what would you

choose; and if you could do what you liked best, what would you do? Particularly good on motives which underlie English children's ambitions.

14. Children's Ideas of Lady and Gentleman, by ANNA KÖHLER BARNES; Barnes's Studies in Education, Vol. 2, pp. 141-150.
Contains interesting comparisons of the ideas of English and American children as to what constitutes gentility.
15. Children's Ambitions, by JOHN I. JEGI; Transactions of the Illinois Society for Child Study, October, 1898, Vol. 3, pp. 131-144.
An investigation of the vocational interests of the German children of Milwaukee. Only 400 papers—200 of each sex—were used in this study. Accompanied by a number of diagrams.
16. A Study of Children's Hopes, by S. B. HOUSH; Child Study Monthly, February, 1896. Based on only 450 papers written on the topic "What I want to do when I am a Man (or Woman) and why?"
A few commonplace and somewhat disjointed conclusions are arrived at. It is of but slight permanent value.
17. Children's Attitude toward Future Occupation, by EARL BARNES; Studies in Education, Vol. 2, pp. 243-258.
Another English study generalized from returns of 1,000 boys and 1,360 girls in the London Board Schools. Comparison is made, so far as varying classification will permit, with other existing studies.
18. School Girls' Ideas of Women's Occupations, by SARAH YOUNG; Barnes's Studies in Education, Vol. 2, pp. 259-270.
A study of limited value to American students because reflecting the attitude of a single social class of London elementary school children, and because it is limited to the ages of eleven to fourteen, and to opinions regarding only five specified vocations.
19. What 100 Girls Would Like to Be, by HELEN HAMILTON; Ladies' Home Journal, January, 1903, pp. 3, 4.
A brief popular study of doubtful scientific value, being quotations from the letters of 100 college girls written in reply to the two questions: "Would you prefer to be a man or a woman?" and "What is your highest ambition to be as a woman?"
20. Vocational Interests of Children, by WILL S. MONROE; Education, January, 1898.
21. Children's Ambitions, by WILL S. MONROE; New England Journal of Education, June 18, 1896.
These last two articles have not been accessible to the writer during the progress of this study, and are not, therefore, characterized.
22. What One Teacher can Do, by FRANK K. WALTER; Pennsylvania School Journal, September, 1902, Vol. 51, pp. 110-113.
This is a paper prepared for the Child Study Department of the Pennsylvania State Educational Association, a part of which is devoted to a study of children's ideals. It is based on only 741 papers gathered from scattered Pennsylvania schools. No new principles are discovered, and the conclusions are few. The paper has slight permanent value except as showing that such studies are practicable for ordinary teachers.
23. Die Ideale der Kinder, JOHANN FRIEDRICH; Zeit. f. Päd. Psy., February, 1901, Vol. 3, pp. 38-64.
This study came to the writer's notice too late to be included in the summarized results of the present paper.

TONE PERCEPTION AND MUSIC INTEREST OF YOUNG CHILDREN.

By WILL S. MONROE,

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It is well known that children learn to distinguish sounds very early and that they learn to sing before they learn to talk. Rhythmic measures and movements of tonal sorts very early cause pleasurable and painful reactions. Preyer notes that his child manifested pleasure in music even in the first three months and that this pleasure increased manifestly in the six following months. He cites the instance of a little girl, who, in her ninth month could sing correctly every note given her from the piano, and who found discords so unpleasant that she wept bitterly whenever any one blew on a small tin trumpet.¹ Young children will give to musical sounds degrees of sustained attention altogether out of proportion to the normal control of their activities. This manifest ability to distinguish not only pitch but the stress and shade of tones has been explained (1) by the fact that particular tones correspond to certain conformations in the child's acoustic apparatus and (2) by virtue of certain hereditary predispositions.

In connection with studies of young children made by my students, I have been able to collect facts from 161 children under six years of age along the following lines:

1. Ability to learn the scale.
2. Ability to remember the scale.
3. Ability to learn and remember rote-songs.
4. Interest in music.

The children were all Americans by birth, although one or both parents in eleven instances were foreign born. Thirty-eight of the children were between the ages of two and three years; sixty-four, between the ages of three and four; forty-six, between the ages of four and five; and twelve over five but under six years. Of the 161 children, 69 were boys and 92 were girls.

Ability to learn the scale was least from two to three years. At that age, 29% of the boys and 49% of the girls could be taught to sing the scale; from three to four years, 31% of the boys and 54% of the girls; from four to five years, 34% of the

¹Preyer: *The Senses and the Will*. Translated by H. W. Brown, New York, 1888.

boys and 59% of the girls; and from five to six years, 40% of the boys and 71% of the girls. Taking the boys at the different ages, 34% are able to learn and sing the scale, whereas 58% of the girls possess this ability. The boys begin at two years with 29% and end at six with 41%. The girls begin at two with 49% and end at six with 71%. A number of children could learn a portion of the scale only—the first three, four, or five notes; and in two instances the first seven notes could be learned, but the whole scale could not be learned. Tonal difficulties were always greatest with the upper notes of the scale. Three children—two boys and a girl—could perceive the notes of the scale and name them when sounded, but could not learn to sing them; and a girl of five years could be taught to recognize the first five notes of the scale, but she could not be taught to perceive tones beyond G.

A fortnight later, with three intervening reviews, the children were again asked to sing the scale to test their ability to remember it. In the first group (two to three years), 19% of the boys and 23% of the girls were able to reproduce it correctly; in the second group (three to four years), 27% of the boys and 33% of the girls; in the third group (four to five years), 29% of the boys and 45% of the girls; and in the fourth, group (five to six years), 40% of the boys and 57% of the girls. The average for the boys is 29% and for the girls 40%. The boys, it will be noted, have dropped but 5%, whereas the girls have dropped 18%.

The children were taught simple songs of the kindergarten type, and a fortnight later they were asked to reproduce these songs. In the first group of children (ages two to three), the songs were remembered by 43% of the boys and 59% of the girls; in the second group by 50% of the boys and 61% of the girls; in the third group by 47% of the boys and 62% of the girls, and in the fourth, or oldest, group of the children by 60% of the boys and 71% of the girls. As will be seen, the songs were remembered by 50% of the boys and 63% of the girls. The greater power of memory of songs over the scale is due to two factors: (1) Children are much influenced by the movement of a song and an appreciation of rhythm of simple or complicated arrangements of notes within the bars, based on two or a multiple of two; and (2) by associations with concrete realities. Songs, for example, about pansies and pussy willows and song sparrows attached themselves to pleasurable experiences and were more easily retained and more readily recalled than the scale.

The fourth rubric—fondness for music—furnishes, necessarily, more vague returns than the other rubrics of the test, since the student formed her judgment from the musical reactions of

the child and conversations with the parents concerning the child's musical interests and instincts. In the first group (two to three years), 33% of the boys and 53% of the girls are reported fond of music; in the second group, 31% of the boys and 61% of the girls; in the third group, 23% of the boys and 65% of the girls, and in the oldest group (five to six years), 20% of the boys and 57% of the girls. Of the 69 boys, 27% are reported fond of music and of the 92 girls, 59% are supposed to have special tastes in that direction. A fact of no small interest is the drop in the male curve as the boys grow older. The curve of the girls in this test rises—excepting the last group; and the curves of both boys and girls in the other three tests rise with advance in years.

The study suggests some interesting sex differences in musical abilities and interests of young boys and girls, the girls throughout taking higher rank for tonal excellence than the boys. It is well known that auditory defects are more common among males than among females. Among adults, Zufal in Germany found 60% of the deafness among men and 40% among women. In France, D'Espine reports 61% of the deafness among men and 39% among women.¹ There are nearly ten thousand children attending public and private schools for the deaf in the United States; and of this number, more than 55% are boys and less than 45% are girls.

According to researches made by Jastrow and Morehouse on the students of the University of Wisconsin,² the hearing of women students is decidedly more acute than that of men. They placed their subjects twenty-five feet from a glass plate upon which was dropped a shot weighing ten milligrams, and the distance it had to fall to be heard by the two sexes was 17 and 35 millimeters respectively.

Musical interests, in America at least, are sustained largely by women. They form the bulk of the patronage at our concerts, recitals, and operas; and musical directors find it possible to get two female choristers for every one male. All this evidence points to manifest feminine superiority in tone perception and music interest; yet the fact is a matter of record that women have never achieved distinction as musical composers or interpreters. Not only the creative but all the higher phases of tonal art have always been monopolized by men; and the conclusion is suggestive of the fact that a process of natural selection takes place from the earliest years of infancy. And the keener tone perceptions and wider musical interests of these young girls, after all, seem to have little more of promise for the future than mediocrity, both in creation and interpretation of tonal art.

¹Gellé: Précis des maladies de l'oreille. Paris, 1885.

²*American Journal of Psychology*, April, 1892, Vol. IV, p. 424.

LITERATURE.

The Story of My Life, by HELEN KELLER. Doubleday, Page and Co., New York, 1903. pp. 441.

This book is in three parts. The first, 140 pages, is Miss Keller's own story of her life down to her third year in Radcliffe. The second, to page 283, is made up of her letters from the earliest and most imperfect down to November, 1901. These are in large type. The third part, in small type, consists of five supplementary chapters entitled, the writing of the book, personality, education, speech and literary style, and is edited by Mr. Macy, but is mostly made up of Miss Sullivan's letters and diary, with a few additional extracts from Miss Keller's writings.

Helen Keller was born in 1880. She became entirely blind and deaf at the age of nineteen months, before which time she had learned a number of words and had the usual experiences of her age in acquiring a knowledge of the external world. Miss Sullivan, who had herself been blind and was educated at the Perkins Institution, inspired by the example of Dr. Howe's work upon Laura Bridgman, came to Helen in 1887 when she was six and three-fourths years old. She found her an exceedingly active child with a very violent temper, with outbursts sometimes daily and almost hourly, caused largely because she could not understand or make others understand. During the first days or even weeks, there were severe and sometimes physical tussles between teacher and pupil, which evidently at the time put considerable strain upon the relations of the former with the family who had been exceedingly indulgent. At first Helen was taught to spell a very few words like doll and cup with the deaf mute language. Finally at a definite date, April 5, 1887, the child seemed to catch the idea that everything had a name and learned thirty words in one hour. April 24th, her vocabulary was one hundred words; May 22nd, three hundred; September, six hundred; and in March of the next year, she knew nine hundred. As words were learned, the signs, some sixty of which she had devised, fell off. One evening at a hotel she is said to have learned twenty new names of persons, all of which she remembered the next day, long words, having apparently a little more individuality, being easiest for her. Very great ingenuity was required to teach the meaning of such words as in, on, large, small, fast, slow, love, think, etc.

As rapport between herself and the external world was established, her temper grew rapidly sweet. Helen's activity brought her in contact with a vast variety of objects and she was encouraged to swim, slide in the snow after she came north, to climb trees, to touch everything possible,—Miss Sullivan, *e. g.*, holding pigs, crabs and poultry that she might feel them all over. For every new thing, she wanted a new name. Miss Sullivan sought to train her exactly as normal persons are trained, and her success long ago distanced that of Dr. Howe with his famous pupil. Only in reading this book can one realize the extreme sagacity, sound sense and devotion of Miss Sullivan, which appears to be fully appreciated by her pupil to whom she has almost given a soul. Her teacher for a long time did not believe in regular hours, but taught upon the moment whenever anything was

needed or became interesting, and has a just horror, as has her pupil, of all cram, form, methodology, and book work where direct contact with things is possible.

On the other hand, her pupil is no less a marvel and must be considered as an entirely exceptional being, with nothing less than genius for language. Although her life is largely confined to touch and movement, she has developed, especially in the latter, powers unparalleled in the known history of the race. These limitations make her knowledge more real and her language more literal, and perhaps her feelings more vital. The story and personages of Homer, the blind poet, thrill her soul and make her interest breathless. The tale of the extinct geologic animals haunts her dreams. Historical characters are almost as real to her as persons she knows. I know no record of any life where the topics of high school and college have produced such vivid and sympathetic reactions of interest. The saddest thing in the book, next to the bereavement of this wonder child, are the signs of disenchantment with college work, with the frippery of notes and the study of words, mechanical methods, etc. She writes, "it seems to me that there is in each of us a capacity to comprehend the impressions and emotions, which have been experienced by mankind from the beginning." She must herself have a subconscious memory of the world of sight and hearing, for experiences of the race must be dormant in every one, and language in her case brings it out.

Religious questions seem to have come to her naturally in the early teens or before, but her mind was kept in a virginal state until the remarkable letters and interviews with Phillips Brooks introduced her to the natural, universal religion of love of God and to the race. She has enjoyed the acquaintance of Holmes, Whittier, Edward Everett Hale, Mark Twain, Joe Jefferson, Alexander Graham Bell, and very many others, who have taken an interest in her and enriched her life with both suggestions and memories. That Miss Keller, now at the age of twenty-three, has real literary power is certainly suggested by her own letters and autobiography. There are plenty of suggestions that much that she says is a little unreal, but much is more real than with others.

She greatly enjoys the theater and, with Miss Sullivan to explain what is going on, seems to get as much satisfaction from it as others. Jefferson has acted some of the scenes from *Rip* for her benefit, while she felt his mouth and attitudes. She even takes pleasure in music, although it is only a series of jars, loves moonlight, and appreciates the difference between the quiet of the night and the garish day perhaps as much as others. Perhaps language means more to her because so much of her life goes out in it. She certainly takes great pleasure in knowing and reading things, which must be beyond her experience. She knows comparatively little of evil; perhaps a purer soul does not exist. It would seem that the great passion of her life has been to know what others know, to test herself by other girls, to feel the sympathy of friends and communion of thoughts. Every study she has undertaken has had special obstacles, which she has had to overcome, sometimes with very great ingenuity and by tedious long circuits and oppressive handicaps. One trembles to think what would become of this beautiful soul if, after sixteen years of incessant intercourse, Miss Sullivan, who almost began where Dr. Howe left off, should be taken away. She has studied hard up the high school and college grades to be useful to her pupil. Sometimes Helen seeks to assert her independence, but these efforts seem almost pathetic. Both owe their fame and their genius to the other, without whom neither would ever have been heard of.

To The Frost King episode, where Helen told a story after a long interval, which was written by another near the time of her birth, which she reproduced in outline and occasionally in phrasology and which was given to the world thinking it her own, we attach little importance. That the mistake was not only possible, but for one in her condition natural, every psychologist will readily understand. That the cruel charge of plagiarism, of posing in borrowed plumes for effect, should have darkened a portion of her life and haunted her mind and that of Miss Sullivan ever since with the question whether every new thing she says was remembered or created is unfortunate.

As a pedagogical achievement, the facts contained in this book will always stand out as monumental. It is easy in the light of past experience to wish that many things had been otherwise. It is doubtful if any scientific psychologist, although devoting himself with the same assiduity to the same work, could have achieved results equal to what this woman's tact has accomplished. The world was long since interested and will follow developments in the future with growing zest. We hope that this comprehensive work does not imply a sense on the part of any of those concerned in its authorship that the high water mark has been reached, and that further developments are not to be expected.

The Making of Citizens. A Study in Comparative Education. R. E. HUGHES, M. A. (Oxon), B. Sc. (Lond.) Scott Pub. Co., London and Newcastle-on-Tyne, 1902. With table appended, summarizing the laws relating to school boards in various cities.

This book is a review of the systems of education in England, Germany, and America. The author takes the ground that each system is adapted to the idiosyncrasies of the people who support it. Its object is to make citizens. "Anarchists must be born; they cannot be made under existing conditions." The introduction of the factory system, which in so many cases takes the parents away from the children, makes it all the more important that the State should care for the education of the youth. How this is done is shown in the several chapters, first on primary and finally on secondary education in these four nations. In each chapter are given valuable tables of statistics concerning finances, child labor, etc. Further there is detailed information concerning teachers and their qualifications, curricula, school laws, and administration. In England is a rapidly increasing number of women teachers in the primary schools and these are of diverse qualifications. In German schools of the same grade the teaching force is better equipped; the best minds are attracted thereto by the pension system. In France the system is making citizens but not strong independent character. The teachers are inferior, but, unlike the Germans, they are ready for new methods. In the U. S., owing to overcrowding, thousands are without school advantages. As in England, the teachers are of various classes in respect to preparation. English and American schools are individualistic; French and German schools, socialistic. In France and Germany the teaching force is a closed corporation; the only access to it is by way of definite preparation. In England and America, there is greater freedom in this regard. Here both teachers and schools are in direct contact with the public.

The author now passes to a discussion of the secondary schools systems. In France the system is exclusive and produces automata. In Germany all classes are provided for, but social cleavage is perpetuated. In America the system varies with the locality, and in England there are several classes of secondary schools.

Following this are two chapters, one on the education of girls, the

other on the training of defectives. In the conclusion he says that each system is indigenous and is doing the work required of it. We cannot compare systems. There is a progress toward social equality of the sexes which is commendable. More doubtful is the tendency to hand over the education of the youth to women. The tendency in the U. S., is toward science and manual training. This is democratic but not desirable in the extreme. The solidarity of education must be recognized. Inorganic nature and organic, the humanities, history and æsthetics must be taught in every grade, the future will be less concerned with instruction than with education, that the man may be wholly furnished for life.

If any adverse criticism to such a work is pertinent, it is this:—the time table of the gymnasium showing the essential characteristics of the German Secondary schools is not based on the recent official action. For the correction of this, however, reference is made in a footnote to Eng. Special Reports, Vol. IX, p. 175. ROBT. H. GAULT.

CUBBERLEY, ELLWOOD P. *Syllabus of Lectures on the History of Education with Selected Bibliographies*. Macmillan & Co., New York, 1902. pp. 302.

This syllabus, the author tells us, has been "used during the past three years with a class in the history of education." It is published in its revised form as a guide to librarians, teachers and individual students. The outlines given here seem to the reviewer of much less value than the bibliographies. The latter cover very well the wide field of the history of education from ancient peoples to the present time. The best of the important literature dealing directly with education is usually included in these lists, but most of the references are very defective. The date, place of publication, and the number of pages is usually omitted in the case of books; and in the case of articles or essays contained in other works this fact is not always mentioned. These defects detract very greatly from the value of this important contribution to educational history.

The author's aim is high. "An attempt has been made," he says in his preface, "to study the history of education as a phase of the history of civilization. Accordingly a close connection has been maintained between the history of the civilization of a people and the ideas on and progress of education among them. Significant political events, changes in religious ideas, the attitude of the leaders toward the great problems, the progress of scientific discovery and invention, and the rise and progress of the scientific method and national spirit have been considered as a background for the study of the history of educational theories and practice." From this wider point of view many other books should be included in the bibliographies; and a general index of authors would add greatly to the value of the whole.

W. H. B.

Genetic Psychology for Teachers, by CHARLES H. JUDD. D. Appleton and Co., New York, 1903. pp. 329.

The title of this book is misleading. We expected something on the development stages of the mind, but find that the term here means introspection. The author appears to know little or nothing of the study of childhood, but his basal principle is that the teacher must first study his own mental processes before he can study children. He does intimate that child study is of little value and almost "wholly worthless" to the teacher, and must remain so until they can introspect. The best parts of the book are the author's own study of optical illusions, with many cuts, the pedagogical value of which is not apparent, and his two long chapters on the mechanics of

reading and writing. The style of the work is extremely diluted, often gossipy, implying a low idea of the intelligence of teachers. A few years of incubation might have resulted in an interesting development of his thesis. Compared with David J. Hill's *Genetic Philosophy*, published in 1893, which is true to its title, this work is essentially based upon an epistemological abstraction, and the disparagement of child study which recurs in its pages appears to be a local or provincial prejudice.

The Making of our Middle Schools. An account of the development of secondary education in the United States, by ELMER E. BROWN. Longmans, Green and Co., New York, 1903. pp. 547.

The strong point of this book, as well as by far the chief space, is, of course, the historical chapters. The writer is in every way well prepared for this work and has had access to all the sources in the East. Of course, every intelligent reader will find in such a work omissions of points that he would like to see included, but the historical part of the book is a very distinct addition to the literature upon secondary education, indeed, far and away the best in its field. If we were to consider the author's standpoints on secondary questions as represented in his concluding chapter, entitled *The Outlook*, the verdict would have to be far otherwise. The standpoint is, on the whole, that of great conservatism and caution, which is well, but also written under the profound dominance of university standpoints and interests. This is apparent despite the very general, measured, and over qualified phraseology. A very valuable bibliography, with descriptive notes concerning many more important works, and an excellent index are appended. The author shows himself essentially an historian.

Hearing on the Bill (H. R., 14,798) to Establish a Laboratory for the Study of the Criminal, Pauper, and Defective Classes, with a Bibliography, by ARTHUR MACDONALD. Govt. Print, Washington, 1902. pp. 309.

This hearing contains a number of interesting additions to Dr. MacDonald's work. Half of it is a bibliography. The author has certainly shown amazing industry both in the collections of literature, of facts, and of table-making. He has also pushed his work of propaganda with very great vigor. Whatever may be said in general of the man and his work, there is much sympathy with him in his loss of opportunity to push on into better and larger fields. Without pronouncing an opinion upon the bureau which he sought to establish in Washington, many regret the course of Dr. Harris and think it somewhat strange that he should have been a decade or more in finding out that he did not desire to encourage either Dr. MacDonald or his work.

A Plea for a National Institute of Geography, by J. G. BARTHOLOMEW. With plan and note by Professor Geddes. Reprinted from *The Scottish Geographical Magazine* for March and April, 1902.

We have here at last a suggestive plan for a National Institute of Geography based upon Professor Geddes's ideas. There are two domes, each containing an eighty foot globe, one of the earth and another of the heavens, separated by a high outlook tower, and at the extreme ends are a semicircular lecture theater and congress hall and a panorama representing typical scenery of all countries. Front and back of the globe rooms are rows of library rooms devoted to maps, books, models, and pictures of the various departments of the science of geography. It is greatly to be hoped that Professor Geddes's plan may be realized.

The University Courier. Devoted to the interests of the American University and Higher Education. Washington, D. C., December, 1902.

The institution this publication represents is steadily developing and is certain to be a very welcome addition to our higher institutions of learning. Bishop McCabe has succeeded, at least temporarily, to the presidency during the illness of Bishop Hearst. If President Harper is right in his reported statement, "give me one million dollars and I will make here a better university than can be done in Chicago with ten million dollars," the advantage of the situation at Washington, where the government has expended some fifty million dollars in scientific and literary collections, is immense. It is strange that some millionaire does not come to the relief of this institution after its ten years of diligent and progressive efforts to secure adequate endowment.

Indian Story and Song from North America, by ALICE C. FLETCHER. Small, Maynard and Co., Boston, 1900. pp. 126.

The songs, the author prints here are, as she says, "like the wild flowers that have not yet come under the transforming hand of the gardener." Both the stories and songs are here published for the first time and have been directly gathered from people in their homes. It is interesting to know that Arthur Farwell and others have harmonized some of these songs printed by the Wa-wan Press at Newton Centre, Massachusetts, and that, while these melodies can hardly await such development as the Hungarian, Russian and other national melodies have had, they certainly bring out new and very interesting ethnic elements which are valuable as suggestions.

The Method of Recitation, by CHARLES A. and FRANK M. McMURRY. The Macmillan Co., New York, 1903. pp. 339.

This book has sprung out of the authors' experience in schoolroom work, which he has supplemented by an effort to develop and bring together various principles which control skillful teaching. Like all the other works of the author, it is largely based upon the principles of teaching of Herbart, Ziller and Rein. It is really part two of the broad subject of method, the first part of which, General Methods, has already appeared. This edition is rather radically revised. It consists largely of the general and rather abstract principles stated and then illustrated in a concrete way.

Co-education. A series of essays by various authors. Edited by Alice Woods. With an introduction by M. E. Sadler. Longmans, Green and Co., London, 1903. pp. 148.

We have here nine very interesting papers on this subject from different standpoints by men, some of whom are widely known, like Arthur Sidgwick and Cecil Grant. All favor co-education, although some in more and some in less degree, and all have had experience with it. Sadler frankly states that he is not yet entirely convinced and believes that "to be educated in common with boys throughout the latter part of her secondary school career would not be the best kind of training for a girl, although some girls seem by nature more fitted for a boy's training and a man's career than others."

Epoch-Making Papers in United States History. Edited by Marshall S. Brown. The Macmillan Co., New York, 1903. pp. 207. Price, 25 cents.

Twelve precious texts from the Declaration of Independence to Lincoln's Gettysburg speech, with notes, introduction, etc.

A Manual for Physical Measurements for use in normal schools, public and preparatory schools, boys' clubs, girls' clubs, and Young Men's Christian Associations, with anthropometric tables for each height of each age and sex from five to twenty years, and vitality coefficients, by WILLIAM W. HASTINGS. Springfield, Mass., 1902. pp. 112. Price, \$2, and \$2.50.

This manual treats of the methods of physical examination and computation of results for large numbers of children. The primary object of both manuals and tables is the propaganda of physical training, showing normal standards, determining vitality, etc. On the whole, the work in its field is without doubt the best and fullest that we now possess and should be in every normal and high school and at hand in every gymnasium.

New York Supreme Court. Appellate Division. First Department.

Louis Goldstein, an infant, respondent, vs. New York University, appellant. Opinion of the Court. November, 1902. pp. 7.

This is a unique case of a law school student named Goldstein, expelled by the faculty on the accusation of annoying a young woman in his class by writing her requesting her acquaintance. This letter he was said to have given to another person to hand to the young woman. He denied the whole matter and obtained an injunction forbidding the faculty to interfere with the right to attend the lectures of the school.

Cap and Gown. Selected by R. L. Paget. L. C. Page and Co., Boston, 1903. pp. 331.

This is the third volume of verses collected from college journals. They are all short, and some of them are really brilliant. The prevailing theme is the other sex. Humor and wit are perhaps the next most important note. A very favorite device is the expression of real sentiment disguising itself by ending in conscious bathos, a typical form of expressing the self consciousness and sense of defective form which often underlies these effusions.

The Theory of Education in Plato's "Republic," by JOHN E. ADAMSON. The Macmillan Co., New York, 1903. pp. 258. Price, \$1.10.

This is a very valuable presentation of Plato's educational ideas arranged in a more modern order,—the substance of literature, stories of divine beings, courage, truth and temperance. Under the forms of literature, the dangers of imitation, melody and rhythm are discussed; then follow the environment and end of a musical education, gymnastics and physical education, education the first condition of the welfare of the State, primary and higher education, etc.

America in its Relations to the Great Epochs of History, by WILLIAM JUSTIN MANN. Little, Brown and Co., Boston, 1902. pp. 315.

The author has here printed five of his lectures, each considerably expanded, and has made of them an interesting volume. The subjects treated are—the romance of the new world, homes in the new world, the Federal Convention and adoption of the Constitution, America as a formative force in history, and correlations. The author has an easy and attractive style, and both shows and kindles interest in his subject.

Corneille and the Spanish Drama, by J. B. SEGALL. The Columbia University Press; The Macmillan Co., New York, 1902. pp. 147.

The early Spanish Influences and plays are traced in an interesting way, the Cid and the Menteur being especially dwelt upon.

Experimentelle Didaktik. Ihre Grundlegung mit besonderer Rücksicht auf Muskelsinn, Wille und Tat, von W. A. LAY. O. Nemnich, Wiesbaden, 1903. pp. 595.

The author well assumes that education is the most difficult of all human problems. It is the first comparative treatment we have yet had of motor education, with due recognition of the contributions of modern psychology, child study, and pedagogical pathology. It is a valuable, solid work, taking special account of everything experimental, and it is a pity that its size precludes translation into English.

Greater Russia. The Continental Empire of the Old World, by WIRT GERRARD. The Macmillan Co., New York, 1903. pp. 337.

This is a book combining in a rare degree the interest of a narrative of personal adventure and objective descriptions. It is copiously illustrated, and describes in a fascinating way young Russia as a new America, the Siberian railroad, the Siberians, mines, markets, plains, the yellow danger, the author's passage through Manchuria in disguise, with conclusions upon Russia's manifest destiny.

The Paidologist. The Organ of the British Child-Study Association. Vol. No. I, February, 1903. Cheltenham, England.

This journal still retains its interest. Langdon-Down makes a valuable contribution on neurotic children; J. O. Bevan on ambi-dexterity; S. Levinstein on children's stories; W. Permewan on the waste of intelligence in the young; W. B. Drummond discusses child study; A. Stookes, some educational problems. It is an unusually rich and varied number, both in its literary digests and in its original contributions.

Official Report of the Nature-Study Exhibition and Conferences Held in the Royal Botanic Society's Gardens, Regent's Park, London, July 23rd to August 5th, 1902. Blackie and Son, London, 1903. pp. 307.

Five conferences are reported, including many addresses from eminent men. A few of those that especially strike our eye are—the seasonal study of natural history, trees as means of nature study, nature study in colleges and high schools, plant life, school gardens, nature study as an element of culture. This work comes at a very opportune moment for American teachers.

The Story of the Greatest Nations from the Dawn of History to the Twentieth Century, by EDWARD S. ELLIS and CHARLES F. HORNE. Parts 45 to 56, inclusive. Price, 25 cents each. F. R. Niglutsch, New York.

We have often noticed the earlier parts of this publication, which now reaches the 1344 page, and is still incomplete. Every one of these pamphlets contains about a dozen full page photographs, where possible, from standard artists. This renders the work of very great and peculiar interest. It is something which should be in every school.

A New Student's Atlas of English History, by EMIL REICH. Macmillan and Co., London, 1903. Price, \$3.25.

We have here fifty-five full page maps illustrating about everything that can well be put upon a smooth surface of two dimensions, aided by colors. About a page of history is given on the opposite page to illustrate each map. It is difficult to praise too heartily such a careful piece of work; which should be accessible not only to every expert, but to every college and high school student.

The Child Mind, by RALPH H. BRETHERTON. John Lane, London, 1903. pp. 229.

This book belongs to an interesting new class of child literature, which has already a number of representations. It describes from the supposed standpoint of the child typical experiences of going to bed, the nursery, illness, Sunday, the sea, contact with other children, the weather, dance, etc. It probably errs in making these experiences more intense and vivid and especially more agonizing than they are in fact.

The Nonsense Anthology, collected by Carolyn Wells. Charles Scribner's Sons, New York, 1902. pp. 289.

This collection is very well made. Beginning with Mr. Carroll's *Jabberwocky*, it illustrates admirably the power of sheer nonsense to please and excite interest. Words invented out of nothing, some of which have even come into general use and into our dictionaries, have a strange resonance in the soul. Such material really opens a chapter in æsthetics, which yet has to be adequately worked.

A Geography and Atlas of Protestant Missions. Their environment, forces, distribution, methods, problems, results and prospects at the opening of the twentieth century, by HARLAN P. BEACH. Vol. II. Statistics and Atlas. New York, 1903.

This long expected and long delayed work is a monument to the industry and devotion of its author. Every Protestant mission in the world can be located and a good deal told about it by the use of a very interesting key in the eighteen large, double page, colored maps, which constitute the bulk of the volume.

An Introduction to the History of Western Europe, by JAMES H. ROBINSON. Ginn and Co., Boston, 1903. pp. 714.

This valuable and convenient book covers a period from the barbarians' invasion of Europe to the present time. It is illustrated by many cuts and frequent maps, with convenient marginal notations and an adequate index. It is a work sure of a career as a text and reference book in high schools and colleges.

The Negro Artisan. A social study made under the direction of Atlanta University by the Seventh Atlanta Conference. Atlanta University Press, Atlanta, Ga., 1902. pp. 192. Price, fifty cents.

We have here another installment of the very valuable collection of facts which this institution is making. They are the best guide we have for knowledge of all the important questions and, we may add, for philanthropists, who desire to put money where it will do the most good. This study is one of the very best.

Studies in the History of Educational Opinion from the Renaissance, by S. S. LAURIE. The Macmillan Co., New York, 1903. pp. 261. Price, \$1.50.

Here we have sixteen interesting and lucid chapters, as is the method of this author, discussing the renaissance, universities, Elyot, Rabelais, Ascham, the Jesuits, Montaigne, Bacon, Comenius and Spencer, but with far the largest amount of space given to Locke.

Report of the Librarian of Congress for the Fiscal Year Ending June 30, 1901. The same for 1902. Govt. Print, Washington.

Every reader will be profoundly interested and grateful for the lucid and copiously illustrated account of the various departments and methods of work in the great national library, which is here presented.

Dictionary of the French and English Languages, by W. JAMES and A. MOLÉ. Completely rewritten and greatly enlarged by Louis Tolhausen and George Payn. The Macmillan Co., New York, 1903. pp. 663 and 564. Price, \$1.50.

Perhaps the most remarkable thing about this very attractive, convenient, and comprehensive work is its low price.

Les Études sur la Psychologie de l'Enfant en Amérique, par F. L. VAN BECLAERE. *Revue Thomiste*, Jan., Feb., 1903. pp. 702-716.

The author devotes this article to the child study work of the editor of this journal.

Pestalozzi and the Foundation of the Modern Elementary School, by A. PINLOCHE. Charles Scribner's Sons, New York, 1901. pp. 306.

We are glad to have in this concise form a clear picture of Pestalozzi's personality, his work, and influence. The work seems to be well done.

Spelling in the Elementary School: An Experimental and Statistical Investigation, by OLIVER P. CORNMAN. Ginn and Co., Boston, 1902. pp. 98.

Introductory Course of Nature Study, by PATRICK GEDDES. (Six lectures with afternoon excursions.) Univ. Press, Cambridge.

A Naturalist's Society and its Work, by Professor Geddes. Reprinted from the *Scottish Geographical Magazine* for February and March, 1902.

History for Graded and District Schools, by ELLWOOD W. KEMP. Ginn and Co., Boston, 1903. pp. 537.

The effort here is to reach children from six to sixteen and to develop in their minds the idea of the unity of history. Only a frame work is given. Each chapter ends with a bibliography.

Essays on the Study of Poetry and a Guide to English Literature, by MATTHEW ARNOLD. The Macmillan Co., New York, 1903. pp. 121. Price, 75 cents.

Civilization and Savagery, by G. STANLEY HALL. *Proceedings of the Massachusetts Historical Society*, January, February, March, 1903. pp. 4-13.

An attempt to suggest a new race pedagogy.

Arithmetic for High Schools, Academies, and Normal Schools, by OSCAR L. KELSO. The Macmillan Co., New York, 1903. pp. 274.

High-Grade Men In College and Out, by EDWIN G. DEXTER. Reprinted from *The Popular Science Monthly*, March, 1903.

Psychologie de l'Éducation, par GUSTAVE LE BON. E. Flammarion, Paris, 1902. pp. 304.

Elements of Physics, by ERNEST J. ANDREWS and H. N. HOWLAND. With a manual of experiments. pp. 53. The Macmillan Co., New York, 1903. pp. 386. Price, \$1.10.

De la nature des courants électriques du nerf. Les excitants et les poisons du nerf, par N. E. WEDENSKY. (*Archives de Pflüger*. Bd. 82.)

The Dangers and the Uses of the Lecture, by FREDERICK HAVEN PRATT. Reprinted from the *Educational Review*, December, 1902.

Quarterly Bibliography of Books Reviewed in Leading American Periodicals. Cumulative. January, June, 1902. Index Publishing Co., Bloomington, Ind., Vol. I, No. 2. pp. 100.

THE PEDAGOGICAL SEMINARY.

Founded and Edited by G. STANLEY HALL.

VOL. X.

JUNE, 1903.

NO. 2.

EDITORIAL.

The first article in the present number is a study of children's habit of showing off, and involves many subdivisions such as muscular feats, affectations in speech and manner, clothes consciousness, taking a dare, bragging, doing stunts, etc. In contrast with this, bashfulness and shyness are studied and constitute the second part of the article. This is expressed by nervous movements, awkwardness, blushing, giggling, speech inhibitions, inaccuracy, affected boldness, impudence, etc. The article closes with some new evolutionary suggestions and a bibliography.

In the second article Dr. Triplett makes a contribution of value to the now rapidly growing literature on pedagogical pathology, which was founded by the somewhat abstract work of Professor Strümpell on the subject, and was continued by Közle. Dr. Triplett attempted to study first the faults of children as seen by children, and secondly, their faults as seen by teachers and parents. He divides those that his census shows into several groups,—inattention, physical defect, carelessness of observation, indifference, lack of honor, of self reliance, laziness, dreaminess, under vitality, nervousness, heedlessness, mental incapacity, poor memory, inability to express thoughts, lack of consideration for others, disobedience, lack of home training, lying, stealing, whispering and tardiness. His studies are concrete and afford us real and valued new insights into this important theme.

Professor Kline has made a study in juvenile ethics by the questionnaire method, which brings out many interesting ideals of future occupations. These he classifies as altruistic, selfish, common, individual and indifferent, and finds marked differences between the country and city returns. He requires children to finish a story as one method of determining moral ideas, and concludes that girls are more conservative and more likely to express their choice and have good reasons for it than boys. Country boys name fewer ideals, but are more likely to give fuller expression to them and to give reasons for them. Imitation is stronger in the country and independence is far more so, home life in the country being more effective than in the city. Younger children prefer industrial occupations. Judgments of justice are more likely to be based on emotion than on intellect, and in some lands and schools moralizing is carried to excess. Boys are more original than girls and country children are more so than city children. These results are very important if established.

The usual book notes follow, with a very brief account of the Boston meeting of the N. E. A.

SHOWING OFF AND BASHFULNESS AS PHASES OF SELF-CONSCIOUSNESS.¹

G. STANLEY HALL and THEODATE L. SMITH.

Perhaps the strongest of all the social motives in man, who is so profoundly gregarious in his nature, is to win the good will of his fellowmen and to avoid their ill will. He wishes their approbation during all his life, that of posterity afterwards, that of the gods always. He would be spoken of with respect, and seeks wealth, knowledge and power to this end. Certain moralists make this the chief motive to virtue in the world, discriminating with care between the commendation of the many and of the few competent, or even the one ideal spectator, as an objectified conscience. Fame, glory and renown, with their carefully distinguished connotations and in different fields, sometimes become the ruling passions of life. Praise inebriates superficial natures, and men have been so inflated by applause as to seek the divine honor of apotheosis and been ceremonially deified and worshipped, and mistaken the voice of popular acclaim for that of God. Flattery is the intoxicant which hypertrophies due self respect into conceit, divorces reputation from character, tends to make men substitute seeming for being, appearance for reality, till we have the dualized hypocrite, outwardly good and great, inwardly bad and mean, a living lie. Thus one of the chief problems of moral education is how to secure the good and avoid the evil in these motives and find the practical golden mean safely poised between indifference to the opinion of others and excessive regard for it. It will help us to learn how to do this aright. We must first secure a clear and copious array of factual manifestations of this instinct in its crude childish forms, which it is believed are also not without some scientific value for genetic psychology and ethics.

The steps by which the new born child, conscious, at first, of only vague unlocalized sensations, characterized by a general feeling of comfort or discomfort, passes to a definite conception of self to which activities, feelings, and intellectual processes belong as opposed to the not-self which constitutes

¹This study was made with aid given by the Carnegie Institution which is hereby gratefully acknowledged.

the rest of the world, are so complex and involve so many factors and influences of heredity and environment are so interwoven that the problem of understanding and guiding aright the manifold activities of the growing personality in a way to insure the development of a normal, sturdy, self-respect free from too great self depreciation on the one hand and any excess of self assertion on the other, is one of the most difficult presented to mothers and teachers. To secure a healthful development of the child's personality and to preserve the naïve self expression, which is one of the charms of childhood, free from all forms of affectation or morbid timidity, is a problem, presenting so many difficulties and complexities that the need of psychological study of the subject will not be questioned. But two aspects of the subject are presented in the present study: the development of self-consciousness in the various phases of "showing off," and as exhibited in bashfulness and its antithesis,—boldness. The data are partly reminiscent and partly derived from the direct observation of children by adults, the value of the latter being greatly enhanced in many cases by detailed description of the child's environment. Three hundred and sixty-three cases of "showing off" and three hundred and fourteen cases of bashfulness in children were examined and classified according to the natural groups. These groups were then studied for any specific differences which might appear along the lines of age and sex and these, in so far as they appeared, have been indicated. Three distinct types of "showing off" appeared, each exhibiting many degrees and variations. (1) "showing off" by some form of muscular activity, (2) clothes, and (3) by speech and manner, including bragging and imitation. In the youngest children "showing off," either by means of action or clothes, seems to be the simple openly expressed desire for recognition and sympathy, the step in the extension of the consciousness of self which naturally succeeds the baby's development of self through the investigation of the limits of its own body to which the first year of life is in some part devoted. That problem having been solved, the growing ability to do things and interest in possessions, whether clothes or toys, asserts itself and the claim for recognition and sympathy from those with whom the child comes into relation grows with this new extension of self. It is difficult to draw any line between this normal growth of the consciousness of self—for the sense of personality is exceedingly strong in young children and the development of the social self has its beginning in the early months of a child's life—and the creeping in of the various disagreeable phenomena which we call self-consciousness. The intense feeling of personality which is an inevitable accompaniment of the baby's growth, under the influ-

ence of environment and possibly of hereditary tendencies, often becomes too greatly emphasized, leading, on the one hand, to vanity, egotism, and self assertiveness and on the other to self distrust, shyness and shrinking from all unsympathetic contact. The little child turns instinctively to its mother or those most closely associated with its daily life for sympathy not only in all its troubles but in its pleasures also, whether these consist in newly acquired muscular activity or some new possession, and upon the approbation and sympathy which are received the child's growth in a measure depends. Love of praise and fear of reproach are both powerful incentives in the childish mind and though an excess of either may prove a dwarfing or perverting influence to the child, they are natural stimuli for growth. Children brought up in foundling asylums or other institutions where, though all needful physical care is bestowed, personal incentives are almost wholly lacking, learn to walk and speak much later than children whose baby efforts receive the attention and encouragement of an admiring family whose sympathy baby soon learns to regard as his right. The next step is taken when the child having found that approval is a pleasant experience begins to do things, not wholly because of pleasure in the activity itself but either partially or solely for the sake of praise and approbation. This motive also may become a strong incentive for both mental and moral growth, but it is at this point that deviations toward the egoistic and unpleasant manifestations of self begin. Desire for praise and approbation, unless wisely guarded, may lead to all sorts of showing off, affectation, boldness and vanity; especially in children of strong social tendencies. Material from the returns has been freely used to illustrate each phase of this development of self-consciousness from the simple desire for recognition to the painful and exaggerated forms of vanity and self-complacency.

Showing off: Muscular Feats with Open Desire for Recognition.

M., 1½. Turning round the ring. Elders called it dancing.

M., 4. Being watched at his play, would run as fast as he could and fall down.

M., 4. "See how far I can frow this tick." Was praised, then "See how far I can frow dis stone."

F., 4. Callers. Came into the room. "Would n't you like to see me dance?"

F., 4. "Do you want to see a trick? Wait till I show you a trick."

M., 4. "Do you know how to throw a stone? Don't you want to see me throw one in the water?"

M., 4. "See me climb this fence." Making great efforts as if it were difficult.

M., 6. "See me climb the tree."

M., 7. When observed at his play began to hammer the fence. "See what I can do, I am moving the fence."

F., 7. Her sister had sung. "Mamma don't you want me to sing something now?"

F. When the family are at the table. "See how high and how far I can jump."

M., 8. "I can climb to the top of that pile of boxes."

F., 9. "Come out and see how far I can jump. You can't jump that far."

Consciousness of clothes is shown at a very early age, girls especially showing pleasure in fresh, clean clothes and attractive colors, and this natural and instinctive pleasure seems especially liable to perversion into an exaggerated sense of the importance of dress and a fruitful soil for the seeds of vanity and self conceit.

The influence of environment and imitation begins to be manifest in very young children. This, in the present returns, is much more noticeable in girls than in boys. The delight of the boy in his first trousers, his added sense of dignity and feeling of self expansion seem to be quite natural and unaffected and in some cases, at least, a new sense of responsibility and manliness is donned with the new garments marking a real stage in the boy's growth. It would seem to be a fortunate circumstance for the boy that the matter of dress, from a social point of view, is made relatively of much less importance to him than to the girl. The little woman of five who announces "I can't sit on the floor to-night, I don't know if I can even sit on a chair because I have on my very best frock," is certainly having forced upon her a disproportionate consciousness of clothes as compared with any natural development of her personality. While Lotze's ingenious explanation of the pleasure in dress as due to the feeling of extension of the personality felt in every undulating fold and floating ribbon certainly finds place here, it is, in the case of girls, largely subordinated to the pleasure derived from the effect upon others. The subject of clothes is early made an important one in a girl's life, her movements are restricted because of them and she is debarred from many forms of activity which would soil or rumple her clothes. As a result her instinctive pleasure in fresh, pretty clothes is soon mixed with a consideration of their effect upon others, attention is concentrated upon appearance and the influence of environment is plainly reflected in the child's attitude. The transition from the frank open expression of pleasure in new possessions, and desire for sympathetic appreciation of this pleasure, changes by insensible gradations to pleasure, no longer derived from the thing itself, but from its effect upon others. This naturally leads to various devices to attract attention. Into these, though, at first, quite openly expressed, an element of affectation soon enters. Attempts to attract attention become perfectly conscious and deliberate but the

child does not wish these efforts to be recognized. She wants to attract attention but she does not want any one to know that she does and therefore employs various devices more or less transparent to attract attention without seeming to do so. Cases have been selected from the returns to illustrate these various phases of clothes consciousness, and also to show the relative frequency of their occurrence in boys as compared with girls. It will be noted that it is not a boy's method of showing off and that the element of affectation in this connection is almost wholly lacking in boys.

Consciousness of Clothes Openly Expressed.

F., 1 y. 9 m. Had a new dress. Would walk in front of every one that came in until it was noticed.

F., 3. "Don't anybody see my new dress with blue ribbons?" Being asked "What's that?" said "Oh that's only my new hat from Miss —."

M., 3. Twisted himself round and looked at his pants. Acted as if he would like to say "See my new pants."

F., 3. "Aunt Gussie, I have a new cassimere dress with pretty bows and all lace, aint I swell?"

F., 4. "I can wear my new hat any way," turning her head to show it.

M., 4. Not being noticed. "It's a wonder you would n't put your new dress on you, as long as I have my new suit on."

M., 2. Had shirt that was shirred at the neck and waist and a bright tie and seemed to enjoy looking at himself.

F., 4½. Went across the street to show a new dress to her aunt. Walked on her toes and held her dress very high.

F., 4½. Having on a new or clean gown, would often say: "Now, mamma, don't little Mary look just as sweet as she can?"

F., 5. Her new shoes not being noticed, put her foot in the lady's lap and said "Why did n't you look at my shoes? They are new."

M., 5. First pants. Walked round then began to kick, laugh, lie down, roll over, show size of his pockets, etc.

F., 6; F., 7½. After being dressed Sunday morning these two sisters rush to their father. "How do we look? Which is the prettiest?"

M., 7. Had a white sweater, showed it to everybody and walked up and down the street.

F., 8. Was visiting. Went to the mirror. "Did you see my new dress? Aint it pretty. Aint my hat pretty? It's new you know. I bet I look pretty, don't I?"

F., 8. Her shoes not being noticed. "I got new shoes on."

F., 9. Having a new dress was eager to recite in school.

M., 10. Delighted in wearing a military cap.

Showing off Clothes, with Element of Affectation.

F., 5. A beautifully dressed child entered a crowded room and attracted considerable attention. When she noticed it she began to swing from side to side, look at her dress, put her hand up to her hat, and glance at a gold ring which she wore.

F., 5. When she has new clothes walks up and down the street, swaying back and forth.

F., 5. Had a new hat which she kept taking off and putting on again. Puts on airs when she is dressed. Walks up and down and swings herself, has a little smile. Sits down, holds her head first one side, then another. If no attention is received she will get a book, stand

on a chair, and sing, speak pieces, etc. As soon as people leave the room she becomes natural.

F., 7. Strutted across the floor to show off her new dress.

F., 8. Had a new dress and was told to say "Excuse me," when she went in front of any one. Walked in front of a lady and stopped to say "Excuse me" and then went on.

F. Three girls walked up and down to show their new spring dresses. Nearly a dozen boys marched behind them.

F., 10. Had a pretty neck chain. Went out on a hotel piazza, tried the chain on some of the younger children, examined it closely, watching to see if she were observed.

F., 10. Was mincing along the street with her head thrown back. Refused to take her companion's hand. After a few minutes stopped and began to laugh.

F., 12. Having new clothes, strutted by her acquaintances scarcely speaking to them.

F., adult. Had many rings. When she went into company would put on a number and hold her hands so as to show them.

But consciousness of clothes is by no means confined to the well dressed child, the child whose personal experience of clothes is limited to their use as coverings and protection from the cold, often insufficient, though she has a certain advantage in unrestricted freedom of movement also develops a clothes-consciousness from social environment, not indeed through pleasure and approval of others, but through the sense of contrast and a shrinking from unsympathetic observation due to mortification, or an antagonism toward those who are better dressed is aroused and manifests itself in boldness and effrontery. This latter development seems to be somewhat more common in boys than in girls and the dramatic instinct of imitation is more marked in girls. The boy's sense of self is less affected by what he wears and he takes refuge in a contemptuous attitude toward better dressed children, while this element, though by no means lacking in girls, is subordinated to a desire for imitation, shown not only in imitative play but in the bragging lies which have frequently been noted among children suddenly brought into more advantageous surroundings, where the form of the lie is, in the case of girls, almost always in regard to dress or possessions as contrasted with boys whose lies are chiefly in regard to what they or members of their families can do. In all classes of American society the clothes consciousness is an important factor in feminine psychology and children reflect not only their immediate but to some extent their more remote environment, and the psychology of clothes is no superficial problem but one closely bound up with the growth of personality. With some children a new dress seems to act chiefly as an incentive to showing off. Numerous instances of sudden interest in school or church due to this factor are reported and many reminiscent papers describe with great vividness the feeling of superiority over other children and the desire to make this felt induced by especially fine clothing.

Closely connected with affectations of dress are those of speech and manner. Here the imitative tendency comes strongly into play, sometimes rooted in the desire to be like some older person who is especially admired and loved and sometimes in a general desire to appear grown up or superior. The forms in which these affectations manifest themselves are noticeably different in boys and girls. Both imitate their elders or those who attract them, but the boy affects a roughness of speech and action in marked contrast to the affectations of the girl and, on the whole, the imitations of the boy are probably really less affected than those of the girl. The tendency to pose, so closely bound up with the dramatic instinct, appears at a very early age and in a great variety of forms, the earliest being the plays in which some person or animal is personated, with little attempt at real imitation. In many cases these plays are taught to the child, but the readiness with which he makes them his own, and the fact that they also arise spontaneously among all classes of children, indicates an instinctive aptitude which is closely connected with the development of personality. In this early form of imitation there is little or no appeal to recognition of self, but the attitude of seeking to alter or extend personality finds its earliest manifestation in these plays and it is this attitude, plus the desire for recognition and approbation of self, which underlies the various forms of affectation. Many affectations of speech are really little more than the child's effort to increase his vocabulary, and though the immediate result is often laughable there is a real gain in this direction which should not be ignored, and it would be a psychological blunder to condemn all affectations indiscriminately as unwholesome. It is not the impulse to imitation which is to be condemned but, too often, the models upon which it works.

Affectation in Speech.

F., 4. When alone some one came asked for her folks. "Min's up stairs and Eddie has gone to the dentist's to have his hair cut."

F., 5. Had been shopping with her mother and returned very tired. "Come," said her mother, "we will go to bed." "Oh! yes" sighed Alice, "anything for a difference."

F., 5. Being asked to have more cake said "No. I have had a delightful sufficiency."

M., 6. Correcting his small brother. "You must n't do that; you should say, Excuse me. If I did it I should say I beg your pardon."

F. If called on to answer questions first her manner is natural. But if others have failed, she takes great pains to pronounce each word (3rd yr. primary).

F., 7. Met a young lady: "Why, good morning, Catherine, when did you get home?" Had heard some one make the remark.

F., 7. Likes to say things to make people laugh. Says whatever she thinks of first, whether good or bad.

F., 8. Why, Ethel, "I'm so glad you came! So sorry you were absent yesterday." Very affected tone.

F. Affectation: waging for wagon, pitched for pitcher, chimbley for chimney, lady calf for heifer.

M., 10. Liked to show off the words he knew. Would say to younger children: "At what time do you retire? Will you kindly vacate that chair?"

F. Always became self-conscious in the presence of strangers. Her language was stilted and the tone of her voice changed.

F., 10. Two girls knowing a few French words pretended to carry on a conversation in French on a car.

M., 12. Imitated a witty man who stuttered until unable to talk properly.

F., 12. Liked to use large words. "Have n't they been having awful torpedoes (tornadoes) out west?"

F., 12. Likes long words. "O, does n't that boat look wistfully!"

F., 13. Very affected in speech and manners. Affects great vivacity. Has grown to be a habit.

F., 14. Her voice is unnatural and her words do not sound like English when a certain boy friend is near. Sometimes the affectation continues after he has gone away.

F., 17. Liked to use words she did not understand. Tried to tell about a party and meant to use the word *reception* but used the word *conception*.

Affectations of manner, as those of speech, vary greatly in form and degree but they are all traceable to the same underlying principles. In some cases they are undoubtedly almost unconscious imitations, but for the most part the motive of self aggrandizement is present though by no means acknowledged even to self. In cases where the imitation is of some person especially admired, this motive is less prominent and the imitation itself may be frankly acknowledged, but as a rule the self-consciousness which manifests itself in the various forms of affectation is accompanied by what is possibly a deep lying dramatic instinct to pretend even to one self that the pretence is real. A child's manners are in large measure a reflection of his environment, the habits and actions of those about him are continually imitated and his personality grows through these varied acquirements. It is the refuse of this process, the things not assimilated and therefore not genuine expressions of the child's personality, which we call affectations.

Affectation in Manner.

F., 4. Talks nicely to her dolls and is natural, but if watched puts on airs.

F., 7. In the presence of visitors pretended that she had done a very hard lesson.

M., 7. Becomes very affected when trying to attract attention; is much pleased when laughed at.

F., 7. Naturally bright and full of mischief. Puts on a very serious face for Sunday, walks quietly, just smiles when spoken to. Refused to wear a red hat because it was too bright for church.

F., 11. Has often taken part in church entertainments. When she talks with her playmates seems conscious of her words. If observed when walking will switch her dress from side to side.

F., 13. Puts on airs while walking.

F., 13. Very affected in company.

F., 15. Imitated an affected manner which she admired.

F., 17. After she returned from boarding school was very affected in her manners and speech. With strangers the affectation was very noticeable, with friends much less so. Very seldom entirely natural.

F., 18. Whenever she speaks puts on a calm easy indolent manner.

In the showing off instinct, as exhibited in motor activities, a noticeable difference between boys and girls appears, 78% of the boys furnishing examples of this type while only 22% of the girls were included in this classification. Moreover, there was a marked difference between boys and girls in the kind of activity. Among the boys feats of physical strength and skill, running, jumping, fighting or special gymnastic exercises prevailed, while motor activities on the part of the girl are not only more limited but frequently involve much more complex psychic accompaniments. With boys it seems to be the motor activity itself as an expression of personality for which recognition is desired. Among girls this motor factor is frequently only a means to an end and intended to attract attention either to dress, general appearance or the possession of some accomplishment. In the boy the element of pretended unconsciousness seems somewhat less than among girls; his mental state is less complex and contains less of the element of affectation. He desires recognition of his physical strength and skill, and though he probably wishes the fact that he is showing off to be ignored, he is not averse to recognition so long as that fact is kept in the background. In the more complex mental state of the girl is involved a subtle feeling of deception because her actions are not those which are in themselves normal expressions of motor activities which might conceivably be carried out if no spectators were at hand but are either imitation of the characteristics of another person, supposedly superior, or means to an end which she does not like to acknowledge openly. It is not alone sympathetic appreciation of her pleasure in new acquisitions which is desired but praise and acknowledgment as well, and things are done not for their own sake but with a view to self as it appears in the eyes of others. Of course, a morally healthy child is ashamed of this motive when brought face to face with it, but children are not analytic and often do a vast amount of pretending even to themselves.

Showing off. Physical Action, Pretended Unconsciousness.

M., 3½. When watched likes to ride very fast on his velocipede.

M., 4. Playing with his dog. When observed began to whip the dog.

M., 5. Finding himself watched began to jump, run, and swing on a rope.

M., 5. Rode a tricycle up and down as long as he was watched.

M., 6; M., 6. Agree very well when alone; but will often fight when observed.

M., 8. When observed at play began to fight and cut up antics. When the observers apparently went away, they stopped.

F., 9. Tried to jump and run fast to attract attention.

M., 9. Four boys had attached a raft to steps of board walk. The tide was high and as the waves came in the boys would jump on the raft. Being watched became much more daring.

M., 7. When walking with the observer would begin to take long strides and try to act like a man.

M., 8. Being observed on the street, began to swagger and put a cigarette in his mouth.

M. Peaceable with one or two but getting up a fight if larger boys were present.

M. Riding a bicycle. When observed, rode faster, whistled, and moved his body.

M., 13. Being watched, attempted a trick on the trapeze which he was unable to do. Fell and hurt himself.

M., 13. Was balancing on his hands. Spectators. Immediately did it again and then walked on his hands.

F. Danced up and down the walk, looking at the window to see if she were observed. When she saw no one, went away.

F., 4. Mended her stocking in the presence of a neighbor to be called smart.

F., 4. Would get on a table and jump off, go under the table and pull the cover down to hide herself, pound the floor with her feet, and shout.

F., 4. Ran noisily through her mother's store into a back room and then ran back to the door: to attract the attention of a customer.

F., 4. Likes to show people how much she can help her mother; runs up stairs, sets the table, etc.

F., 6. Saw a great professor play on the piano. Tried to imitate him by movements of her hands and head. Did not do it when alone.

Conscious Showing Off.

M., 2. Turned somersaults when he went calling.

M., 3. Playing horse with a chair. When observed began to whip the chair and say, "Just see how I can make my horse run."

M., 3½. Would put a hassock in the middle of the floor and jump over it or try to stand on his head.

M., 4. When visitors took any notice of him would race round, climb up on high things and jump.

M., 4. Began to kick as high as he could and turned round to see if he had been observed.

M., 5. Would turn somersaults and make faces to make visitors laugh.

M., 6. Annoyed his mother by making pot cheeses when there was company.

M., 7. Made faces at a visitor in school, dropped his pencil.

M., 7. Ran till he was very tired to excite the admiration of his sister and her friends.

M. Had a balloon at a railway station. Went through all sorts of performances and looked round for approval.

M., 11. One boy pounding and kicking another, some men looking on.

M., 12. Having learned a new song at school, when he reached home sang so loud that he annoyed everybody.

M., 12. Out swimming—was watched—came out and made a daring dive. Afterwards boasted that he often dove from a certain bridge.

M., 12. Went through the motions of playing a violin with his ruler for the benefit of a visitor in school.

- M., 12. Liked to perform on a trapeze when he had an audience.
- M., 12. Turned somersaults and climbed a tree, swinging on one of the branches for the amusement of three young ladies.
- F., 5. A beautiful and finely dressed child on a train. Stood up on the seat, held her hat in front of the mirror. "I'm sure that none of you saw such a pretty girl with a hat like this before. Look in that big glass in front there and you'll see me another time. Papa calls me his sweetheart. Don't you think that's a nice name for a pretty girl like me?—I wonder how many people there are in this car who know I'm going to see my grandma. That woman over on the other side is got a little girl with freckles all over her face. I guess she wishes her little girl was as white as I am."
- F., 5. As she was going on the platform stepped very daintily holding up her dress and trying to act old.
- F., 7. Thinking herself watched, tried to walk in a fine way.
- F., 9. Shook herself from side to side, held her head high, put her feet down carefully.
- F., 9. Did not like to practice but when there was a caller would open the piano herself and practice her full time.
- F., 10. Jumped rope. If observed jumped till she was almost exhausted.
- F., 11. Tried to play on the organ to impress visitors with her smartness.
- F., 14. Tried to kick with both feet. Playing kick the ricket.
- F., 14. When visitors are in the gymnasium puts one foot up by her head, turns somersaults and does other things to attract attention.

Taking a Dare.

The form of showing off called "taking a dare," "stumping," or "doing stunts" appears from the returns to be a dangerous and perverted form of the showing off instinct. Eighty-four cases were reported and include the following items: jumping from high places, such as trees, roofs, walls, embankments, etc., skating over thin ice, crossing railroad bridges, trestles or narrow planks across streams, running in front of horses or moving railroad trains, coasting in dangerous places and in dangerous attitudes, crawling under a train at station, stealing, truancy and injuries to property. Accidents occurring in consequence of these dares include twelve cases of broken bones or serious sprains, eight cases of falling into the water with danger of drowning, two cases of serious nervous shock, one case of severe ivy poisoning and a large number of minor injuries. Unlike the other types of showing off no specific differences between girls and boys appear in the character of the dares taken. One girl walked over a high railroad trestle without accident but for three years her dreams were haunted by a recurrence of her sensations. Another girl stayed until after dark in a house reputed to be haunted but suffered for a long time afterward from the nervous strain. The larger part of the more serious accidents happened to girls, owing, probably, to a less degree of muscular strength and skill and in some cases to the impeding of their movements by clothes. The

motivating impulse in all the cases of daring examined seems to be, not a real exhibition of courage even of the physical sort, but a desire to avoid the accusation of cowardice. In many instances the dare was taken by children too young to have any real knowledge of the danger involved. One four year old boy, on being dared by one older, plunged his hand and arm into a hornets' nest. In not a single case was there any evidence in favor of the dare as being instrumental in developing either physical or moral courage. Many of the dares taken involved disobedience, that, in some instances, being a part of the dare. A curious perversion of the moral sense seems to enter into the whole question of daring and under the excitement of taking a dare, in addition to other moral delinquencies, actual criminal offences are committed by well brought up children, fear of being called a coward and a false ideal of courage bringing about a sort of temporary moral anæsthesia. The remedy for this state of things can lie only in the correction of the child's ideals of courage and honor, and in this connection courses of reading and literature offer great opportunities to the teacher.

- M., 6. Coasted down steep hill into river, was nearly drowned.
 M., 10. Jumped from high bridge into coal car.
 M. Caught on to running board on electric car, fell but escaped injury.
 M., 12. Jumped from a second story window because he was dared.
 M., 8. Being told he could not whip another boy, at once did it.
 M. In his efforts to outdo his rival in diving, struck his head on the bottom.
 M., 11. Threw stones at a cat, some ladies remarking upon cruelty.
 F. Made herself sick smoking cigarettes. Was dared by her brother.
 F. Drank liquor and made herself drunk. Dared.
 F., 10. A group of children trying to outdo each other. Although she hated onions ate one and succeeded in keeping back the tears till she got away.
 F., 13. Tried to ride horse bareback; was thrown almost immediately.
 F., 10. Slid down hill standing on sled with skates on: not seriously injured.
 F. Took her baby sister up a tree and swung off limb with her in arms. Neither child injured.
 F. Climbed an electric light pole and touched wire, not knowing whether it were live wire or not.
 M., 10. Crawled under train stopping at station.

[*Special Dispatch to the Boston Herald.*]

ROCKVILLE, CT., March 16, 1903. Two children, aged eight and six years, of John Young, a blacksmith of Tolland, were playing together in the woodshed Saturday afternoon, doing "dares" and "stunts." The older boy got hold of an axe and holding it over his head said to his little brother, "You don't dare to put your foot on this block, cause if you do, I'll chop it off with this axe." The little fellow immediately put his foot on the chopping-block, and the older brother, probably thinking he would not let his foot remain, brought down the axe, chopping his brother's foot off at the ankle.

Horrified at his deed, he then ran to the house, calling loudly for his father, who drove with his wounded son to this village for surgical aid.

Bragging. Ability to do Things.

In bragging, although the motive of self-aggrandizement is the obvious and immediate antecedent, its manifestations vary from an expression of rivalry and emulation, with statements founded on fact, to the bragging lie in all its forms. In its primary form bragging is simply an assertion of the ability to do something better than some one else or an expression of pride in possessions, tinged with a satisfaction that they are superior to those of another. But from this beginning it passes through various stages of degeneration, losing more and more its factual foundation until it culminates in the bragging lie with all its absurdities, pettiness and meanness. The same difference between boys and girls which appeared in other forms of "showing off" is also apparent here. In 134 cases of bragging, exclusive of lies, 78% of the total number of boys bragged of what they could do and 22% of possessions or relatives. Of the total number of girls, 90% bragged of possession, family or wealth, and only 10% of doing things. But this statement does not bring out the entire character of the differences between the sexes, as a careful reading of the returns shows a larger preponderance of direct motor activity as a subject for boasting among boys, while many of the girls boasted of ability to read, write or spell better than some one else and of accomplishments or superiority of marks at school. The chief motor activity mentioned was skill in jumping rope or dancing. In bragging of possessions among girls, clothes lead, then come household furnishings, father's wealth, rich relatives, special advantages of travel and personal endowments as fine hair or eyes, beautiful complexion, etc. Among the boys, father's wealth and possessions, travelled relatives, and personal possessions such as sleds, skates and footballs are oftenest mentioned. The only form of clothing mentioned was a pair of rubber boots. These differences, though due allowance must be made for the repression of motor activity among girls by limitations of dress, social restraint, etc., are so far in harmony with biological theories as to the superior motor activity of the male and the relative passivity of the female sex, that it is, at least, in order to raise the question how far these differences are due to environment and how far to innate sexual differences. Is this marked difference in the motor activity of boys and girls indicative of a primary sex differentiation or are they to be ascribed to a progressive influence of environment? It is to be noted in this connection that marked exceptions to the general rule occur among girls of unusually

fine physical development, their pleasure and pride in physical feats quite equalling that of boys. The following are typical samples of the cases of bragging furnished by the returns.

Doing Stunts.

M., 3. When watched would jump and turn somersaults. "I can do something you can't do."

M., 3. "I kin beat you runnin. I can run faster 'an the stars."

M., 4. "Oh! I can sing better than that, wait until you hear me sing."

M., 5. "Got a segar? I kin smoke. Give us a pipe and tobacco and see me smoke."

M., 5. To an older child. "I can lift more than you can."

M., 5. To his playmate's father. "Can Joe whistle? I can;" whistles.

M., 5. To a strange boy about his own age. "I can knock you out in one round."

M., 6. On hearing it said how high up a man was. "Oh, that is n't high. I can climb that tree without any ladder."

M., 6. "I spelled a word right that Roy could n't spell and I'm only six and Roy is nearly eight years old."

M., 8. "Can you throw a stone in that window?" (No.) "I can, wait until you see me."

M., 8. "I can climb twice as high as you."

M., 8. Boasted that he could jump across a large stream.

M., 14. "I can swim better than he can and go under water too."

M., 15. Bragged that he could whip one boy and when he had succeeded, whipped another without the slightest provocation.

F., 4½. Went into the parlor when there was a party and said, "I know how to spell and I can read better than Willie too."

F., 7. Likes to tell people that she is in the second reader and that another is only in the first reader.

F., 8. "You can't jump with the rope this high, but I can."

F., 8. "I can read better than you can Lizzie." When asked to read said that her mother told her not to stay long and that she had better go home.

F., 9. "Oh! I can write better than I do if I want to, even better than she can. Wait until I write this line and you'll see if I can't."

F., 9. "Now just you watch me jump rope, I can jump faster than anybody in my class."

Bragging of Possessions.

F., 4¼. "Your mamma haint got what my mamma's got! My mamma's got a new silk dress."

F., 5. Told a little visitor. "I have a paper from New York. I subscribed for it."

F., 6. "It's too bad you can't go down to the seashore. We are all going for two months. It's perfectly elegant there, the band plays all day, we go out walking, dance and are dressed up all the time."

F., 6. Told a little girl that her mamma's baby was n't as pretty and did n't have such pretty dresses as her own baby sister.

F., 7. "My father does more than that, he goes to the city and gets things for people."

F., 7. "Our house is grander than yours because we have a cupola on it."

F., 9. "Oh! that's nothing, I heard pa say this morning we had a mortgage on our house, but I have never seen it myself."

F., 8. "Well we have papa's and mamma's pictures in the parlor and the frames are solid gold for they look like it."

F., 8. "I have a picture at home like that."

F., 8. "Pooh! I've got about a dozen."

F., 8. Boasted of the good condition of her father's horses. The other horses were poor old things that ought to be sent to the bone-yard.

F., 8. "I shall not play with you any more, you are not so rich as we are for you don't have high topped boots, so there."

F., 8. "My aunt Lizzie has more money in the bank than your papa. She will buy me anything I want. I'm going to get a safety."

F., 8. Boasted of her beautiful dresses and what her mamma was going to get for her birthday.

F., 8. "My dress is much prettier than yours. I got a piano, a watch, and many other pretty things that you have n't. My papa is richer than yours."

F., 8. Bragged of her clothes and of the house furniture.

F., 8. Kept away from and looked contemptuously at a child less well dressed who sat in the same pew.

F., 8. On hearing a little girl's hair admired. "It ain't as nice as mine, is it mamma?"

F., 8. Asked a playmate if all her family ate off one plate because they all went in at different times to their meals.

F., 8. "Mamma has bought our Julia a doll that cost \$8."

M., 4½. "I feel pretty good, I've had something good to eat." Stretching himself.

M., 4. "I have a new stepmother."

M., 5. "Pooh! that is nothing. I have one too."

M., 5. Boasted of his father and his father's horse and cow, how he picked lots of berries for his mother who said he was "smarter'n Mabel."

M., 5. Thinks his rubber boots are prettier than Mabel's. Thinks his orange is larger than Mabel's.

M., 10. "My father is richer than your father."

M., 12. "My sled is better than yours; yours was made, mine was bought."

The differences of content observable between boys and girls in the cases just given appear also in bragging lies. In forty-three cases of lying, sixteen boys and five girls lied about their ability to do things, seventeen girls and five boys about their possessions. The motives underlying these lies are self-aggrandizement, frequently plus the desire to humiliate some one else, the impulse to repel humiliation and desire to attain some selfish end. In some children the love of showing off develops to an abnormal extent so that false pretences in regard to personal acquirements, abilities and possessions become so accentuated as to dwarf and warp the normal character. Physically well-developed children, in whom the dramatic instinct is strong, naturally have a tendency to show off but the degenerate forms of this impulse are due far more to ignorance and injudicious treatment on the part of parents, guardians and teachers than to any qualities inherent in the child.

M., 7. Was given a piece to learn for Arbor Day. When he came

out of school said "I knew that piece as soon as I saw it." Then: "Well I did know it but I can't think of it."

M., 5. Said that he was at a fire and saved four horses.

M., 5. He can whip any boy round.

M., 4. Some one tried to take a flower from him. "Well they'd better stop or I'll *do* them, for I can. Why I can do a big man or a horse."

M., 7. Said he licked three boys in a neighboring town. Being questioned said he would have licked 'em if he had got off the wagon.

M., 8. Had read much about fighting. Was often heard to tell his mates that if his mother would allow him to fight he could whip them all.

M. Kindergarten. Children asked if they had previously learned a song. R, yes he knew the second verse, but was unable to sing it and acknowledged he did not really know it.

M. On seeing a lemon tree said that he had planted a pit. In three days it was 6 inches high and in two or three months had lemons.

M., 9. Would lie about his hunting and fishing, telling that he had killed a dozen birds when he had not.

M., 9. Said he had been stung twice by bees and had not cried. Had not been stung.

M., 10; M., 13. Would tell lies to see which could tell the biggest.

M., 14. Did n't care if he did die. To show how brave he was.

F., 6. Said there was an awful big snake in their field and it ate up all their rye.

F., 8. Children quarrelling. This one said "If you come on my steps I'll have you arrested, my father is a policeman."

F., 10. One of her mates refused to give her any candy. "You had better give me some, for if you don't I shall tell my brother and he is an assembly man."

F. Had a fever so high that it cracked the clinical thermometer.

In bragging lies in regard to possession, *envy and imitation* are frequent motives. Several papers report actual *epidemics* of lying as occurring among groups of children whose sole object seemed to be the attainment of some fancied superiority, conferred by the possession of superior advantages of dress or household furnishings.

F., 7. Being shown some silver spoons just cleaned: "Pooh! my mamma's spoons are always as bright as that and when we polish them they are a hundred times brighter than that."

F., 7. Told another girl how many gold rings, watches, and earrings she had and promised the girl to bring her a watch the next day.

F. Fresh Air children boasted that they had Brussels carpets and lace dresses at home. Two small rooms were the actual home.

F. Fresh Air child told about her father's riding in a carriage with a span of horses. Proved to be an ice-wagon.

F., 9. Boasted of costly dolls and dresses which she did not possess.

F., 10. Bragged of her father's smartness.

F., 11. Said that they had Brussels carpets in every room but the kitchen, where there was a rag carpet. The kitchen floor was bare and there were no Brussels carpets.

F., 11. Always telling what they had or were going to have, where they were going. Used to say she could have anything she wanted, her father was rich.

M., 5. My papa's going to buy a boat bigger than your house.

M., 6. Told about a cane his father had. Said it was very large,

all gold, with a lock and key at the head. Everything he happened to see was on that cane. He turned round and saw the grape arbor. "There are all ripe grapes on papa's cane."

M., 10. Said his father shot a hundred geese with one shot. Finally reduced the number to one.

M., 12. "I am going to have a thousand dollars to spend the day the show is here."

M. A boy being asked his name and his father's occupation said his father was captain of the Pilgrim—then first mate—then captain's orderly.

F., 9. "Oh! that 's nothin'; why! I went to Mexico last summer, and at the place where I was, all I had to do was to pick up all the diamonds I could carry. Some of them were blue and some red. I have a blue one home that is as big as a hickory nut.

Showing off by imitation is so closely interwoven with the dramatic instinct and imitative play that it is difficult to determine at just what point undesirable elements may creep in. The assumption of another personality, whether merely in name or extended to dress and manner, gives peculiar enjoyment to children. To dress up in a long skirt and play at being grown up is a girlish delight to which the boy's enjoyment of a soldier's uniform or a miniature football suit is the correlate, for in this particular connection, the boy's interest in dress seems quite equal to the girl's and the pleasure in showing off quite as great. Up to a certain point this seems quite normal and healthful but in some cases the dramatic self-deception passes over to the world of reality, the dressing up loses its dramatic character and the play pirate may become the actual juvenile offender. In real play children always desire the recognition of their new characters. They resent acts or speeches on the part of others which are inconsistent with their assumed characters and it is only when this consistency is lost that undesirable manifestations of self-consciousness appear. On the other hand, this ideal personality so insisted upon by the child may often be taken advantage of to overcome certain difficulties in nursery regime. A child whose somewhat capricious appetite was not always aroused by her simple diet happily consumed her quantum of oatmeal by having it fed in successive spoonfuls to different members of an imaginary bunny family, and all readers of Mrs. Ewing's "Story of a Short Life" will remember the use a wise mother made of her little crippled son's love of soldiering, for his moral training. Probably every mother or teacher can recall instances of benefit derived from taking advantage of this instinct, but much depends on the models from which the child derives its ideals for, as has already been pointed out in connection with taking a dare, the imitative instinct when applied to false ideals may lead to dangerous consequences.

Imitative Play and Showing Off.

F., 3. Was always playing company, would come to her mother and ask "How do you do? How is the baby?" etc. Would hurry away and when she returned would play she was the grocer.

F., 3. Has named a doll for an aunt's baby. Says "I am Aunt Jean" and will not answer to any other name for several days. Imitates her aunt to perfection.

M., 3. "I must go do my work up now."

M., 5. Likes to call his mother Kate so that people will think he is "big like papa."

F., 5. Went visiting and behaved in a very lady like way. Inquired after the lady's husband and said her own was "awful sick."

F., 5. Had an aunt whose dress and manners she imitated. Imitated any trait or act that she saw admired in others. Always before people.

M., 7. Chose a name for himself and pretended to be a man with a wife and family. Acted it out consistently for three years.

M., F. Brother and sister playing. He called her by her mother's name and she called him by the father's name.

F., 8. Was fond of imitating the talk of grown people.

F. Two sisters will dress one in the mother's the other in an elder sister's clothes, will live in different parts of the house and visit each other.

F., 9. Very fond of trying to act like some one else. Saw a very stylish lady walking down the street. Tried to talk just like her, put on so many airs and gestures that she could hardly be understood.

F. Used to pretend she was some character in a fairy tale which she had read. To a certain extent the part was practiced before others but more freely alone.

F., 10. Two girls who imitated two young ladies whom they knew. Ate and walked like them and gave imaginary parties at which they talked to the friends of the young ladies.

F., 11. Same as above. One was Rosalie the other Lord Fauntleroy grown. Rosalie was serenaded. Fauntleroy proposed and was accepted and there was a wedding. Parts were acted for two months, mostly when alone.

F., 11. Would play that she was a business man of great wealth. Sometimes she was a drummer, then she would put her hands in her pockets, throw her shoulders back, put her hat on one side and hold her cane in the air. Would often take out imaginary things from an imaginary valise. Does not do this in presence of strangers. Has done it for nine years.

M., 2½. If any one notices him puts on his grandma's glasses and his uncle's hat and coat and walks around the room saying "I am Mr. Davis."

F., 6. Did her hair in a psyche knot, put on one of her mother's old dresses, put different colored ribbons round her waist and went out into the street.

F., 6. Dressed up in her mother's clothes, dressed her doll and made believe she was going to call on one of her friends. Carried on both sides of the conversation.

F., 7. Dressed up in her aunt's clothes and tried to act like her.

F., 8. Strutted up and down the street to show her new dress. Then held it up, looked back and grinned.

F., 8. Dressed in a long dress and paraded up and down the walk. Would cough or make some gesture to attract attention.

F., 8. Buttoned a cloak round her waist so that it would drag on

the sidewalk. Would march up and down looking back at it. Sometimes took an umbrella on a fair day.

F., 8. Fond of dressing up in her mother's clothes and going out on the street.

M., 8. Dressed up in a ridiculous fashion. Was laughed at. Repeated the performance next day and went out in the street.

F., 8. Would dress up in her mother's old clothes and show off before company.

F., 8. Dressed up in an old poke bonnet and a long black gown and then walked down the street with a feeble tottering gait.

F., 8. Had short hair and wore a comb. She had a piece of braided rope attached to the comb and wore it to school several days.

F., 9. Used to put on a great many airs as she walked, and talk to her doll about the grand way in which they lived. Would get into an empty wagon and pretend to drive and would bow condescendingly to those whom she met.

F., 10. Put on a long cloak and walked up and down the room, saying she "was going in church" and that she was ——. She tossed her head and put on airs as she had seen the young lady do.

F., 14. Borrowed a pair of glasses and wore them to church though they hurt her eyes.

II.

In contrast to the various forms of showing off, which are rooted in the social instinct, are the phenomena of *bashfulness and shyness*. The extension of self and demand for sympathy which develops first towards the mother is soon extended to the family, but for some children, expansion beyond this limit is attended with more or less difficulty. In all new situations the element of strangeness inspires a certain fear, possibly a far off echo from the dim past when fear of the unknown was a safeguard in the struggle for existence. Curiosity and interest in what is new conflict in the child's mind with a dread of the unknown and preponderance of the latter element results in shyness and bashfulness, as does an excess of the former in boldness and self exaggeration. The "social me" becomes the all important thing, the affirmation of self assumes undue proportions and is expressed in the unpleasant forms of vanity, self-assertion, and boldness. On the other hand dread of the unknown and unexperienced may inhibit interest and curiosity to such an extent that a painful self-consciousness is developed, manifesting itself in bashfulness and timidity whose somatic effects vary from blushing and nervous movements to muscular inhibitions and mental confusion. The instinct of individual conservation, which in its defensive form is at the root of fear, develops at an early age. Preyer noted manifestations of fear in his son at 25 days. Perez observed them at two months, Darwin in the 4th month, Compayré cites a well marked instance at 5 months and Miss Shinn observed the first manifestation in the 5th week. In young children there is normally a shrinking from what is new and strange quite apart from any

fearful quality in the object itself, and though this is usually readily overcome by curiosity and interest which soon lead to familiarity and extension of the baby's world, it frequently persists in the form of timidity and shyness.

Among the earliest manifestation of shyness and bashfulness are crying, hiding and covering the face. These manifestations occur most frequently in children from one to five years old, though in delicate and nervous children crying at sight of a strange face occurs much earlier and is sometimes extended into later years. Cases of *crying* in connection with bashfulness, however, which occur later than the ages mentioned, are likely to be from more complex causes, the element of mortification at failure to accomplish something, as reciting, singing, etc., due to the inhibitions of shyness, becoming a factor in the total situation. Though the number of returns on these early phenomena of bashfulness is too small to justify general statements, the fact that twenty out of twenty-eight cases occurred in girls indicates the greater frequency of this manifestation among them.

F., 3. Hid her face and cried. M., 3. Ran into a corner and cried.

F., 4. Mother was forced to almost carry her into the house to see a visitor. She stood behind her mother's chair and when coaxed to come out began to cry.

F., 5. Almost cried while reciting and afterwards cried and cried.

F., 6. Was to sing in public. When her name was called, too bashful to go forward. When coaxed began to cry.

M. Recited at the church, Just as he said the last two or three words, his lip began to curl and by the time he got off the platform he was crying.

F., 7. When her name was called, went upon the stage but did not bow. Pulled up her dress, held her head down, stuck out her lips and at last put her hands to her face and cried. Then ran from the stage.

F., 7. Knew her piece perfectly but when she stood on the platform forgot it and began to cry.

F., 8. When her name was called, stayed in her seat and cried. But after most of the people had gone, was persuaded to recite.

F., 8. Forgot her piece—burst out crying.

F., 7. When she first went to school, cried every time the teacher spoke to her.

F., 8. Cried and cried. Recited after most of the people were gone.

F., 10. Tried to recite—broke down and cried.

M. Sang in public. Broke down in the first verse and cried but persevered through 4 or 5 long stanzas, a sob and then a word. Swayed from side to side, holding on to the side seams of his trousers all the time.

The sensation of *being looked at* is almost intolerable to some children, and many cover their faces, *hide* behind their mother's or any convenient article of furniture to escape the observation of strangers. Even the attention of friends seems to exercise an inhibiting effect upon such children and to produce a painful self-consciousness.

- F., 1½. Hid behind a chair, would roll her eyes strangely, drop her head.
- M., 2. Hid behind a door but got over it later.
- F., 3. Hid behind her mother.
- F., 3. Used to hide under the table when she saw a cousin with a loud coarse voice coming.
- F., 3. Hid behind her mother. Nothing would induce her to come out.
- F., 3. Hid in closets or anywhere.
- F., 5½. Clung to her mother and would n't play—got over it.
- F., 6. If she enters the room where strangers are will walk along the wall and out of sight as much as she can.
- M., 6. Hid under the sofa.
- F., 3. Too shy to hold out her hand. Turned her head away when looked.
- F., 3. Covered her face with her hands and turned away every time she was spoken to.
- F., 3. At the table hid her face in her hands till the meal was half over. Then if nobody looked would take her hands down.
- F., 3. When she first saw the visitor hid her face in the nurse's dress but soon got over it. Being coaxed to recite seemed unable to keep to one piece but wandered into another.
- F., 4. Turned her back when spoken to.
- M., 4½. When spoken to hid his face.
- F., 5½. When strangers came would hide face in her mother's dress.

The *running away* impulse to avoid meeting strangers develops somewhat later than the crying and hiding manifestations and is a frequent form of sex bashfulness at adolescence. One boy explained his action in this respect as due to a fear that the girls would make fun of him, another said he never knew what to say to girls, while a third explained that he did n't "like girls anyway;" they always made him feel as if his feet and hands were in the way. Certainly, fear of ridicule, a feeling of being at a disadvantage and a lack of common topics of interest are sufficiently potent factors to account for a pronounced avoidance of the circumstances likely to bring them about, and the greater the desire to appear to advantage in eyes of any particular person, the more pronounced is the effect. Girls rarely seem to be able to give any definite reason for their avoidance of the male sex though in the case of younger children it is probable that its source may lie in some forgotten infantile experience. A baby's first experience of the masculine sex outside the immediate family is usually with the physician and frequently under circumstances which leave an impression that such experiences are distinctly things to be avoided.

- M., 5. If you attempt to shake hands with him after not seeing him for a few days, he will run away.
- M., 5. Went in corner—said yes or no.
- F., 6. Always ran away when strangers came.
- F., 6. If a boy or man looks at her she will run and if they speak

to her she will cry. Never looks any one in the eye, is confused and troubled in talking with a lady, will play with her fingers and move her feet about.

- F., 8. Runs from a boy.
- F., 9. Would run from male visitors.
- M., 9. When girls came to the house, he would run away. If he could not get out of the house he would go up stairs.
- F., 10. Ran away—would not speak.
- F., 12. Reciting in public, ran out of the schoolhouse.
- M., 13. Ran out of the room to avoid meeting a girl.
- M., 14. Always got excused Friday afternoon or else played truant to avoid the speaking of pieces.
- F., 12. Will run if she sees any company and if she finds any one looking at her will not raise her eyes for a long time.

Nervous movements and awkwardness are characteristic signs of bashfulness familiar to all; clutching and pulling at the dress, movements of the hands and feet, putting a finger in the mouth and biting the nails are common manifestations of this uncomfortable consciousness of self. Some of these movements become automatic and require considerable effort to break off the habit. Some are so embarrassed at being observed or spoken to that they drop and spill things, become absurdly conscious of hands and feet, stumble against any objects which come in their way, say or do the wrong thing and, as a psychic accompaniment to their various blunders, imagine that every one is observing the whole train of unfortunate occurrences. Children who have any personal peculiarity or disfigurement are especially prone to this form of self-consciousness and to exaggerate their own defects until, in some cases, the situation becomes one of actual torture and a morbid condition may result unless avoided by special consideration in both home and school life. The majority of children simply outgrow the difficulty but its duration can frequently be shortened by careful study of the individual case. Nervous movements as a manifestation of shyness or embarrassments are frequent in young children, but all forms of awkwardness are greatly increased during the early years of adolescence, thirty-eight out of fifty cases being most marked at this period.

Nervous Movements Indicative of Bashfulness.

- F., 4. When reciting in public would clutch her dress and pull it up little by little till it was above her knees.
- F., 6. Reciting. Pulled up one side of her dress and then the other.
- M., 6. Offered a cake. Sidled up with his finger in his mouth.
- F., 8. Put her finger in her mouth and walked backwards.
- F., 9. Began to move her hands because a stranger looked at her.
- M., 12. Called upon to go before the class—moved his hands and feet constantly.
- F., 15. Fussed with her handkerchief.
- F., 16. A young man called. She stood up most of the time and bit her nails.
- M., 18. In the presence of ladies or in a public place, will spread

out his handkerchief to its utmost extent and wipe his face neck and hands.

Awkwardness.

- M., 8. If spoken to, tipped his plate over in his lap.
 M., 8. Anything that he carries is allowed to fall.
 F., 8. Was much troubled by her hands.
 F., 9. Had on a new pair of blue gloves. Did not know what to do with her hands.
 M., 10. Being watched, pounded his fingers.
 F., 10. Dropped a plate she had been asked to bring.
 F., 11, 13. Grew so fast that her legs always seemed too long.
 M., 14. Scrapes his feet on the floor and rubs his hands together.
 F., 14. Her feet were large and she did not seem to know how to manage them. Her hands did not trouble her so much.
 M., 14. Knowing that he is observed is likely to stumble.
 M., 15. Face gets red, hands are in the way, stumbles over things. If there are visitors at the table usually spills something.
 M., 15. Always falls over his feet if he comes in the parlor among strangers. He seems to forget how to talk and has often said "Good-night" when he meant "How do you do."
 M., 15. Sure to stub his toe on a stone, to tip over a waterpail, would stumble over a hard word. Dragged his feet when he walked, began to sit down before he got within six feet of his seat. Would make a dive for the seat with his hands and then drag his body the rest of the way.
 M., 16. Likely to stumble when entering a room. Would thrust his hands in his pockets, then pull them out and fold his arms. Washed his hands in awkward way.
 M., 16. Hands and feet seemed to be separate from his body.
 M., 17. Dropped books. Fell into any posts in the way.
 F., 18. Hands and feet—clumsy in all ways—hesitates in talking.
 F., 18. Servant. Company being present, let the pie slide off the plate on some one's dress.
 M., 19. Large and awkward. When he rose to recite would grasp one hand, cross his feet, lean against the desk, stand on one foot and change his position often. Made breaks, always stepping on toes, or bumping against people.
 F., 20. When a child always went out when a stranger came. Was very awkward in presence of strangers and often blundered.
 M. Banged his feet together when he walked down the aisle; when at the blackboard dropped chalk and eraser; when reading would blush and stammer. Poked his hands in his pockets and shuffled his feet.

Blushing.

Immediate somatic effects of bashfulness include blushing, chills, trembling, disturbances of circulation and respiration and inhibitions of speech, movement, appetite and memory. Very young children do not manifest shyness by blushing. The youngest case mentioned in the present returns was at three years. ¹Darwin mentions two cases of little girls blushing between the ages of two and three. He also quotes Dr. Burgess as authority, that infants do not blush and that it is

¹ Darwin: Expression of the Emotions in Man and Animals.

more common in women than in men. Mr. Partridge¹ in his collection of sixty cases had but two as young as six years. It is more common in the young than in the old but is dependent upon a certain amount of mental development, as it does not occur in infants and idiots rarely blush. Though blushing is indicative of modesty, embarrassment, shame, shyness, and false shame, self attention is, in all cases, the primary and essential element. This is probably first directed to personal appearance as existent in the minds of others and later, perhaps, to moral conduct; shyness depends upon sensitiveness to good or bad opinion of others, especially as regards personal appearance. Blame or ridicule, whether fancied or real, induce blushing more easily than praise. The feeling of being looked at seems of primary importance, and this perhaps is connected with the fact that women blush more easily than men since they are as a rule more sensitive to personal appearance. ²In this connection it is interesting to note that blind children, even those congenitally blind, blush as readily as other children and from the same causes and are, moreover, quite as sensitive as to personal appearance. This is due to the fact that special attention is given to training them in habits of personal care and neatness. Blushing is a distinctly disagreeable reflex and often accompanied by other reflexes of an unpleasant character, as muscular weakness, trembling, palpitation and indistinctness of vision, probably due to vaso-motor disturbance of the retina. Though the reddening of the skin is usually confined to the skin and upper part of the neck, the whole circulatory system is involved and sensations of heat are often felt over the whole surface of the body. Reactions from these somatic disturbances frequently occur in the form of headaches, sleeplessness, sleeplessness and nervous excitement. Public recitations, vocal or instrumental musical performances, are often a nervous strain upon children, the effect of which is greatly underestimated. Some of the present returns indicate this fact with great clearness.

Bashfulness as Manifested by Blushing and other Somatic Effects.

- F., 3. Very uneasy. If looked at would blush and drop her eyes.
 F., 4. Twisted her finger, turned her feet, blushed and looked down.
 F., 4. Blushed, cast down her eyes—twisted her curls.
 M., 4. Very shy for a year then got over it: blushed readily.
 F., 5. Very bashful before strangers and those of the opposite sex. Her face grows red and she says the opposite of what she means.
 M., 5. Twisted his neck to hide his face, blushing and choking for minutes before he could speak. Diffident with his mother.

¹G. E. Partridge: Blushing. *Ped. Sem.*, Vol. V, p. 387.

²We are indebted to Dr. Agnos, of the Perkins Institution for the Blind, for the above information.

- F., 6. Always looks at the floor, blushes at the slightest thing.
- M., 6. When spoken to, blushes up to his hair, looks at the ground while he is talking.
- F., 9. When a stranger speaks to her blushes; if she answers, hardly speaks above a whisper.
- M., 9. If a girl spoke to him would blush, stammer and drop his eyes.
- F., 10. Reciting. Blushed, half smiled, and put her finger in her mouth.
- F., 10. First public recitation. Knees shook, cold all over, something came up in her throat, thought she should forget.
- F., 12. Went on the platform to speak. Could not see distinctly, knees shook, trembled all over. After she finished and sat down heart beat so hard it almost took her breath.
- F., 12. When she had to speak before the school was so bashful and nervous that her knees would hardly hold her up.
- M., 14. Was much troubled with what he called the "swallowers" if he sat in a conspicuous place,
- F., 14. Tried very hard to be friendly. Her face flushed, her voice trembled, she hesitated and then expressed herself very bluntly.
- F., 17. In public performances her limbs would tremble.
- M., 16. Stayed in a corner and took no part in the conversation. Only ladies present were his sisters. One of the visitors by asking questions compelled him to talk. He flushed and became very nervous and later had a nervous headache.
- F., 16. Face would flush and heart palpitate when spoken to by a stranger.
- M., 17. Quite a fine speaker for his age. Says he feels faint and sick when he faces an audience. Blushes painfully and every nerve seems to twitch.
- F., adult. A teacher would blush painfully if even a very young pupil from another class entered the room.
- F., adult. Often addresses meetings and presides with great dignity. Says it is a great trial. When she stands before her Bible class she is in a dripping perspiration and is not sure of what she says.
- M., adult. Witty, graceful and hard to embarrass in the legislature, when asked to make a presentation at a golden wedding in the family, lost his cue, trembled and turned red and pale; finished lamely.

Somatic effects other than blushing closely parallel those observed in fear, trembling, disturbance of circulation and respiration, chills, cold perspiration, dimness of vision, contraction of throat muscles, faintness and nausea all being reported as occurring in greater or less degree. While of more frequent occurrence among children and during adolescence, numerous instances are reported among adults. Cases of stage fright occurring at all ages. Children often suffer from shyness more than is realized and the first day at school is often a trial which tests the child's courage to the utmost. The shy child who takes refuge in silence and inactivity suffers, but the timid child, who with fluttering heart and trembling knees, with tears just ready to burst forth, nevertheless forces himself to attempt what is asked of him, deserves both sympathy and admiration for genuine courage.

Giggling.

This is one of the common forms in which self-consciousness displays itself. It is apparently more frequent in girls than in boys and appears as the reflex of a number of different mental states. Embarrassment, shame, mental bewilderment and nervous excitement, whether painful or pleasurable, find their path of motor discharge in the giggle. Its psychic accompaniments are entirely different from those of hearty laughter, being most frequently of an unpleasant nature and aroused by entirely different antecedents. It is common as an expression of sex bashfulness, arising in this connection from a not wholly unpleasurable embarrassment but generally associated with a vacuity of ideas. In some cases it seems to serve the purpose of filling in the lapses of conversation. With very young children it appears to be merely a nervous reflex of excitement.

M., F., 3-5. Giggled whenever well-dressed visitors came to the kindergarten.

F., 10. Lack of speech, drops her eyelids, nervous laugh.

F. When she feels bashful she laughs. Says the girls in her school all laugh when they are ashamed.

M., 11. When introduced his arm and hand would seem to become nerveless, and he would sidle up to strangers grinning foolishly.

M., 12. Sort of silly smile.

F. Girls at North End, Boston. An elocutionist read the death of Steerforth from David Copperfield. Two-thirds of the girls giggled from beginning to end. They did not understand it and did not know what to do.

Inhibitions of Speech.

These, as an expression of bashfulness, are of frequent occurrence and include inhibitions of both voluntary and involuntary muscles, speech, memory and appetite. Some children speak in very low tones, some only in a whisper, others stammer, develop temporary aphasia, feel the throat constricted, manage to articulate only after repeated effort, and in delicate children this sometimes becomes a neurosis. One girl of fifteen, at sight of a stranger, could neither move nor speak and though the inhibition could be overcome by a strong effort of will, the nervous reaction was so great as to cause headache and sleeplessness. This pathological condition continued for a year.

Cases of *stammering* are rendered much worse by the consciousness of attracting attention from strangers. A bright boy of sixteen was quite unable to prepare for college in the public schools owing to this difficulty, which was so much lessened under private instruction that it became only a slight hindrance and entirely disappeared whenever the boy became absorbed in his work. A temporary development of this species of inhibition often occurs in adolescent boys when in the presence of the opposite sex. Numerous cases are reported of

children whose first day at school was passed in absolute silence or whose vocal efforts were confined to timid and almost inaudible answers to the teachers' questions. An interesting case of speech inhibition occurred in the case of the man who went through with a carefully rehearsed after-dinner speech with all the appropriate gestures without making a sound, his friends uniting in keeping up the illusion. Temporary aphasic conditions, varying from a mere tendency to displace words in a sentence to a complete confusion of words and ideas, are frequent phenomena, though but few cases occur before the beginning of adolescence. Of the three hundred and fourteen cases of bashfulness reported, one hundred and seven involved some form of inhibition of which over fifty were connected with speech.

F., 2½. Threw her arms around her mother's neck and recited in a whisper.

F., 3. Very quiet, would not always answer questions.

M., 3½. When he first saw his aunt would not talk to her.

F., 4. Talked freely till a stranger came in and then was silent.

M., 5. Would not speak, ran to his mother.

F., 5. Would not speak a word to a stranger. Would cry if you even attempted to take her from her grandmother.

M., 6. When he saw so many people refused to speak, but was willing to speak after some of the people had gone.

F., 7. Casts down her eyes, colors violently, fingers her dress, trembles puts her head way over and does not answer at all or in a whisper.

F., 9. Went into a room intending to speak to two boys with whom she used to play. Did not dare speak and went out of the room feeling much ashamed.

F., 10. When she spoke, could be heard with difficulty.

M., 12. Asked to recite. Held his head down, turned red and stammered the answer.

F., 13. Is bashful among strangers. If asked a question will clasp her hands, stretch her arms full length on her lap, put her head on one side, half smile and then feebly answer.

M., 16. Has an impediment in his speech which is made worse by his bashfulness. When walking holds one shoulder up and turns his head to one side.

M., 16. Found it impossible to recite on the stage.

F., 16-30. If spoken to in company could not command voice to reply. Sitting at table was apt to overturn some dish if taken unawares. Did the most absurd things in company.

F., 16. Had to declaim and make some gestures. Thought the class was laughing at her. Her voice trembled and she was unable to finish.

F., 18. Tongue cleaves to the roof of her mouth, makes crooked speeches.

M., 19. When talking to a young lady, turns bright red, stammers, smiles, does n't say much, finally bolts.

Public functions furnish numerous instances of inhibitions of both speech and memory which seem frequently to be connected with the inability to meet the gaze of a number of people. If the eyes are closed or fixed on the floor the inhibition can be over-

come even when this is quite impossible without such relief. An interesting case occurred in a child not three years old, who being embarrassed by the presence of visitors in the kindergarten went through all the various exercises of marching and singing with her eyes tightly closed. This child was under ordinary conditions a very social little being and remarkably spontaneous in all her activities. A boy of two and a half who is very talkative with his friends finds it so difficult to speak to a stranger that when told to say "how do you do," after repeated attempts, succeeds in producing only an almost inaudible whisper but is able to speak quite naturally if he can retire behind his mother or a convenient chair. The child's mental condition in cases of this kind seem analogous to that with which any one who has ever worn a mask is familiar, the sense of being apart from observation as far as one's own personality is concerned giving a quite unaccustomed freedom of speech. Hawthorne makes a dramatic use of this in the carnival scene in the Marble Faun. It is of this peculiar psychological reaction of which the Roman Catholic confessional makes use, the screen interposed between the priest and the penitent rendering confession far easier than would be possible under other circumstances. This same effect is noticeable also in twilight confidences.

So important a part does the *sense of sight* play in self-consciousness there is probably no normal individual who does not experience a sense of discomfort in being *stared at*, and the most fluent public speaker finds his flow of thought and words restricted by the consciousness of an unsympathetic attitude on the part of his audience, even though he may not, like the child, actually "forget his piece."

F., 5. Forgot her piece, hung her head and had to be carried from the platform.

F., 5. Forgot her piece when the people looked at her.

F.; 6. Went up on the platform to sing. Made her bow and opened her mouth. When she saw all the people, stopped and dropped her head.

F., 8. Forgot her piece, trembled, turned white, and cried.

F., 8. Forgot her piece. Trembled but did not cry.

F., 8. Knew her piece until she was called on.

F., 10. Became confused.

F., 9-12. Could recite at home but as soon as she saw the people from the platform would forget. After many trials was able to recite well.

F., 11. Had to be prompted when reciting in public.

M., 12. Gets his words mixed up.

F., 19. When asked to recite became confused.

Effects in Eating.

Inhibitions of appetite due to embarrassment in the presence of strangers, while not so common as some of the inhibitory ex-

pressions of bashfulness already mentioned, are yet of comparatively frequent occurrence. Children and adolescents and, in some cases adults, develop a difficulty in swallowing, stop eating and, even though hungry, become so uncomfortable as to refuse food. Children refuse to accept candy from a stranger because unable to overcome shyness sufficiently to approach. Those conscious of a lack of social training become embarrassed and unable to eat in the presence of those whom they feel to have had superior advantages in this respect—unfamiliarity of table appurtenances and unaccustomed formalities of serving exercising an inhibitory effect that quite neutralizes any possible gustatory pleasures under such conditions. A pathological manifestation of this condition occurs in those cases of mental alienation where the subject refuses to eat in the presence of any one.

M., 5. He would not eat before people. Now will not eat if any one looks at him. Will not talk with any one until he has seen them a number of times.

F., 5. Hung her head and clung to a dress. Would not eat.

F., 7. Could not answer easy questions—stopped eating.

F., 8. Very hungry, but would refuse food when offered.

M. Too bashful to take candy offered by a stranger.

M., 17. Ate very little.

F., 18. Refused to go to the table and eat with strangers.

Psycho-physical Inaccuracy.

In addition to the inhibitions already mentioned there are a large number which are partly of the muscular and partly of the mental type. Both children and adults lose precision of movement when closely watched. The accessory muscles lose the effect of training and act irregularly. It not infrequently happens that a musician whose talents are of a high order fails as a public performer because unable to accomplish before an audience what is easily attained in private. Some engravers cannot work well when watched, and children whose gymnastic movements are accurate and rhythmic while in line cannot lead because the consciousness of being watched destroys their rhythm and accuracy of movement. Others become inaccurate in blackboard exercises when a stranger is present although able to do their work quickly and accurately when not observed.

F., 7. Plays well, but when asked to play for company was unable to do so.

F., 8. Could not sew when watched.

F., 12. Did not dare ask to have her seat changed although an open fire caused her to really suffer.

F. Could not lead the line in the gymnasium.

F. Very quiet when boys were present.

M., 16. Will hardly recognize a young lady on the street. Never lifts his hat for fear he will be laughed at.

F. College teacher does not know if her words are spelled correctly when she writes on the blackboard before a class.

F. When asked for coffee poured ice-water, asked for water passed the vinegar. Put salt in the sugar bowl.

Abnormal Boldness.

As the opposite extreme of that development of self-consciousness which is manifested in bashfulness we find impudence. Though in some of its manifestations boldness is undoubtedly a form of showing off and in part developed from the social instinct, it also involves an element of antagonism which in its origin is akin to both fear and anger. This antagonism finds expression in both speech and action and the street gamin furnishes the most complete example of its development. Unfortunately, it is by no means confined to those in whom it has been directly and almost inevitably developed by the struggle for existence. Children in whom the element of self-assertiveness is naturally strong and in whom it has been increased by unwise encouragement of its early manifestations which are perhaps, regarded as "cute," and those who come into frequent conflict with authority to which the child feels itself superior because it has learned that it can be set aside, furnish painful examples of this form of aggressive self-assertion. In some cases it seems to be a result of imitation. Rooted in the social instinct it appears in connection with a feeling of social inferiority to manifest itself in a rude aggressiveness and under opposite conditions in an exaggerated self importance and demand for attention. Manifestations of boldness which develop at adolescence are usually a temporary phenomena and are frequently associated with bashfulness either as alternating with it or an attempt to conceal it.

Examples of Boldness: Speech.

F., 4. Hello — — till she was spoken to.

F., 5. To a stranger. "I never saw you before. What is your name? Do you live here? Oh my! I do not like that part of the city? Nobody but poor people live there."

F., 7. "I am Miss Marjorie Montgomery Hough. My father is the Hon. G. Hough of Ewing," or "If you have a little girl you probably have some candy in your pocket, would you mind giving me some?"

F., 10. Had once or twice been given grapes. "I want some grapes to take for my dinner. I want this three quart kettle full."

F., 10. Went into a neighbor's yard and picked flowers having previously gone to the porch and peeped through the glass in the door. Being observed put the flowers behind her and walked into the house. Made a number of bold remarks and told the lady she'd *have* to give something to an organ grinder.

M., 10. To a man of 70. "Good-morning, Mr. Mugwumps Mayor."

M., 11. When a lady said how do you do to him told her to shut up her mouth. A prayer meeting was held at the house and he asked one of the ladies "Why don't you have a prayer meeting at your

house so folks can look at your things?" The other children in the family were well-behaved.

M., 12. "Look out or it will bite you." One of the mink's head boas.

F., 12. Was large of her age. When it was remarked upon said, "I find it very advantageous to be large."

M., 11. When compelled to meet strangers talks in a loud voice, uses slang, throws himself around, escapes as soon as he can.

Action.

M., 3. Would go up to a stranger, make out fight with him. Run up to any dog, pick up a whip and hit him, etc.

M., 5. Goes to the P. O., with his father. Puts his hands in people's pockets.

M. Made faces.

F., 10. At a party, took a chair and seated herself in the middle of the floor. Pretty soon wheeled the chair round and whispered something to each person. Later seated herself in the lap of a young man and attempted to kiss him.

F., 10. Would shout and climb into strangers' laps.

F., 11. Went into a house where she was almost a stranger and without being asked to sit down threw herself into the most comfortable chair in the room. At another time, going out into the yard, she began to pick up fruit, without saying a word to the hostess who stood near.

M., 12. Stares at a person and takes things from her desk.

F., 14. Frequents the streets, stares at people.

F., 14. Was skating on roller skates and a front door being open, she walked into the parlor with her skates on, to the great amazement of the lady. She was a stranger to the lady and told her she thought she would run in see her a while.

F., adult. Many years in society, laughs loudly, talks in a high key, crosses her feet, taps her heels, etc., in presence of strangers, especially, gentlemen. Charming manners when with intimate friends.

In summarizing the results of the present study it appears that the origin of the various phases of showing off may all be traced to the primitive social instinct, the claim for sympathy and recognition, which is innate and underlies all social development, while the various forms of bashfulness are rooted in the conservative instinct, that primitive fear which is one of the earliest developments of the individual and the race. Unsymmetrical development in either direction gives rise to exaggerations and perversions, often directly traceable to immediate environment, while a balance of the two tendencies is required for a normal, healthful development of a character both self-respecting and respecting the claims of others, free from an excess of self-assertion on the one hand and self-depreciation on the other. Both tendencies are useful and necessary and this must be recognizing, even in their most disagreeable and unfortunate manifestations. Bragging is certainly a fault to be guarded against, but the very essence of self-respect lies in the ability to *do* things with an implied reference to other

selves, and position and wealth have their chief value because their lack involves a limitation of the sphere of action and power to execute. Of these values there is a recognition in all bragging—though it may be but dimly felt, rather than a matter of intellectual perception.

Differences of sex, so far as they appear, seem to lie in (1) the superior motor activities of boys, though how far this is due to an inherent sex difference to cumulative effects of environment is uncertain. Boys show off chiefly by exhibitions of muscular activity; girls by dress and accomplishments; boys brag of what they can do, girls of their possessions.

(2) According to the present data, girls are more bashful than boys except toward adolescence, when the reverse seems to be the case.

(3) Blushing is more frequent in girls and awkwardness and aphasic manifestations in boys, and both showing off and bashfulness increase towards adolescence.

(4) Health has a marked influence, the tendency to show off being most marked in strong vigorous children and timidity and bashfulness in those of nervous temperament and weak muscular development.

I. Genetically, the ostensive consciousness of the gifts of nature and heredity seems to come early. Of most of these, girls are more conscious. They discuss with others and with themselves and display to best effect their eyes in color, size, expression, movement; their hair, its abundance, its color, etc.; their complexion, teeth, form, dimples, and study to show or conceal in most effective ways the forms of this most ancient wealth and worth which comes of breeding, blood and family. They earliest in life and most are conscious of their ancestors, parents, relatives, etc., and this normally, because their bodies and souls are better organs of heredity than man's.

II. Perhaps next, genetically, belong feats and stunts, especially the cruder ones of strength and fleetness. Here boys lead and are most persistent in seeking recognition. Their biceps, their athletic record, and especially their bodily achievements become objects of intense self-consciousness, so that they are more liable to be injured by too great attention from others. True to man's pedigree, because in primitive society the strongest was chief, they seek not only leadership but distinction and victory. How easily the intense blaze of public attention focused upon the products of this instinct becomes injurious, is now abundantly seen.

III. Daring, although a topic by itself, perhaps best belongs here. Aristotle long ago pointed out that true courage was the mean between foolhardiness and cowardice. If the former could be made as much a matter of reproach as the latter, it would be

well. The instinct of courage wrongly directed, impulsive suddenly appealed to by suggestion, and the list of risks and calamities in boy life due to crude and ignorant challenges of courage, show that foolhardiness is often an insanity or form of mental arrest and defect which is, however, susceptible of easy and early remedy, caution being the normal form of maturity. Probably the best practical pedagogic method of dealing with this disease would be a larger collection of cases, like ours, with appropriate comments to all classes of boys.

IV. Dress, which some anthropologists tell us began with tattooing as clothes etched on, has a rich psychology all its own. Its ornamental, decorative function, however, chiefly concerns us here. Very challenging is the homology between the dress, which nature provides for animals by an organic function, and that which man by the psychic function which Schleiermacher was so fond of paralleling with the original, provides for himself. Here we see in childhood, as in all other respects, human nature with the lid off, and realize what a long travail of soul is necessary for the development of good and correct taste, between loudness and dandyism on the one hand and excessive plainness and meanness on the other, suitably adjusted to station and wealth. The profound influence of dress on behavior is now giving it a place in our systematic treatises on ethics, with suggestions that the world needs at least two grades, one for common and the other for uncommon occasions, sufficiently diverse that the difference be fully felt. That not merely the quality of goods and cut but that their rigidity or softness has much influence upon conduct, upon spirits, and even circulation, respiration and digestion, is plain, and the maxim often advocated of so dressing wherever one is as to be utterly unconscious of dress is probably an unpedagogical even more than it is an impossible situation.

V. The products of training on the finer accessory muscles and movements are almost a class by themselves for our purpose. Imitations on the part of children and the young are often a form of flattery that is abject and gross. Here girls are more plastic than boys, more apt in putting on and off vivacity, languishing moods, drawling speech, fine ladyism, superior ways, accents and airs of many kinds; their penmanship, pronunciation, choice of words and style are all subject to affectation; they are prim, precise, easy, indolent, mincing, boisterous, and readily fall into acting roles. Manners are, of course, minor morals and should be from within outward and not products of external environment. They belong intrinsically to character and are normally the physiological economies of expressing the higher and better sentiments.

Here, too, great attention is needed, especially at the age when various styles are successively borrowed and put on and off until one is found that fits with sufficient adjustment.

VI. To still another category belong skills, accomplishments, special attainments in the arts or in knowledge. Fake achievements here are so easily recognized that, although there have been great historic impostors since Anoteichus, detection is easy and sure. Experience of travel and seeing men, women and the world, is still harder to counterfeit.

VII. The bragging, boastful lie is a psychosis by itself which has of late been somewhat treated in the literature of abnormal and border land psychology. Here the truth is left behind and the mind Munchausenizes in the field of romance, heroics and the imagination. Ruse and deception are only the foreschool to this form of self inflation. One of the most interesting groups of slang words has for its function the puncturing of these bubbles, which childhood and youth have a keen sense for and subject to summary treatment in often vulgar terms. The evil of this habit is that it destroys just and true self knowledge. That it is very directly connected with impudence in conduct seems unlikely. The latter is aggressive, defiant, and not necessarily pretentious, and is motivated sometimes by a stinging sense of inferiority or by malevolence.

Some of our data suggest that inferiority and bashfulness in some cases may go with ostentatious conduct in directions of excess. This, however, seems to be exceptional and confined to abnormal natures. The philosophic and the scientific man has a deep and basal desire to bring seeming and being into complete coincidence, at least in most of the realms of life. He would scorn to be admired for excellencies which he did not possess, but demands recognition for real virtues. Perhaps, as a recent writer concludes,¹ falsehood tends to develop in proportion as society becomes complex and its evil is that it dwarfs the generous æsthetic and social sentiments, and leads to profound dissociation. Youth certainly needs some oscillation between the extremes of repression, which prompts to retirement, and encouragement, which brings praise. The ideal of a development made normal chiefly by inattention and studied neglect in order to avoid self-consciousness is certainly mistaken, but as in every other problem involving the education of our deeper moral nature, treatment here must be individual and based upon careful individual study. Here children cannot be educated uniformly or in masses. The profound importance of attention to this aspect of training would seem to admit of no question.

¹ *Le Mensonge*: G. L. Duprat, Paris, 1903. p. 183.

The chief danger of both the instinct to show off and of bashfulness is that it inclines the child to abdication of its own true nature and leads to that kind of self-consciousness which is really better termed consciousness of others. The tendency of both, especially of the former, is toward a type recognized by recent writers in characterology from Metrile to Ribèry¹ as amorphous and unstable. To live in another's eye which is the best index of attention, to be noticed, watched, judged and interpreted, especially by adults, tends to cause two results. First, previous activities are checked, and secondly, new ones of a different kind or intensity are incited. The retiring child, who is often sickly, a little undervitalized, or else without social experience, more often from the country, sometimes loses control over its muscles. Respiration, circulation, eating and swallowing, speech, common industries like sewing, ciphering, etc., lose precision and are perhaps more or less inhibited. Bashfulness is a form of fear, and the tendency is towards cataplexy. Along with arrest of the movements intended, automatisms like giggling, chewing the nails, twisting the hair or clothes, writhing, trembling, and awkwardness in its many forms, where the fundamental movements are exaggerated as the accessory are reduced, appear. The sense of being observed more closely than usual or by strangers or numbers of people, is paralyzing to the higher and may bring out primordial activities like crying, hiding, etc. All these effects are greatly heightened not only if the child has been unusually alone or neglected, but if observation of its acts has generally been associated with disapproval, failure, defect, or has led to ridicule.

On the other hand, if the endeavors to attract the regard of others have been successful and their judgment has been favorable, a passion may be developed for artificial conduct and affected ways. Ostentatious and inopportune demands are made upon adult attention, or the parent's interest in the child lapses perhaps to *Affenliebe*. The child is flattered, smiled at approvingly; its performances are thought cute, cunning, or smart; it become a toy, doll, puppet, or manikin for the amusement of adults. Its conduct is for their delectation, and thus the child's life is more or less edited from a maturer standpoint and it becomes a poser and attitudinizer, and its individuality remains undeveloped. Character lacks heart and soul and becomes hollow, pretentious and dramatic. Of the two extremes, the latter is more dangerous. Socrates praised modesty as not only one of the chief adornments, but also as one of the best signs of normality and of later develop-

¹Essai de Classification Naturelle des Caractères. Paris, 1902. p. 156.

ment in youth, because it involved at least a realization of something yet above and beyond to be attained. Only children and those reared in the city are more prone to the worst extreme. Of course the chief desideratum is that children should essentially live out their own lives and develop a normal personality independently of adults and others sufficient to realize the stages of growth and not sacrifice any stage of life to a later, or model it too much on alien or mature patterns. Only thus can they remain unspoiled, and only thus will they develop a personality of their own which is substantial and which will be the basis of just confidence and due self assertion.

The differences between girls and boys, suggested in this study, present interesting problems. Why is it that, while boys in general are more prone to the overt forms of showing off, they incline in early adolescence a little toward modesty, and girls, usually a little more retiring at this period, now become less so? This, we believe, connected with the larger problem why the human female, if not indeed as many claim intrinsically more beautiful than the male, certainly makes herself more attractive and takes far more pains to please than he, while in most forms of animal life the female is duller in hue, less ornamented by secondary sexual qualities, and more retiring? To answer that this is due to the fact that in the human world man makes the advances and all women wish to attract proposals is superficial. It may be in part due to difference of social environment. But the reason we suggest lies deeper. If we assume that the family once consisted of the mother and children and that the domestication of feral man and his reclamation from roving loves is one of the great achievements of woman, this apparent reversal in the human world of the law that exists among animals admits of ready explanation. Maternity costs more as we ascend the scale as human infancy is prolonged, so that there was a great and growing need of the development of man into true fatherhood for defence and support. Woman, therefore, must have had courtship proclivities for a prolonged period after as well as before motherhood. Her endeavor was to hold men by her own attractions to their duties and responsibilities in the long ages that preceded marriage which clenched these obligations. Thus the effects of the females protracted ancestral endeavors to be attractive and to bring the male into the family circle to which instinct the home owes its origin, have magnified this function. The effects of a primeval desire of the mother to hold are now added perhaps by tachygenesis to the maiden's desire to win him. If this be correct, modern woman's wish to please is the survival of a not yet spent momentum of her culminating achievement

in the great work of domestication in the past. Of course, in general, her results are achieved in the somewhat more indirect field of attention than those of men. Her circle is smaller, and her methods are often to accomplish results by using men as instruments.

In general, self exhibition is one form of the expansion of the ego due to the momentum of growth, which in the psychic field impels every youth, more or less, to attempt all that is possible for man and to exploit the will to live to the uttermost. Our data on these instincts at adolescence suggest that both are intensified then. This we should expect from the well-known fact that in both bodily and mental development, individual differences are suddenly and very greatly accentuated. The interval between the strong and weak, the dull and bright, suddenly becomes far greater than it was before. This of itself impresses upon each individual that he has some rank in a scale, generally with some above and others below, and he is eager to know his place here. There is a new sense of passing some kind of unwritten examination in nature's school and a new rivalry to stand high and not low upon some of these multiplying and lengthening scales. The chief changes here at this age, however, are that these propensities to excel have a new polarization in sex. Each sex feels itself being rated by the other, and the stimulus is different and in many respects, and probably on the whole in all, stronger at least for a number of years than the stimulus which comes from the judgments of others of the same sex. This is a very primordial quality and is far too large a chapter in the psychology of not only courting but fighting to be more than alluded to here.

Insects and still more birds compete; are dressed by nature in more brilliant hues, and take a new interest in displaying charm of color or form. Male wasps, butterflies, moths, fishes, frogs, and snakes abundantly illustrate all this. Birds acquire and inflate their wattles, sing, tumble, strut, balz, rattle, slur and pout at the beginning of the breeding season. Primitive man is tattooed, removes hair or teeth, undergoes mutilations, wears ornaments, etc., with the same instinct.¹

This instinct in man has played in the past and still plays an enormous and probably not adequately recognized role. There are men and women whose manner, bearing, voice and whole nature undergo immediate and sudden transformation in the presence of the other sex. Each should thus be inspired both to be, do, think and feel their best. But just as with the relation of children to adults, the chief virtue of these influences is to be found midway between extremes. Naturally,

¹ See Scott: Sex and Art. *Am. Jour. of Psy.*, Vol. VII.

each supplements and complements the nature of the other. Each is constantly passing the other's examination or preparing to do so. Each has in a very large measure indeed made the other. But the fuller treatment of this topic belongs elsewhere.

Finally, in this and in every other genetic study involving feeling, emotion, or sentiment, published or under way here, we are impressed by the paucity or aridity of the literature. We have found some specific aid in Darwin, a little in Ribot, Stout, Wundt, and a few others, but copious as has been the psychological and æsthetic writing on these subjects it is mostly too abstract to be of scientific value or interest for our purposes. There are abundant discussions of whether pain is a sensation itself or a quality of sensation, whether all forms of pain are identical or whether there are many pains, whether there is a neutral state between, toned by neither, whether there are pure states of feeling devoid of intellectual elements, which are the primordial feelings and which are secondary or derived, whether the Lange-James theory is true or false, etc. There is no apparent probability that if one could command all the data in the world and work a lifetime in the laboratory or clinic under the most favorable conditions, one of any of the ancient scholastic logomachies, of which the above are random samples, could be solved, nor is it probable that any one can even prepare a crucial experiment. Most of them are surds that charm only disputative, literary or speculative minds and repel the real investigator, who is chiefly attracted by problems that in the present state of human knowledge admit of solution rather than in those that preclude it.

Thus, meager as our data for this study are and readily capable of great enlargement and enrichment, we find more of value in them as they stand than in all the books. The easy chair psychologist condemns all such matter as ours as merely descriptive. Such indeed it is if this term include observation and fresh first hand data as it exists in the richest of all quarries for such psychic facts. They jostle the systems and definitions, show spacious voids. But now in this field the only hope of progress is to turn again to nature and life and gather abundant material and make confession, harder than passing the needle's eye to those already committed to printed solutions, that, many of the questions we have striven to answer are artifacts; that even the problems must be restated, that in reality we are at the beginning, not at the end, of the matter; that the best work here is yet all to be done, and that we are only now just discovering and mapping the field as it really lies and have hardly begun to sink our first shafts, and to make trialette, rough drafts of it fit and adequate to yield best results

at some unknown period in the future. Moral education and all best and most economic training of the heart and to some extent of the will must wait till we know each sentiment broadly, deeply and in detail, for then only can we teach how to fear, pity, be angry, love, etc., aright, for in this all such discipline, whether of individuals, classes, races, essentially consists. What has the psychology of the present taught us of all this?

The causes of these defects and errors are not hard to see. First, in our day and civilization the hot life of feeling is remote and decadent. Culture represses, and intellect saps its root. The very word passion is becoming obsolete in psychological literature, which in this field elementarizes, repeats, is pedantic, or affectedly didactic. The life of feeling has its prime in youth and we are prematurely old and too often senile in heart. What does the psychologist of the study know of hate that makes men mad or bestial, of love that is not only uncalculating but is stronger than life, of fear that shakes the pulses, and courage that faces death in its cruelest forms unflinchingly, of the wager of battle where men fight beasts or each other with teeth and knives and spitting revolvers, of torture, of joy that threatens sanity? Our sensibilities are refined, our experiences serene and regular, we are salaried, protected, our very philosophy as well as our religion suppresses and looks with Platonic contempt, even upon enthusiasm, even in matters of the cold reason. We have experienced no soul-quaking reconstruction of our inner nature like Paul, Augustine, Luther, and we are anemic and more prone to deny than to believe, to speculate than to do, turn to novels and the theater, for catharses of our emotions. Our sentiments are over subtilized, sophisticated, and reduced to puny reactions to music and art that are nine parts criticism and one part sympathetic appreciation. What we have felt is second hand, bookish, shopworn, and the heart is parched and bankrupt. We can hardly keep alive even the hearty and frank jealousies, aversions and sympathies which our own divergent theories, ought to cause, as if our deeper soul felt their inanity, and so the stagnation that healthful controversies and polemics prevent slowly supervenes. In fact mind and life are one and inseparable, and we lack fullness of soul because we are undervalized.

Happily, for our craft, the child appears at the truly psychological moment, freighted as it is, body and soul, with reminiscences of what we were so fast losing. It is abandoned to joy, grief, passion, fear and rage. It is bashful, shows off, weeps, laughs,, desires, is curious, eager, regrets, and swells with passion, not knowing that these last two are especially

outlawed by our guild. There is color in its soul, brilliant, livid, loud. Its heart is yet young, fresh, fiery and in its golden age. Despite our lessening fecundity, our over-schooling, city-fication and spoiling, the affectations we instill and the repressions we practice, they are still the light and hope of the world and especially to us, who would know more of the soul of man and would penetrate to its deeper strata and study its origins. Yet back of them, too, lies the great animal world, where often each species seems essentially but a simple feeling-instinct embodied. Soul is homogeneous through all the souls of animal life, differing chiefly in degree and proportion. We can know the body only by way of the soul, and the soul only through the body. There are just as many types of vitality as of mind and *vice versa*. *Nemo psychologus nisi biologus*. The carnivora's cruelty, the rabbit's timidity, the peacock's ostentation, and a true science of character that goes beyond eye, ear and motor-mindedness, or activity and passivity, cannot dispense with the deeper, older and more fixed thumic elements or binary or at most ternary compounds that were matured and compacted before man arose. But our work here is yet to be done.

BIBLIOGRAPHY.

- BAIN. Emotions and Will. Chapters VIII to XII. London, 1899. (Fear, Anger, Power and Self Feelings.)
- BALDWIN. Mental Development in the Child and Race. Chapters VI, IX to XII. New York, 1895.
- BOHANNON. Peculiar and Exceptional Children. *Ped. Sem.*, Vol. IV, p. 3.
- COMPAYRÉ. L' Evolution intellectuelle et morale de l'enfant. Chapters V, IX, XVI. Paris, 1893. (Egoistic Feelings.)
- DARWIN. Expression of the Emotions in Man and Animals. Chapters XII, XIII. New York, 1873. (Fear, Anger, Blushing.)
- HÖFFDING. Outlines of Psychology. Chapter VI, C. New York, 1891. (Egoistic Feelings.)
- IRELAND. Blot on the Brain. Chapter IV. Edinburgh, 1885. (Insanity of Power.)
- JAMES. Principles of Psychology. Vol. I, Chapter X. New York, 1890. (Fear, Anger.)
- LANGE. Les Emotions. Chapters III, IV. Part II, Chapter I. Paris, 1895. (Fear, Anger, etc.)
- LINDLEY. Mental Automatism. *Ped. Sem.*, Vol. V, p. 41.
- LOTZE. Microcosmus. Vol. I, p. 590. New York, 1885. (Psychology of Dress.)
- MOSSO. Fear. London, 1896.
- OPENHEIM. The Development of the Child. Chapter VII, p. 148. New York, 1898. (Lying.)
- PARTRIDGE. Blushing. *Ped. Sem.*, Vol. V, p. 387.
- PEREZ. First Three Years of Childhood. Chapter XII, p. 278. Paris, 1888. (Dramatic Instinct.)
- PREYER. Senses and Will. Chapter VI. Part II, Chapters XII, XIII. New York, 1888. (Early Emotional Manifestations, Imitation, Crying, etc.)

- ROYCE. Some Observations on Anomalies of Self Consciousness. *Psy.*
Rev. Vol. II, p. 433.
- RIBOT. *La Psychologie des Sentiments*. Part II, Chapters I, II, III,
V and VIII. Paris, 1896.
- SCOTT. Sex and Art. *Am. Jour. Psychol.*, Vol. VII.
- SHINN. Biography of a Baby. Boston, 1900. (Early Emotional
Manifestations.)
- SPENCER. Principles of Psychology. Vol. II, Part IX, Chapters
IV to VII. New York, 1883. (Egoistic and Social Emotions.)
- STANLEY. Evolutionary, Psychology of Feeling. VII, VIII and XV.
New York, 1895. (Fear, Anger, Self-Feeling.)
- STOUT. Genetic, Psychology. Chapter VII. New York, 1899.
(Social Factor in Development of Self Consciousness.)
- SULLY. Studies of Childhood. Chapter VI. New York, 1896. (Fear.)
- SUTHERLAND. The Origin and Growth of Moral Instinct. Vol. I,
Chapters XI, XII and XIII; Vol. II, Chapters XIV, XV. London
and New York, 1898. (Social Sympathy, Self Respect, etc.)

A STUDY OF THE FAULTS OF CHILDREN.

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The problem which pedagogical pathology presents of tracing the faults of children to their source and showing their psychological causes has only lately been attacked. The subject of human faults, however, has always been a theme for prolific discussion on the part of theologians and of philosophical and pedagogical writers. The prevailing view in times past being that faults were the evidence of original sin, this thought found expression in religious creeds, and traces of it are still in evidence as distinct survivals in the popular attitude towards these various phenomena of childhood. Furthermore this view has been especially fruitful in giving teachers a faulty apperception of children.

No attempt at a systematic treatment of faults was made until recent times. The publication in 1890 of Prof. Ludwig Struempell's "Die Paedagogische Pathologie"¹ was the first extensive treatment of the subject and it has inspired a copious literature by his disciples. This work merits attention chiefly for its historic interest, and because it first made prominent an important field of work in which many German scientists are now engaged. Struempell was a follower of Herbart. He accepted in its essentials his system of philosophy and psychology and based his work on its principles. The pedagogy of Herbart possesses much of value, but his psychology is obsolete. Struempell's attempt, therefore, to account for the faults of children by basing them on such arid speculations can have little value for science. Much more to the point are the contributions of such men as Kraepelin, Demoor, Baur and others; and of Ufer and Trueper and their contributors in the publication "Die Kinderfehler." In the solution of these problems science must consider all the evidence in the psychology of abnormal types, from medicine, penology and pedagogy. The recent advancement in these departments of knowledge now makes such a study possible. It is a work which must be done by many men and its accomplishment will bring closer agreement as to what constitutes faults and defects in children.

¹Die Pädagogische Pathologie oder die Lehre von den Fehlern der Kinder. I. Aufl. Leipzig, 1890.

At present one is impressed by the very divergent views of the various writers on the subject.

From reading the pedagogical literature of the German writers of the past century, Professor Struempell found mentioned 314 faults, or words used to designate faults; and these he classified according to his philosophical scheme. A more careful search by his pupil, Koezle,¹ brought to light more than nine hundred different faults so-named of children. Have children so many faults? The mere naming of faults, much more a classification of them, implies some standard of comparison. Have we a true unconditioned norm which will enable us to recognize faults and defects and to estimate their importance? It seems to the writer that an absolute standard is out of the question. Even on the physical side this has not been reached. The measurements by Dr. Porter of 33,500 children in the St. Louis schools and those by Dr. Boas on children in Worcester and by others, notably Dr. Christopher in the Chicago schools, indicate how intangible a quantity is even a physical norm. In pedagogical pathology it could be only an abstraction as the phenomena in this field exhibit so wide a range. Even in the so-called normal all shades of variation exist; most eyes are astigmatic to some extent, yet astigmatism is not regarded as a defect below a certain point. A child may be slow to respond in the mental world or may lie and yet be neither feeble minded nor a moral imbecile. No line of demarcation exists between the faults of children in the schoolroom and the graver phenomena seen in the distinctively pathological cases. Crimes are faults writ large, and idiocy but the extreme of dullness. The schools, however, are not concerned with the abnormal cases of an extreme type. These are cared for in State institutions by more or less appropriate methods. It is the task of the pedagogical pathologist to throw light on the doubtful cases which lie in a wide-reaching borderland and to delimit the range of variation.

In the light of the above we must emphasize the relativity of the norm. Avoiding any attempt at strict definition we may, perhaps, regard that as normal which permits of a development advantageous for the race or the individual; while deviations from the norm would be a lack of biological or sociological adjustment to environment. In this view only those phenomena and tendencies of childhood are abnormal or faulty which are serious enough to interfere with development into good citizenship.

This paper is preliminary to a more searching study of faults.

¹Die pädagogische Pathologie in der Erziehungs. kunde des 19. Jahr. hunderts. Gütersloh, 1893.

Its purpose is to show just what traits of children are given the name of faults and what degree of seriousness is attached to each. There will be presented in it the results of (1) A study of the faults of children as seen by teachers in the school-room.

(2) The faults of children as seen by children.

(3) A partially successful attempt to ascertain what are the faults of children from the standpoint of parents.

I.

CHILDREN'S FAULTS AS SEEN BY TEACHERS.

In view of the fact that no objective study of the faults of children from the point of view of the schoolroom has ever been made, so far as the writer is aware, it seemed worth while to ascertain just what teachers consider faults in children. The assistance of several prominent superintendents of the country was enlisted. Among them Supt. Kendall, of Indianapolis, Ind.; Supt. Balliet, of Springfield, Mass.; Supt. Johnson of Andover, Mass.; Supt. Spaulding of Passaic, N. J.; Supt. Whitcomb of Lowell, Mass., and Supt. Tarbell of Providence, R. I. Their teachers were asked to mention those faults and defects of children which were the greatest obstacles to them in their school work, and to give the essential characteristics of each. They were also asked to describe striking cases of any of these. 402 teachers responded to the request. Some of them simply mentioned the worst faults of children, or those that gave most trouble; others wrote at great length and contributed excellent studies of special cases. Below is given the tabulation of the faults named and the number of times each is mentioned. The grouping of the faults may appear arbitrary, but was determined not only from the terms used but also from the meaning expressed in the answers so far as it could be ascertained.

Faults and Defects Named by Teachers.

	Times named.
1. Inattention, 154; Lack of Concentration, 141; Lack of application, 38,	333
2. Defects of Eyes, Ears, Nose and Speech producing inattention,	61
3. Carelessness in observation and Mental Slovenliness,	73
4. Indifference, Lack of Interest in study, No Ambition to Work, No Appreciation of Opportunity, Looking forward to being Fourteen, Distaste for Uninteresting Work and desire to shirk it, Wanting to be Amused, Helped to Death, etc.,	74
5. Lack of Honor, Lack of Moral and Intellectual Standards,	52
6. Lack of Self-reliance, Dependence on others, No power of Initiative, Lack of Confidence in themselves and their work,	48

7.	Laziness, Indolence, Procrastination, Lack of Mental Energy,	39
8.	Dreamy Listlessness, Abstraction, Absent-mindedness, Sleepiness, etc.,	20
9.	Lack of Vitality from various causes: from poor health, overwork out of school, insufficient sleep and food, bodily abuse, cigarette smoking, etc.,	30
10.	Nervousness and Lack of Steadiness from excessive use of tobacco, etc., Restlessness—mental and physical,	53
11.	Heedlessness, Thoughtlessness, Impulsive Speaking, Lack of self-control,	55
12.	Mental Incapacity—under many names: Lack of power to Reason or to think, Lack of Comprehension, Lack of visualizing power or perceptive power, Lack of Mental Grasp, Lack of Brains, Inability to sift out the important point or to gain the thought from the printed page, Stupidity, Dullness,	78
13.	Poor Memory, Inability to retain facts taught, etc.,	23
14.	Inability to Express Thought,	15

Faults—Egoistic and Relating to Conduct.

15.	Lack of Consideration for others, Desire to Rule, Willfulness, Stubbornness, Rudeness, Selfishness, Impertinence, Teasing, Quarrelsomeness,	69
16.	Disobedience, Disregard for Law and Authority, etc.,	45
17.	Lack of Home Training, Lack of Harmony between the Home and the School, Increase of Hoodlumism,	35
18.	Untruthfulness,	53
19.	Stealing,	6
20.	Whispering,	11
21.	Tardiness,	4

Besides the above many others, given below, were named from one to six times. Most of them could have been classified under some of the above heads: Vanity and affectation, jealousy, untidiness, cruelty, swearing, desire to imitate, meddling with neighbor's business, some children too young to receive the work, variation in the ability of children, laughing and making others laugh, wrong idea of success, over-wrought imaginations, vandalism, harsh voices, lack of imagination, non-critical attitude, taking on authority, reforming the children's language, blaming others for faults, mischievousness, snobbishness, dislike of school, raising hand when unable to give an answer, grumbling, telling tales, boasting, diffidence, inquisitiveness. Several of these groups, with some remarks of explanation are given separately below. A number of the teachers' expressions characterizing the faults are also quoted. These extracts may seem unduly multiplied, but they are so vibrant with the life of the schoolroom that no better composite picture of schoolroom conditions can be gained than from their perusal:

Inattention. The worst fault of children, as teachers view it, is, by an overwhelming vote, inattention or lack of con-

centration. The number in the table opposite this group, however, is somewhat misleading. In several cases teachers evidently did not regard inattention and lack of concentration as the same trait and gave both. This preponderance appeared uniformly in the returns from every city contributing. An explanation of the reasons for the frequency with which this trait is mentioned involves a knowledge of the psychology of teachers as well as of children. Without reference at this point, however, to the question whether the teachers calling inattention, and some other traits, faults, convict themselves of ignorance of child development, let us very briefly review the psychology of attention for the light it throws upon the subject.

Attention may be regarded as a certain aspect of the stream of consciousness. It is best taken as a narrower term rather than made identical with consciousness. The range or grasp of attention is limited. After the helpful analogy of vision—we are attentive to that which is focal and more or less inattentive to that which is in the margin of consciousness. A momentary spurt or pulse of attention in one direction leaves little energy of consciousness for other things. The monoideistic character of attention seems more marked in children. I know a case of a young girl who, when using the telephone, is utterly oblivious of all that goes on about her; her attention cannot at that time be diverted even by loud shouting.

The forms of attention of importance here are (1) natural or passive and (2) voluntary, active or acquired attention. The attention of young children and animals is almost exclusively of the first sort. It is easily captured by loud sounds and bright lights, but most easily of all by moving objects. The significance of attention to movement, as of attention in general, is to be interpreted in relation to the struggle for existence: through far reaching ages of primitive life it was essential to every creature to have an eye out for the moving object. To many animals it was and still is a condition of life, as existence itself depended upon giving the moving object a correct interpretation. It was hence essential that it be brought into the field of clearest vision; the reflex reaction to movement in the eye was thus established through stern necessity and still persists. Noting the tendency of children to give only passive attention Professor James¹ says "The child will always attend more to what a teacher does than to what the same teacher says. During the performance of experiments, or while the teacher is drawing on the blackboard the children are tranquil and absorbed." When the explanation begins attention takes its flight to the next most attractive object.

¹ Talks to Teachers, p. 92.

The child comes into the world with an imperfectly developed nervous system. His mental life begins at zero. By contact with the world, through the stimulation of his sense organs, there is gradually built up a body of knowledge which enables him to fit in, more or less closely, to environment. His nervous system is fashioned to respond to external excitations, and for several years development is dependent on what comes through sensory channels.

The passive sort of mental reaction corresponds, according to Professor Wundt, to a simple impulsive act following a single motive, a simple perception or idea; while the active form of attention corresponds to a complex voluntary act and involves a conflict of motives and the exercise of volition. The purpose of education is to train to power of attending actively. It is only possible when there has been passive attention. Herein lies the difficulty of the teacher's problem: to gain for the relatively uninteresting ideas of the school subjects a proportionate share of the child's conscious energy in competition with the large mass of ideas instinctively appealing to him. In the first years of life very little is possible; to use an old figure the mind is like the butterfly, the creature of incessant change. This is the inattentive state so troublesome to teachers in its various forms. "The worst form of inattention, sometimes called distraction, is characteristic of those people whose intelligence," in the words of Ribot,¹ "is unable to fix itself with any degree of persistence and who pass incessantly from one idea to another at the mercy of their most transient whims, or of any trifling events in their surroundings. It is a perpetual state of inability and dispersion which is the very reverse of attention. It is frequently met with in children and in women." From their very nature this must to some degree be true of most children. Indeed Compayre says that "In one sense we might say without paradox that the child's attention is only perpetual distraction."

Aside from cases of unusual distraction, therefore, the character of the trait under discussion is to be regarded as perfectly normal, and due simply to the reaction of an immature nervous system in the presence of a world of sense objects. The nature of the trait is plainly seen from the extracts below.

The greatest fault is a lack of concentration on what they are doing. Lack of concentration impedes the progress of my school more than any other defect.

From my experience I would say inattention to study, caused by giving attention to little things happening around them, is the greatest obstacle.

Among faults the greatest is lack of concentration in both listening and studying.

¹Th. Ribot: *The Psychology of Attention*, p. 72.

A lack of power of mental application, causing the child's attention to be constantly shifting, is the chief obstacle I meet.

Inability to concentrate attention for very long. Shown by becoming tired or restless.

A lack of the power of concentration, as shown by the inability to grasp and hold the essential points of an explanation carefully made.

When information is given I find the child's mind wandering, his fingers playing, and again and again must the same thing be repeated before the child grasps what is being given.

Many are inattentive to all directions and rules, and excuse their wrong doing by saying "I didn't hear you say so," "I don't know the place," etc.

The master of a high school says, "the defects and faults which I observe to be most general and prevalent, are of a mental rather than physical nature, and consist of weakness of attention approaching nearly to deafness, and a superfluity of shadowy and imperfect concepts."

Lack of power to concentrate. This results often in a pupil reciting on another point than the one in question. It is also shown by a quick shifting of the child's mind to trifles in his surroundings. Again it is shown in a lack of attention to the work of other pupils in the recitation.

Many reasons are assigned to account for the alleged inattention. A few are seen from the quotations which follow:

Inattention. They will listen only if lesson is very interesting—something out of the ordinary. They want to be amused most of the time.

My pupils are first and second grade pupils and quite young. I find that some are so absorbed in play that it renders them inattentive. It is due to absorption in too many outside interests.

A slight noise or movement is sufficient to attract them from work. Nervousness is the cause in some cases.

They seem to have cultivated the habit of entertaining themselves with the things around them or lapsing into oblivion.

Inattention in class is sometimes due to the spirit of willful mischief, but more often due to (1) indifference, (2) to mental or physical exhaustion, (3) to inability to grasp subject under discussion.

The first is characteristic of those pupils who are in school against their wills or who know that they are to leave soon. The second is found among pupils who have a good many studies and a limited amount of brain power, and those who have many interests besides school work, especially those who work afternoons and evenings, and those who have many social duties to perform. The third is due sometimes to lack of mental power; sometimes to poor training or lack of foundation in lower grades.

Inattention is the greatest obstacle to effective work in my school. This is not because of indifference on the part of the children but on account of deeper reasons. The location of the school in the business part of town brings many distractions and the crowded curriculum adds confusion.

Special interests may serve to draw the attention as in the following case, cited by a correspondent who says, "many cases could be cited of inattention in young children caused by interest in clothing." An example is given of a five-year-old child who was greatly interested in dress and styles. Her mother was found to have as her chief interest the elaborate dressing of the child.

Of the many special cases furnished by my correspondents a few may be profitably cited.

"One case of inattention in my experience was a girl, aged nine, in good health, who could not concentrate her attention for more than three minutes at a time, and never knew anything that was going on in class. I questioned her several times and found out she had to be up early in the morning to help her mother and also to care for the baby before she came to school, and the result was the child was tired before her work in school began."

"A case of inattention, boy, eight years old, 1 B grade, stout looking child. Has been out some for illness. Child sounds a word. I say in ordinary tone "what is the word?" No answer. Same procedure gone through with several times with no better result, only a vacant stare or a word entirely wrong. Finally with higher pitched voice and very decided tone I demand the word. He starts as if from a dream and says the right word. Does learn when aroused and retains, but seems to learn only in an excitement. I have concluded that he has been talked to but very little and when asked a question has not been pressed for an answer.

Sense Defects.

Many of the replies naming these as the greatest obstacles are in place here as showing how they cause inattention.

The greatest defects I find in my school children are poor eyesight and deafness, these leading to inattention and carelessness.

Defective hearing is an obstacle because it is often the cause of the inattention. Pupils are often blamed for inattention when they cannot hear what is being said.

Defective eyesight is often the cause of idleness. A child cannot see the work on the board and, consequently, idles away his time.

Deafness makes them inattentive, for even if they hear the teacher they cannot always hear the children. I have found these children stubborn.

Defects of Various Kinds.

I think the greatest obstacles to both teacher and pupil are defects in a pupil's sight or hearing, where the pupil, teacher and parent are ignorant of the defect. Defect of sight makes a pupil appear careless and defect of hearing inattentive.

Among the physical defects that are a hindrance to successful school work are poor eyesight and poor hearing. The children with defective sight must strain themselves to see the work on the board, and work at their lessons with curved shoulders and lowered head. Those with poor hearing are slow to respond, and are not nearly so alert as the others.

The greatest obstacle to me in my school work has been the lack on the part of a great number of children of the possession of essential knowledge, which should have been gained through keen sense-perceptions, owing chiefly to physical defect of the children.

In poorly ventilated homes where method and order are not known, we find children with weak bodies, minds not controlled and hence very inattentive. In this physical defect the food given them plays no little part.

Lack of vitality apparently caused by not enough sleep and not having proper food.

Those children who are so deaf that they are not able to hear all that is said in the school conversation, and thus require a special effort from the teacher and other pupils.

Overwork out of school hours. In girls from preparing meals, minding baby, washing dishes, running errands, carrying parents

meals to mill, etc. In boys from carrying parents' meals to mill, running errands, selling papers, etc.

These cases show a large number of exciting causes, for the inattention noted, which could be added to almost indefinitely. Consideration of the subject convinces one that while the trait may be the result of defects, it is in itself not a fault. It is often, indeed, nature's protection against undue strain of the nervous system. In large measure it is the inattention of self defense to escape the abnormal grind of the schoolroom. Every investigation of the effect of school work upon the child indicates that a condition of fatigue is produced after even a brief period of mental labor. The curve of fatigue will vary with the kind of work, the time of day, etc. The inattention to the teacher's instruction will, perhaps, vary with the state of fatigue.

Carelessness in Observation, and Mental Slovenliness.

Judging from the replies of the teachers this trait seems closely related to that of inattention. It is perhaps a difference of emphasis, the teachers having in mind the effect on the school work rather than the mental attitude itself.

Since carelessness is so nearly the analogue of inattention, much that was said under that head applies here; thus it is for the most part in young children not a fault but a natural condition which it is the purpose of education to change. Children are born careless. The young of most animals come into the world well equipped with helpful instincts, and relatively little training from the parents is necessary. The human infant is extremely dependent. The advantages of the long period of infancy in the child, gives opportunity for training to a life of carefulness and responsibility, but there is danger that the system of education may prove inadequate to the task. On the virgin soil of the child's nervous system is to be developed a hierarchy of habits of greater complexity than that of any other animal. Here lies the problem of the home and school.

The greatest fault I have had to contend with is carelessness. I find children careless readers, listeners and writers. For example, I gave this problem to a fourth year school: "If one pipe can fill a cistern in twenty-eight hours how long will it take four such pipes to fill it?" Many of the answers read like this, "It will take four men seven hours to do the work." "It takes four such pipes seven hours to be filled." "It takes seven hours to fill the pipes." "It takes seven hours to fill four cisterns," etc.

Children are inaccurate in what they write. They fail to express clear thought on paper. In telling of Hiawatha's home the child may say "Hiawatha lived in a wigwam with three poles and a deerskin thrown around them."

Many do not observe carefully out of the school or in it. Their attention must be called to every interesting or important fact instead of learning to notice for themselves.

The greatest obstacles in my work as a teacher have been the tendency of children to inaccuracy of thought and expression and their failure to concentrate their mental powers.

The children in my school show inattention, lack of application and lack of ambition. They are inaccurate, careless, and prefer resting to work.

Carelessness is the greatest fault. In reading they will call *a* the or *the a*. In a review I change the figures in a problem for next day. Half of the class will work the problem with yesterday's figures notwithstanding the fact that I have mentioned the change.

Carelessness is plainly shown in the child's constantly omitting the last letter of many words. In arithmetic carelessness is shown in neglecting to label.

Lack of sense-perception is another defect, resulting in the careless use of hands, the careless seeing of things and careless hearing.

Careless and inaccurate thinking. A tendency to deal with words rather than ideas. For instance: A child said "Robinson Crusoe built himself a boat so he could sail on his creek and perhaps get to some land he saw;" thus getting idea creek for big ocean he would have to cross, thinking merely of water and not which body of water he would sail upon.

Careless habits of speech and behavior formed at home are faults which are obstacles in my school work. These careless habits lead to inattention, lack of application as well as to disobedience.

Carelessness. Disorderly habits about their appearance, care of material and manner of studying and reciting lessons. My first aim in organizing a school is to form careful habits.

The habit of hurrying to finish work is another serious fault, the lack of being satisfied with careful, thoughtful work only.

The same is true in geography and grammar questions consisting of several parts. They answer only one part. When working long division or subtraction problems, only about ten out of a class of twenty-five will prove their problems before handing them in to the teacher.

Indifference, Lack of Interest, Lack of Feeling of Responsibility for the School Work and for their own Development, etc.

This great group of "faults" seems to be nearly the counterpart of inattention. They undoubtedly bear the same relation to it that interest holds to attention.

It is unnecessary to examine far into the conditions found in many schoolrooms to realize how general is this lack of interest. In some schools there are almost whole classes who, as one teacher says, are waiting to be fourteen (the legal age) when they may quit school. The thought that, perhaps, the majority of these children have their intellectual curiosity, the very germ of their self-activity, blunted seems almost tragic.

The lack of a sense of responsibility for the school work and for their own development is to be expected in young children, but when found to be true of so many pupils of higher grades, it certainly gives point to President Elliot's query whether the public school system has not very largely failed of its purpose.

Pupils do not feel a personal responsibility for the work and order of the school. Some pupils think that if they can't get a lesson it is

no great matter, the teacher is there to set them right. They rather hold the teacher responsible for any failure they may make.

I find that most children are unstable and seem to have low standards, as they are satisfied with poor marks. There are exceptions, but these statements apply to the majority.

Pupils think it is not necessary to do all the work. When a task is assigned and a definite time set for its completion, pupils do not feel responsible for having that work finished in that specified time. When the time is up, they think the work should be dropped whether done or not.

Many children lack a sense of personal responsibility for their actions and apparently feel indifferent to consequences. They seem to feel that they will be carried along with little or no effort on their part and are at a loss if thrown upon their own resources.

A total lack of responsibility on the child's part, caused partly by the parent's attitude toward the schools. A desire to be entertained only.

Delighted to listen to work given in entertaining story fashion, but not willing to delve for his own intellectual improvement.

Irresponsibility is the greatest obstacle to me in my school work. The essential characteristics are indifference and superficiality. The latter is the most discouraging of anything in my work. I think it is the outcome of the imitations which they see at home. Their parents are satisfied with the imitation play, or dress; the children are satisfied if their work appears like the others, and that later becomes a conscious evasion of duties. Happily, though, such pupils are in the minority.

The refusal or inability, on the part of some children, to assume responsibility. These are the pupils that cannot be trusted or relied upon, and form the lawless element.

One of the difficulties met in teaching young children is their inability to understand that each child is only a unit in the great whole. They finally grasp the idea but it is a great lesson to learn and one which takes some longer than the first year of their school life to understand.

One thing that troubles me is that children feel no responsibilities. "I forgot" is, for them, an excuse for all shortcomings.

In thinking of children 11-13 years old, the faults that hinder a teacher most could be summed up in one word, irresponsibility.

Lack of a feeling of responsibility, which gives as a result, a lack of concentration and attention to work.

Pupils do not seem to realize that they have any part in making their grades.

Generally, the pupils have no idea of the value of school work, consequently, are not earnest in their efforts.

Others think they should do only the work they like best, or that they consider of value.

Lack of thoroughness. They learn for the day or the test and care nothing for the knowledge itself.

A sub-master in an eastern high school, a teacher in a business course, in which it is his duty to enforce a sense of reliability, of responsibility as essential to success, simply names as the greatest fault: "Lack of any proper sense of responsibility," and the city superintendent commenting upon it says that his statement would probably be duplicated by each of the 29 teachers in the school.

Examples of the above.

Walter, a very bright boy of 15, when taken to task for not doing better work in geography, said, "Well, I do good work in arithmetic,

don't I? But I hate geography. What good will it do me?" His father had told him that if he could read, figure and write it was all that was necessary.

Florence, 14 years old, was very conscientious in all her work but in preparing her history lessons, she said, "I just can't study history and neither can my mother." Her mother's favorite speech is "I never could learn history and Florence is just like me."

Distaste for Uninteresting Work, Wanting to be Amused, etc.

Those who criticise the doctrine, made popular by the Herbartians, that the training of children must proceed conformably to an aroused interest will find encouragement for their views in the testimony of the teachers which follows. The thing here chiefly complained of seems to arise from the difficulty of making the transition from kindergarten and primary methods, which properly possess entertainment features, to those necessary when the pupil must meet the more serious subjects further on in the course. Those teachers who make the path of learning too smooth and pleasant for the children in the earlier years inevitably dig a pit for their successors. For such children, blasé and critical from having worn out the possibilities of schoolroom entertainment, are in the condition of the child surfeited with toys who did n't want to play with them but wanted to want to. They illustrate the great law of diminishing intensity of feeling. To arouse the degree of interest demanded by their sated appetites stronger and stronger stimuli are required. The mental fiber of such children remains decidedly flabby, and being destitute of proper habits of acquisition they become indifferent, inattentive, and a burden to the teacher.

The children wish to be entertained. They are thoroughly interested during recitation but lack application during study hours, hence do not master the text. They attend to others instead of themselves, listening to other classes and do not feel that they are responsible for a certain amount of work at that time.

Desire for constant change, when material and subject matter have not been exhausted.

A tendency to shirk anything which is "hard work." They demand to be entertained all the time or they grow inattentive.

A restless spirit, inattention, a dislike for solid work, and a lack of the feeling of responsibility on the part of the child. This is true of the eighth year especially.

Restlessness, a desire for the new before mastering the old, are the things I find so hard to contend with.

No grasp of present opportunities or knowledge, desire for entertainment in the schoolroom instead of work.

An overbalancing of the volitional by the emotional nature. Shown by (1) too great a desire for the novel and entertaining, (2) lack of ability to persist and succeed in the more irksome lines of work.

A desire for entertainment and an unwillingness to work at anything that is not entertaining.

Children expect to be entertained and to get lessons without effort, and do not study the printed page.

The children are at an age when they fail to appreciate the importance or necessity of application. They want to be amused.

Unwillingness to do individual hard work; by this I mean a tendency to give up without effort, any task which is slightly more difficult than the ordinary one. This does not apply to all.

A chronic unwillingness to do the drudgery of hard work required, expecting all work to be made easy.

Inattention. Will listen if lesson is very interesting—something out of the ordinary. They want to be amused most of the time.

Lack of power to concentrate the attention, so that in order to secure favorable results a lesson must be made highly interesting.

Lack of perseverance. Easily discouraged with the least obscure point.

Lack of Moral and Intellectual Standards. Lack of Honor, etc.

No doubt exists regarding the truth of this charge. The young child is deficient in moral perception and must develop an appreciation of the moral content of an act. To him what is permitted is right and what is forbidden is wrong. In time he may be trained to a sense of moral responsibility.

In the intellectual field, also, he has no proper perspective. Having few ideas his ideals are of a low order. He lacks the power of evaluating the products of the adult mind. Living so largely the sensuous life, the artificiality and restrictions of the schoolroom cannot be otherwise than irksome to him. He is incapable of appreciating the importance of the work; hence his indifference to it.

They are unable to control themselves when they are left in the room without a teacher. They seem to feel it is necessary to do the right only as long as the teacher is watching them.

My greatest trouble is in trying to make children understand the meaning of being thrown on one's honor. The conduct of children is all right while the eye is upon them, but they cannot be trusted when the watch is removed.

Untrustworthiness. They cannot be trusted to continue work in the absence of the teacher or some one to watch them.

Irreverence for authority. This is characterized by the tendency to overstep as soon as privileges and freedom are extended.

The children have no pride in accomplishing a good result.

The children are satisfied with getting only what is required of them.

Lack of power of application, which not infrequently results from lack of ambition.

Lack of proper pride in scholarship, brought about by the lowering of the standard.

Lack of ambition, characterized by shiftlessness.

The impression that the child of ten or twelve years of age has, that when he has attained fourteen years his education is finished, and he will not be required to attend school.

Lack of responsibility for actions: so many children wish to excuse wrong actions in themselves, even when they know the right from the wrong. They feel no desire to do right because it is right, but do right only because they are being watched.

Lack of Self-Reliance, Lack of Confidence in Themselves and their Work, Dependence on Others, No Power of Initiative.

We adverted above to the long period of dependence in the human infant which gives time for social preparation. The meagerness of the child's equipment for volitional action is for a long time very marked. Since his capacity for judgment and discrimination is small, it is, perhaps, well that he possesses little power of initiative. For several years imitation is a large factor in his development. He looks to parents, teachers and others for cues to action. Yet while this is a natural condition of early childhood the time soon comes when if he is to be more than a weakling he must rely upon himself for the solution of difficulties, for in practical life there can be no alter ego to supply needed information and suggestion at every step.

One of the great weaknesses in much of our training lies in our failure to change natural dependence into what may be called the efferent disposition. The "idea of success," of power to do things is not given, nor the pride in achievement aroused. The home is, perhaps, more blameworthy than the school in this respect. There is too much waiting upon children by their elders. The child yields to the law of least effort and will not try to do unnecessary hard things. He will not, for instance, learn to speak, nor to wait upon himself if a grunt, a cry or a gesture will bring the satisfaction of his wants. With teachers, also, the temptation is great to do much of the child's work in order to save much of the friction that comes from insistence on strict performance of tasks.

There is a lack of independence in thought and work, little originality, very often the child seeming to rely entirely upon the teacher to present every step in whatever study is before him. This is perhaps due to a lack of application on the part of the pupil, or to his inability to concentrate his mind on a subject, which does not, on the surface, arouse his immediate interest.

Children fail to do individual thinking, depending on the teacher or some force outside themselves for ideas, or else failing to test their own ideas by safe and reasonable guides. I should not like to ascribe all of this fault to the child, as much of it is due to his school training, including course of study and teachers.

Children seem to expect everything to be explained and made easy for them and lack the ability or the desire to hunt out new truths or to solve hard problems, for instance, for themselves.

I have found the greatest obstacle to be,—a lack of independence, the teacher having to supply the plans, energy, animation, the study, and to work out almost entirely alone the desired result.

I believe the greatest obstacle is a lack of earnest purpose on the part of the child. Everything has been made so easy for the child that it takes him too long to realize that he must make an effort to help himself.

They have no faith in their own work and are always wanting to compare their work with some one's. They have no ambition, are

just as happy with fair results as with good ones, and have no high standard.

The children sit like young birds in a nest ready for the food to be placed in them. They cannot or will not think independently.

I find the children very dependent. They do not seem to know how to be responsible for themselves. They are unable to take their books and get from them a lesson unless greatly aided by the teacher.

The fault of children which is the greatest obstacle to me is a disinclination to take upon themselves any responsibility. They depend too much upon the efforts of the teacher and do too little for themselves.

Children, as a rule, do not know how to study. Under the eye of the teacher they apply themselves, but, thrown upon their own resources, they fail, in that they stop work entirely, or are too easily satisfied with what they accomplish.

They are not able to take a book and dig out the lessons for themselves, but must have so much help from the teacher.

Inability to make use of their books after instruction is given.

The pupils sent to me have been helped to death.

In some cases a lack of confidence in their own ability.

The reliance of pupils on each other; *i. e.*, in doing outside work.

Willingness to listen and take an oral part in any recitation, but unable to attend to any task that calls for self-directed activity.

Lack of self reliance and independence. The power of initiative seems most difficult to stimulate.

Inability to apply themselves independently.

Dependent upon teacher's assistance.

The greatest defect discovered in children under my care has been a lack of confidence in their own ability to accomplish work of any kind. Most of the children, when received into the kindergarten from home, are almost helpless in regard to making any effort for themselves. It is very apparent that the home training is greatly at fault. Parents find it far easier to wait upon a child than to teach him to help himself. I have taught a kindergarten fifteen years.

My work has been with children in the sixth and seventh grades chiefly. In those grades I find the children unable to help themselves. They wish to be entertained and to have everything made pleasant and easy for them. They have not the ability to do independent work.

Lack of Vitality from various causes, Dreamy Listlessness, Abstraction, Absent-mindedness, Sleepiness, Laziness, Indolence, Procrastination, Lack of Mental Energy, etc.

It is difficult to say whether many of the cases listed here are greatly different from those given above under the label of indifference and lack of interest.

The child who, from lack of vitality caused by insufficient sleep, and food, bodily abuse, cigarette smoking, overheated rooms and bad air, overwork out of school, or from any other cause has his physical powers impaired, is sure to reflect this condition in his mental life, and as a result we have some of the schoolroom "faults" variously named above.

In the search for the causes, the age of the pupils also should be taken into account. It is well known that children in the seventh or eighth year, by reason of the fact that the heart and

other visceral organs do not keep pace with the body growth, pass through a period of special susceptibility to fatigue characterized by a state of unusual laziness.

Outside of his play activity the child is naturally lazy. He must learn, however, to give over his atavistic desires of a paradise where no one works, and, like the race which has unwillingly assumed the burden of labor, set his face toward the struggle which has made man great. The acquisition of the working habit is a large part of social education.

Listlessness is an obstacle in my school, caused, I think, by lack of proper food and lack of proper care at home.

Listlessness is one of the greatest obstacles that I find in my school work. This, I think, is caused by improper food. I find a general listlessness among the pupils.

I find a general listlessness among the pupils. It is very difficult to interest them in a way to hold their attention.

Abstraction. Inability to repeat a problem, or keep in mind a complete thing. Distraction, when it is a question of taking dictation.

There is a sort of dreamy state into which they wander, and yet they seem to be giving attention.

Sleepiness, caused by late hours.

Dreaminess of mind, unwillingness to master difficulties, attention easily distracted. In some, I believe, it is caused by the beer and coffee given, and in some measure by the entirely unfit character of the food which is their daily fare.

I find indolence the greatest obstacle in my school work. A love of ease and a certain pleasure in dreaming seems to overpower the mind.

The lack of energy in regard to personal mental activity is the greatest obstacle in my school work.

I believe that a large part of the dreaminess, inattention and indolence is caused by defective sight and hearing of which the children themselves are wholly unaware. They hear very little of what goes on in the schoolroom and fall into habits of inattention which rapidly develop into mental dullness and stupidity.

The indolence is often accompanied by a dreamy, far away look of the eyes, which would seem to indicate that the child is occupied in thought of something outside his vision, but my experience has taught me that in many such cases, the mind is not consciously active.

Example: Boy, 11 years old, exceptional student in history, only fair in other branches. A dreamer; starts out with good intentions, but at the end of five minutes is building air castles. He walks along the street in the same way, trips over stones, walks into people and other things in his way. Seldom plays,—stands around and watches the others. When he goes on an errand he takes three times as long as other children sent the same distance. His parents are at a loss to understand the cause. He is passionately fond of history, devours all books within his reach and understanding on this subject. Thinks about what he reads, asking peculiar questions about what might have happened had events happened differently or not happened at all. He is a sufferer from acute catarrh and I believe his physical indisposition has much to do with his seeming thoughtlessness and desire to do nothing."

Nervousness, Restlessness, Lack of Steadiness from Excessive use of Tobacco, etc.

Teachers have to contend with the natural restlessness of healthy children full of animal life and spirits, which results when they are taken from their plays and subjected to too long hours of confinement in the schoolroom. This is a small matter, however, when compared with what they must endure from the cigarette smokers. In addition to unsteadiness of nerves, nearly all the so-called "faults" named in the pages above may be caused by this vice.

A recent investigation¹ of this evil which "concerns nearly twelve hundred boys from the first grade through the high school shows that more than one-third of these admit that they smoke or have smoked. Those who say they never smoked are counted in the list of non-users. The smokers average one year older than those of their grade who are non-smokers. The inveterate smokers are two years behind the non-users. This is true through all the grades." The teachers' reports show that the conduct of the smokers is far below the average. Some of the reports say of them: "Self control poor, inattentive, not trustworthy; bad memory, careless, excitable, nervous, bad conduct; lazy, sleepy, slow to move; very dull, blank look; heavy eyes, sick frequently; never did any good work in school; no energy, naturally bright but no power of concentration; vacant stare, gloomy, listless. Physical deterioration is also a feature."

Nervousness, continual handling of any small object, button, pin or small piece of wood, constantly dropped from one hand to another, put in mouth, placed in different positions on the desk, restless moving of body and feet, twisting of legs and body in queer positions.

Restlessness. It is seen in the squirming and turning in seats, in playing with pencils, knife, erasers, and in the general disregard of rules.

The nervousness of the child is seen in his inability to make his writing uniform, also in his inability to sit still in his seat for more than a minute at a time.

Restlessness due to too great restraint of school hours on natural animal spirits.

Extreme nervousness, causing inability to concentrate attention on instruction given or on the committing of lessons.

Excitability in all children when anything unusual occurs, or while anticipating some interesting event, for instance, the days immediately preceding Christmas.

Nervousness, as shown in restlessness, listlessness, oversensitiveness and self-consciousness causing the child to be timid and to speak in a low tone for fear of failure.

Nervousness. Types—(a) child nervous, irritable, crying, (b) nervous child, muscles not under good control, subject to violent fits of anger.

¹Supt. R. G. Ogg; School Report for 1902, Kokomo, Indiana.

In some cases I believe the nervousness is due to kidney trouble.

The greatest obstacle in dealing with boys is the excessive use of tobacco. The result is nervousness, a quick temper, second grade work and a lack of steadiness.

Use of tobacco. Result: nervous condition, minds inactive, loss of interest.

Among boys, I have found the greatest fault to be the use of tobacco.

Impulsive Speaking, Lack of Self-Control, Thoughtlessness, etc.

The tendency of children to speak or to act on any perception or idea entering the mind is much stronger than in the adult, in whom the power to inhibit action has been established. Poor methods of teaching may foster or prolong the state. Impulsive speaking, for instance, may arise from a desire to answer first, or from the fact that many teachers urge quick answers because their nervous state renders it difficult for them to wait for the proper mental processes to take place. This puts a premium on superficial memorizing of details which can be quickly given. Very often children respond thoughtlessly, basing their answers on some idea aroused by one or two words in the question.

Poor motor control, shown in the inability to keep the hands quiet during a short recitation, the tendency to pick up a pen or pencil, to open a book, etc., is very strong.

Whispering, to each other somewhat, but more often talking to themselves, repeating page given, saying numbers when working in arithmetic, lips moving when studying, etc.

Lack of motor control shown in writing.

Lack of manual dexterity. I have one little girl, seven years old, who seems utterly devoid of any power or desire to perform the simplest kind of handwork. She has been in school a year and a half, and can read a few sentences in script, but cannot write a word, and it seems impossible for her to trace a line which I make for her. In the year and a half that I have been her teacher I have tried and tried to find some kind of busy work that she would be able to do, but have failed utterly so far.

I find that children do not think carefully before the work is put down on paper. In writing, they will not spell correctly such words as *him, large, etc.*

The children are anxious to answer questions and do so without getting the thought of the question.

They are very thoughtless. They speak without thought and write before planning clearly what they wish to express.

A disinclination to think before answering.

Mental Incapacity, under many names: Lack of Power to Reason or to Think, Lack of Comprehension, Lack of Visualizing Power, Lack of Perceptive Power, Lack of Mental Grasp, Lack of Brains, Inability to sift out the important point, or to gain the thought from the printed page, Stupidity, Dullness.

The perusal of the extracts from the teachers' replies below makes it evident that too much is frequently expected of chil-

dren. Because of the weakness or absence in them of those mental traits normally possessed by the adult, many teachers are ready to convict them of "lack of brains," "stupidity," etc. These children of the elementary grades are said to "lack the logical faculty," are "unable to reason," and "wanting in deduction." Other teachers more sensibly attribute the cause of the mental deficiencies reported to lack of training in proper habits of study, lack of training in observation, too many subjects of study, forced promotions, children too young for the work, irregular attendance, and the like.

Aside from the general dullness complained of we have the cases of the really incapable. Monroe in his study of dullards, found about one in every ten children of the public schools to be of this character. Dr. Francis Warner places it at one in thirteen. Such children do not properly belong in the regular schools. They take the time and strength of the teacher and try her patience more than all the rest. The plan adopted by several cities of providing expert instruction for them in a separate school is the best solution of the problem so far found.

Mental incapacity, I find characterized by one or all of the following: 1. The logical faculty to distinguish between essentials and non-essentials, to follow or develop a chain of reasoning, to connect cause and effect, is lacking. 2. Memory is very defective. 3. The power of concentration and of close observation is little developed. 4. Extreme slowness of mental processes.

My greatest trouble is the fact that pupils do not know how to study when they reach my classes, and a large share of our time has to be taken up in teaching them how to study. With a great many pupils it is too late to learn this and so they fail utterly.

Children are unable to select the essential from the unessential, because they have not been taught how to study. Example: The pupils in a sixth year grade were asked the following question in one of their tests, "Describe Washington's campaign in New Jersey." Most of the children took more time in describing some little event, as—how Washington was guided from Trenton to Princeton—than in giving the chief events, their causes and results.

Mental incapacity—evidenced in stupidity, not "seeing the point." Lack of logical reasoning—resulting from not having been taught to see the relations between things. Inability to relate cause and effect.

Inability to put into use knowledge gained—to use in one subject knowledge gained in another.

An inability to apply what they learn to the every day needs of life. Want of deduction. Children are not able to apply knowledge to new surroundings.

The inability to gain the thought from the printed page.

Poor expression. Few have travelled and their experience has been only with Indianapolis, an inland city. The mental images they form from the printed page of a geography show lack of interest and attention.

The tendency of pupils to learn the words instead of the meaning of a lesson, *e. g.*, question is asked, What is an axiom? Answer received—an axiom is a self assumed evident, the words of the book were, an axiom is a truth assumed self evident. The words and not the meaning had impressed the child.

Inability to think—to get from the printed page something more than the words found there.

Lack of mental grasp—they learn words but seem to miss oftentimes the true significance.

Many children's brains work slowly. When the work of the term is carried on too rapidly, they are unable to grasp the thought, lose all interest, and are then alert for other things to take up their attention.

One who says she has taught chiefly the children of society people says "the great fault is lack of ability to grasp the subject matter presented, especially in its relations, due chiefly to the mental energy of the child being expended in so many different directions by a multiplicity of subjects. Also mental restlessness, lack of concentration, a state of being on the *qui vive* for a new sensation due in great measure to the same cause, as it seems to me. There is also a lack of steadiness of purpose, a spirit of frivolity which is one of the characteristics of the time."

Inability to reason—somewhat due to incapacity, but mostly lack of mental discipline.

In a school of thirty-five, the ages ranging from thirteen to seventeen, the children seem able to memorize a thing easily enough but any attempt to lead the child to draw a conclusion from any number of particulars, or any effort to have him follow logically steps that need to be taken, is met almost at once with a falling off in attention and a corresponding increase in non-concentration.

One of the greatest faults I see in children is the lack of power to grasp the entire thought presented. They are satisfied with a part, and do not seek farther for the whole thought.

The children under my charge range from twelve to seventeen years of age. The mental defects most apparent in these grades (sixth to eighth inclusive, are, sluggish perception, distaste for mental exertion and inability to retain facts taught in the school course. These conditions, which are general to a remarkable degree, seem to me to be due, first, to adolescence; second to the overcrowding necessary to cover the prescribed course of study; third, too long hours spent in the schoolroom; resulting in too little physical activity.

A few seem stupid and dull of comprehension; others seem to get tired and sleepy and neglect their work. I strive to counteract these faults with a lively interest in the work, etc.

Mental and moral defects, lack of general information,—current events observe hastily and imperfectly; power of discrimination not developed; lack of "common sense;" no power to make inferences.

A teacher of chemistry says that the greatest obstacle is lack of visualizing power—not remembering things as seen and handled.

In my first year work, children who develop in a one-sided manner form a great obstacle to my work as a whole.

Defect in the power of reflection, caused mainly by multiplicity of subjects.

Inability to comprehend the work of the grade, due to forced promotions or irregular attendance during the first years of school life.

Poor Memory, Inability to Retain Facts Taught, etc.

The charge here, as in the large group just given, seems to be the failure of children to measure up to some standard, held by their teachers, of what ought to be expected of them. As a matter of fact, children's memories are not tenacious. Even with the best teaching the lessons passed over, for the most

part, soon slip away. Much more is this weakness in retaining apparent with that style of teaching which lays emphasis on the acquisition of mere facts.

Lack of retentiveness. Real inability to remember or understand lessons.

Defect of memory. Lack of power to retain; When requested to bring articles from home, it is sometimes necessary to remind the children five or six times.

Lack of quick perception and strong association of ideas. This makes frequent repetitions necessary, and even then many cases of seemingly poor memory result.

Forgetfulness is one of the great faults which I have noticed in children, and I cannot always tell whether it is caused by weakness, or whether it is simply carelessness.

The children forget the sounds of groups of letters. They will know a word one day, the next day it is gone.

Lack of Consideration for Others, Desire to Rule, Willfulness, Stubbornness, Rudeness, Selfishness, Impertinence, Teasing, Quarrelsomeness, etc.

In all animal life the "push upward" appears under one of two forms: It is fight or flight, It is strength or craft. Among school-children we have, on the one hand, the many manifestations of a blind insistence on personality, such as willfulness, stubbornness and other forms of "selfishness;" we have the fighting, teasing and bullying which gives the child an agreeable sense of power, of superiority; and on the other side we have the lying or deception, cases of which follow below.

In the traits of the first group is found an expression of an important instinct. Within limits these tendencies are desirable as giving evidence of an expanding soul-life. Every normal creature seeks a large development. Not life alone but a more abundant life is sought. The strong outcrop of egoism in the child means just this. It explains the many disagreeable traits of the untrained child, such, for instance, as the strenuous resistance to fancied attempts at diminution of his personality on the part of teachers or others. The ability to conquer these untamed bundles of potentialities without a direct conflict of wills but by the power of a real and tactful sympathy is the mark of a true teacher.

A spirit of selfishness and ingratitude.

The tendency to shirk responsibility: that is, to blame others for faults.

Selfishness, characterized by 1. A desire of pupil to claim more than his share of the teacher's attention and time, in helping him with his work or keeping him in order. 2. He is not at all considerate of the rights of others. 3. Anxious to lead without regard to those who are forced to the rear.

Examples: Frank, aged 13, anxious to be the captain of the boys in his class. Whenever he was captain, his conduct was irreproachable, but when a private in the company, he was reported every day for in-

subordination. I could not find out the cause for a long time, till one day in conversation with another teacher, I learned that she had "reformed Frank by letting him do things for her."

Ruth, aged 5, always wants to choose the games in the kindergarten. When allowed to do so, she enters into the games with much spirit, but is either disorderly or indifferent when some one else does the choosing.

I have found that a great number of children are vindictive, impatient and impulsive. Whatever be the cause of the injury, the child seems to think he must repay, and often seeks to return a greater on that received. A seeming accident is sometimes taken for an offense, because the child is too impatient to investigate for himself.

Combativeness; ready to strike any one, especially smaller ones, on the way to and from school.

Crossness. Nothing pleases. Cross to every one around. Do not want to be touched or interfered with in the slightest way; are sure to be in trouble on playground; nothing is accidental; everything was done "on purpose."

Unreasonable desire to do just what they know is not desired or not to do what is desired. This is a characteristic of a few and where found is apt to be violent. It is persistency carried to the last equation.

A sullenness that takes offense at any word of reproof or explanation, even though it be offered kindly.

Petty jealousies, requiring careful treatment in order to avoid discouragements and brooding which result in obstinacy and lack of application. This is, of course, a matter of narrowed vision.

Treating of lower classes with disdain by those of wealthier class. Thus bringing about the spirit against labor.

Vanity, and the not wanting to associate with others more poorly dressed.

Vanity, a desire to be seen and heard and to gain notice. Also lack of consideration for others—incivility, rudeness, impertinence.

The lack of natural gentleness toward each other, resulting from street life in rough neighborhoods, and a smaller amount of antagonism caused by some not being as clean and agreeable, personally, as others. "I don't want to take hold of his hand." (In games.)

Great pleasure in annoying or teasing each other—saying little things to each other that need not be said; taking things away from each other in fun; boys hiding others' caps, etc.

A desire to meddle with the work of nearby pupils, and the habit of laughing at the mistakes of others, are the defects which are the greatest obstacles to me in my school work.

One of the greatest obstacles to me in governing my school is the pupil's curiosity to know all of his neighbor's business.

Self-consciousness; child afraid of the sound of his own voice; where the child cannot bear to have his name spoken and simply cannot be singled out because of the pain given.

There is a boy in my school who affects a peculiar gait—not for the purpose of being annoying, but for his own gratification. I have noticed that this affectation appears in many schools, some boys affecting a peculiar laugh, others a peculiar facial expression.

Disobedience, Disregard for Law and Authority.

What was said above of egoism applies to disobedience, in some respects its most obvious phase. The passion for self-assertion is the dominant trait of childhood, and whether in the

home or the school is an element in, perhaps, the majority of the cases of disobedience. Pedagogy has vexing questions to solve in this field; a broken will is fatal to the development of strong character; on the other hand, the price of entrance into the largest social freedom is through submission to law—parental, scholastic and civil.

The defects which I find the greatest obstacles to me in my teaching are lack of prompt obedience, the lack of power to concentrate attention, and the slowness with which responsibility is assumed. Young America is not taught prompt obedience at home, and does not have a high standard of the meaning and necessity of obeying. There is a lack of the proper appreciation of authority.

Repeated disobedience, carrying with it no marks of shame, but growing into a lack of reverence for parents, teachers and places of instruction. A growing tendency to argue and correct the teacher, the outgrowth of pushing our children forward to make them easy and conversant upon all subjects. This flavors of sauciness but seemingly is not meant for it, but where children were formerly eager to receive information, one must now convince.

Greater than any defect, and greatest of all faults is that of disobedience, characterizing the child as bold, defiant and disrespectful to his companions and teachers.

Another fault is the growing disregard for law, both school and civil.

The average American child is not law abiding. His own pleasure and convenience determine his actions, and he has small consideration for the rights of others when they stand in the way of his own gratification.

Protest against authority, from merely reluctant obedience to open defiance.

Spirit of disobedience, brought about by lax home government and views of life.

Failure to obey promptly, seeming to question teacher's right of authority.

A disregard and lack of pride in conforming to any laws.

Lack of Home-training, Lack of Harmony between the Home and the School, Increase of Hoodlumism, etc.

The troubles of the teacher due to the causes named, are ever present. Her work often seems hopeless because of the apparent impossibility of contending with bad home influences. Training in conduct goes back for its beginning even to the babe in arms, and the constant assertion of teachers that responsibility rests largely upon the home seems justified. When to the natural tendency to follow selfish desires is added the contamination of bad surroundings in the home and on the street, it is cause for wonder that teachers, with their limited opportunities, accomplish so much.

One of the greatest faults is lack of home training, as shown in 1. lack of self-control; 2. stubbornness; 3. impoliteness even to the degree of impudence; 4. untruthfulness; 5. bad companions, or home influences leading to evil-mindedness and cigarette smoking.

An indifference on the parts of the parents to the preparation of

home work; irregularity of attendance, due to the fact that children are kept out to assist with home work.

Dislike for home study. There are many reasons for this. Parents do not insist on it. Too many outside interests, as—play, parties, special lessons, lack of proper conditions, as a quiet room, good light, etc.

Dislike for school. Home influence not what it should be. Pupil attends school from necessity not choice,—hates books and class room.

Lack of discipline at home is the greatest obstacle in my school work. Parents are out at work, children left to do as they please, and hence know very little of obedience and order.

Impoliteness and careless habits due to ill breeding.

They are held for nothing at home and are restless under being held for anything at school.

Lack of home training in the laws of health and cleanliness.

In this locality, where many of the poorer people live, the children are weak on the language side—reading, composition and power to express themselves.

Lack of home training. Its bad influence shown by untruthfulness and bad language.

The greatest faults and obstacles I find among my pupils in my school work, are habits of frivolity and rudeness that savor of the hoodlum. I do not speak of incorrigible or vicious pupils. I find the above named habits increasing among the better and best classes of pupils. Their minds have drifted into improper channels under slack home discipline, unwisely chosen amusements, and the reading of improper literature.

Deception in Many Forms.

In all animal life deception is instinctive, self-preservative. Children's lies which give so much concern to parents and teachers, but which differ much in moral content from the lies of adults, may all find their explanation along biological lines. Lying is the great refuge of childhood. The child's definition that a "lie is an abomination to the Lord but a very present help in time of trouble" is very much in point. The quotations below are strong expressions of fact but shed no new light on this subject which has been so well studied by President Hall and others. All are familiar with the "selfish" lie in its many forms. The lies of self-defence given expression to by all children when under the fear of punishment, and the lies in defence of the tribe, are most troublesome in the school. Next, perhaps, are the lies to excite wonder and to magnify the individual which lead to lives of falsity and sham. The whole question of deception gives little trouble where parents and teachers act and speak the truth. The forcing process in education is responsible for much of the deception in the school. Where great emphasis is laid on grades and promotions, where the child, to win the approbation of parents or for other causes is required to maintain a "standing," a pressure is brought to bear which he cannot withstand and the result is the many forms of cheating complained of.

The tendency to misrepresent things. It is frequently found in the written work which the child has, himself marked; also in his pretension to orderly conduct when a teacher is thought to be near. Lack of courage to confess his own misdoing will often lead a child to tell an untruth. Fear of punishment will produce a like result.

They seem to think nothing of copying a lesson or telling a falsehood.

There is a tendency towards deceit in children. Not that the thing is absolutely willful, but like all mankind, they try to get something for nothing, attempting to copy and crib in their tests—making it necessary for the teacher to be watchful of the first attempts at liberties of this nature, lest it lead to premeditated willfulness later.

The spirit of deception. As far as my observations have gone this fault is not restricted to any particular class but is found alike among all classes and conditions of children. It is also true that the child who does not have this fault is the exception. We see the evidence of this fault in the children's work, and a teacher of any experience must have often felt how impossible it is to know just how much the children can do unaided.

Another fault is what we would call "cheating." Many children will use every means possible to obtain right answers without regard to the means employed, whether honorable or otherwise. Arithmetics which contain the answers to problems are the bane of a teacher's existence.

The boys cause me the most trouble by shuffling their feet or teasing their neighbors, and then try to get out of it by lying.

An utter disregard for truth in statements of wrong-doing when the child wishes to shield himself from censure.

A deceitfulness that shows in preparing lessons, in tests, and more especially in cases of misconduct.

Falsehoods. 1. The results of a too vivid imagination. 2. Those told to screen a fault or to make mischief.

It is a fact that few children are really truthful.

Untruthfulness. Plea of illness to escape lessons.

II.

THE FAULTS OF CHILDREN AS SEEN BY CHILDREN.

In the foregoing section are given the faults of children from the point of view of a body of people who, besides showing the influence of their peculiarly personal relations as teachers, also give evidence of having judged children by adult standards.

We give below the results of an attempt to ascertain the ideas that school-children themselves have of faults.

Since the suggestibility of children leads them to respond in the way they think they are expected to, a change of method was rendered necessary. The plan adopted was to have children write papers in the course of their regular school work, the subject of which was to "tell about the meanest boy or girl you ever knew and why you thought he or she was mean." The plan has justified itself, as the papers collected in this way are, for the most part, naïve and bear the earmarks of honesty. The subject seemed to touch a sympathetic chord and the children wrote from full hearts as though glad of a chance to ex-

press themselves. In some cases, however, the teacher's ideas of bad conduct had been adopted and "mean boys" were mentioned whose chief sins seemed to be that they made the teacher trouble or did not get their lessons at school. It is a suggestive fact that the teacher's attitude toward a pupil may brand him in the eyes of his fellows.

Papers were collected from 309 children, as follows: 152 children from the fourth to the seventh grades inclusive of a ward school in Bloomington, Ind., average age, 11.9 years; 80 children from the fourth and fifth grades of a school in a New York tenement district, almost entirely of foreign parentage, average age, 11.8 years; 77 first year high school pupils of Worcester, Mass., average age, 14.8 years.

The tabulation of the mean traits mentioned by the children of these cities is presented in separate columns below.

Table of Faults as Seen by Children.

	Bloom- ington.	New York.	Worces- ter.	Total.
Number contributing,	152	80	77	309
Average age,	11.9	11.8	14.8	
1 Fighting, bullying, teasing, etc.,	92	36	29	157
2 Stealing, Robbing, etc.,	49	11	14	74
3 Bad conduct, ignorance of etiquette, im- pudence, calling names, "sassing," ill-mannered,	15	7	49	71
4 Lying and cheating,	37	10	23	70
5 Disobedient, "won't help work," runs away from home, etc.,	47	8	12	67
6 Malice, telling tales, slander, revenge, etc.,	40	4	4	48
7 Plays truant, "hookey," runs away from school,	32	1	13	46
8 Smoking cigarettes, etc.,	32		7	39
9 Swearing,	33		3	36
10 Troubling the teacher in various ways,	19		12	31
11 Cruelty to animals,	24	6		30
12 Untidy, "won't wash and comb," etc.,	12		14	26
13 Mistreats parents, shows disrespect to them and elders,	12	5	8	25
14 The reproach of ignorance — "does n't get his lessons,"	16		5	21
15 Selfish, "won't share,"	8	8	4	20
16 Out with bad company, leading boys a- stray,	13		6	19
17 "Ran away and left me," "would n't speak," "kept secrets from me," etc.		16		16
18 Getting angry, bad-tempered, etc.,	2	1	13	16
19 "Hopping" trains,	14		1	15
20 Drinking,	9			9
21 Would n't be "it," would n't accept the penalty of the game,		9		9
22 Gambling,	8			8

Differences of age and environment seem to be responsible for many interesting facts. Clearly marked local differences crop out in the papers and, in some cases, are revealed by an inspection of the table. The Indiana children live in a country town of only a few thousand inhabitants; the place and people are therefore more or less well known to the children. One result of this is that a number mention notorious offenders who have been sent to the reform school. Some neighborhood and teachers' "terrors" are also frequently given.

By some error of direction the idea was given to the children of New York and Worcester that they should restrict themselves to the meanest one they knew of their own sex. The other children, however, had perfect freedom of choice. The result shows that both sexes recognize the greater prevalence of meanness in the boy. Only three out of 70 boys were so ungallant as to choose a girl as the meanest one they knew; while sixteen of the 82 girls choose a subject from their own sex. $87\frac{1}{2}\%$ therefore proclaim the meanness of the "Bad Boy."

It should be recalled that the New York children are from the slum district. Their papers as a whole differ quite materially from those of the children of the other cities. Their range is narrower, and more frequently the acts of meanness noted seem very trivial and to have been mentioned by reason of a personal feeling in the writer's mind. Inspection of the table of faults shows that lying, cheating and stealing are much less frequently given as an evidence of meanness among the papers of these children, and seldom or never given abstractly as faults of an individual. Swearing, smoking cigarettes, untidiness, going with bad company, drinking and gambling are not mentioned at all and "playing hookey" but once. Is the purification of greater New York an accomplished fact? Are the traits named non-existent among these children, or so common as to be taken as a matter of course—a part of the life? The New York children nearly all refer to incidents of street life and little or nothing from the school world appears in their papers.

The children from Worcester were entering on the age of adolescence and many of them live in a more cultured community. Their papers are better written and give evidence of a wider outlook on life. It is noteworthy that many of them, probably because written at this peculiar time of life, mention as faults—lack of observance of conventional usages. In fact by far the largest group of faults named by Worcester children is that put down as "bad conduct, with the idea of violation of social usages. Ignorance of etiquette, etc." Girls lead in this. They often describe the personal appearance of their subject

and charge breach of good manners. They differ from the younger children, also, in naming good qualities where they can do so and often find excuses for faults.

Let us now refer to the table of faults as a whole in response to the general question what makes a child mean in the estimation of his fellows? A comparison of this list with the faults that teachers find most serious reveals the fact that the child world is an almost entirely different world. Teachers are most affected by what obstructs the smooth running of their school machinery, children very largely by what touches themselves. With both a fault is that which conflicts with personality but in the case of the child it is personality in the narrow sense. Comparable to the overwhelming preponderance of inattention on the teachers' list are the charges of fighting, bullying and teasing in the papers of the children. This phase of egoism seems to have been the chief factor in making a choice of subject in more than 50% of all the cases. Indeed there are but few boys who do not mention it. The following cases will show the nature of this trait. The quotations are nearly all from children from 8 to 11 years of age, those as yet relatively unspoiled by civilization. Wherever the personal element is involved the language is vivid and picturesque because of the feeling.

In summer, when the boys would go swimming, he would duck them, throw mud on them when they would come out and make them go back into the water and wash off again, he would tie up their clothes and hide them.

In winter, when the boys would go skating, he would hold them and take their skates off and run around the pond teasing and tormenting them. He would not tease larger boys than himself or they would have whipped him.

I once met a boy at a corner when I was playing a game of foot-ball. He said, "If I did not let him play he would get his bull-dog after us." And the bull-dog bit a boy in the leg.

While he was in school he was always hitting some one and hurting them. When he was a little fellow he would throw rocks at you and aim at your head. When he was nine years of age he knocked a boy unconscious.

Bob delighted in jumping onto little boys and hurting them. Sometimes he would jump onto little boys who had large brothers and the boy would tell his brother and Bob would get licked.

On his way home from school he would hit little children to make them cry and he would go home and not tell his mother and think he was as happy as any one.

He would steal money and throw stones at every girl he saw, and would hit them in the face with sticks, and would try to pick a fight with every boy he saw.

He will throw stones at you when your back is turned. And will call you names. And will fight you, steal your things and hide them.

I am going to tell you about John J. He lives in a fine large house. His father was a doctor. He would tease and hurt little boys. He was always smoking. All the little boys were afraid of him. I did

not like him. I think boys that have what they want are not as good as boys that don't.

Affronted personality in some form inspires the selection of the meanest boy or girl more frequently than any other cause. 55% of the New York children give cases in which the personal element is directly involved. This is true of 31% of the Bloomington children and 8% of the Worcester pupils. The last named seem to have outgrown this stage, for while they frequently mention fighting, teasing or other egoistic traits, it is done impersonally. The line of sex in this matter is quite sharply marked. The stronger sex is given to fighting and bullying and the one who is meanest is so because he has "picked on" the writer, taken his cap, pushed him in the mud, etc., as shown above; the feminine counterpart of this trait is slander and backbiting. Girls fight by "telling tales," "calling names" and "talking about" each other behind the back. Of the 48 cases of this all but one were girls. The continual quarreling and making up so characteristic of little girls crops out repeatedly in the papers. The jealousy or pique felt by a girl at the moment seems often to determine her choice of a mean subject.

My playmate is the meanest girl I ever knew. We had a quarrel and after the quarrel we each went home. And she went out with her friend. And I met her again and she pushed me into some mud. And that is why I think she is mean. And the next day she went with her friend and then when her friend went home she came with me. She said her friend was mad at her so I went with her and the next day she went with her friend again and she passed me by and did not look at me or speak to me. And she was mad at me for a week and then she came to school with me the next day and she played tag with a girl and she said I could play. So we were glad after that.

Note the following from a nine year old: The meanest girl I ever seen. She would talk about people. She would make faces at you. She got angry at Sylvia and I. She would not speak to us and went to other children and talked about us and told them everything that was not true. And when I pass her she will talk to the children that is with her and tell them things that is not so. And then I went and told her grandma she lives with her. And she got friendly again and now she is angry again and I left her alone and she talks about me now.

Gracie, aged nine writes: The meanest girl I ever knew is Lucy D. She is nine years old. She is very mean. The very, very meanest girl on earth. Every time I see her I make a face at her and she does the same to me. But I mine it not a bit, I just let it pass. We were friends.

I know a girl that I don't like for she talks about other children and she tells things that are not true. And every day of school she will make fun of me. One day I heard that she was sorrow of what she had done.

She got mad at me and talked things about me. One day I was talking to another girl and she came along and told the girl not to speak to me.

The desire to dominate in the plays or to have one's own way in general causes a child to be disliked by others.

Once I was playing with a girl. I asked her to play a different game and she would n't so I think she is mean. And I asked her to walk up and down and she would not and that's what I call mean.

There was once a girl and she was the meanest girl I ever new she was playing tage and she said to the other girls "don't play tage any more" and the other girls said Yes and when they were running she pushed the other girl in the mud gutter and she fell and hurt herself.

I will call this girl Molly. She always wanted her own way and would get mad if you would not play everything she wanted to. One afternoon she went to play with some girls. They let her choose nearly every game until they got tired. Then they told one of the other girls to choose a game. The little girl chose something Molly did n't like so she got mad and hit the little girl and then ran home.

Refusal to accept the penalty of the game is another evidence of this spirit. Cases are mentioned of boys taking by force the marbles they have lost playing "keeps," and of others who quit while winning, which is just as mean. The same trait is found in girls. The following is a typical case.

She would never give it (in) when I say she was "it." She would never give it when she was tagged. She would always say "I was not." I think she is the meanest girl I ever knew.

Sometimes a child is called mean because of a failure to grant the writer's request.

One day as I was playing on the street I met a boy. I was thinking to have a game and there was know one around and he was the only boy there. When the boy seen that I could not get any one he would not play.

The meanest girl I ever knew. She would n't wait for me after school. She would n't come to the store with me. She would n't play tag with me. She was very rough in playing. I thought it was n't right for her not to wait when I wait for her every day. I did n't think it was right that she would n't come with me when she was only sitting on the stoop.

In some cases it is plain that the narrator is at fault. His actions may have provoked the "meanness" of which he complains.

The meanest girl I ever knew. I thought that girl was mean because she would not look at me. She would not look at me because I would not let her see my arithmetic. She would not look at me for a few days just on account of the arithmetic. Was n't that mean?

One can read between the lines in the following: "His nickname is pick a pie and he gets mad when any one calls him that and he says very bad words sometimes."

The keen appetites of children lead them to regard as mean those who refuse to share with them.

Examples. "She was a girl that was mean. Whenever she had a penny she would not give her playmates any of her candy." "If she had candy or anything she would not offer anybody a piece. She

would rather let them look at her before she would give them a piece. If you would ask her for anything she would say 'I have not got any.'"

The second largest group on the list is that of stealing and robbing. In most cases small thefts, but they serve to confirm studies in criminology which show that in early life the chief crimes are those against property.

Following closely upon this comes deception in its many forms. As we noted above this trait also stands high upon the teachers' list of faults. Children, however, have little sense of what a lie means and in their papers they seldom name it but merely give the account or incident involving it. The deceptions given cover a wide range from cheating in school to the lies told to magnify the importance of the individual.

Perhaps no other fault has so much power to shock the mind of the child, the girl especially, as swearing.

I often heard him curse his father or even his mother and sister and he seemed to think it manly.

He curses people big or little or dogs or cats, and everything that comes in his way. He will even curse his mother and grandmother.

He would curse his mother. He will call you names. And then run in the house. When they would have a horried girl he would fight and curse them.

Children notoriously "want their own way" and they find it hard to render obedience. One is therefore surprised at the strong undercurrent of feeling throughout the papers that parents and teachers ought to be obeyed and well-treated. Such statements as the following are common: "The worst thing I ever knew this boy to do was to throw a stone at his mother when she came to the window to call him in." "The girl who I think is mean, she answered my grandma back and that is why I think she is mean." Even the boy whom a large number of his grade call 'the meanest boy' chooses a subject who 'wount' mind."

The meanest boy is John F. He lives in Rockvill and he curses and runs away from the house and he never dos anything that his unkel tells him to do and his mother and father is ded, and his unkel taks car of him and he will not do anything atawl and his unkel heats to whip him becaus his mother and father is ded. he goes in No. 5 collige school rockvill and he is a very bad boy, his teacher has to whip him twis a day and sumtimes 4 times a day and he wount mind atawl and he was took up to the purfessors ofice seaverl times and he wount mind.

Judging from the replies many consider smoking as an act of meanness. The consequences of indulgence in the use of tobacco is sometimes given.

"But the meanest thing he ever did was to smoke cigarettes, and even worse than that he smoked pipes."

"I think cigarettes and drinking liquor of any kind and using tobacco will settle him some of these days."

"He was smoking a cigarette and chewing tobacco and to-day he is at Plainfield (the Reform School) for stealing and will go to the penitentiary when he is old enough."

Children resort to exaggeration in order to make out a good case. Here are some characteristic examples: "He uses a whole dictionary full of profane language in a day." "He would steal everything he could get his hands on," occurred a dozen times. "This boy tells the most lies I ever saw and he tells the most lies on me I ever saw." "If she got mad at any of her schoolmates or friends she never got through talking about them and they never would hear the last of it." "He is very very mean, I say he is mean."

Children who are fond of animals become much wrought up over the heartless acts of those who are still in the cruelty stage of life:

"He would catch people's chickens and pull their feathers out and let them go. He would tie a tin can full of stones or gravel to a dog's tail and whip it to make it run. He would catch two cats and tie their tails together and throw them across a clothes line for nothing else but just as he put it "Jest ter have sum fun."

"He is a very mean boy, he will run away from school just because he is to lazy to study. He will throw stones at chickens, cows, horses, cats, and all dumb animals he comes across."

"He used to fight his father's horses and run them. When I would go out riding he would hit my horse to see it run with me."

"He is very cruel to the animals and birds. He threw several cats out of the window."

"This boy would often take worms and small insects, run pins and tacks through their bodies, then fasten them to pasteboard. The insects often died unless some one discovered them in time for the boy always hid them in a place not often visited."

"His best fun is to tie a cat or dog up and whip him till he is dead or throw rocks at him till he dies."

The affection of young children for their teachers readily explains the choosing of one who makes the teacher trouble.

Daphne, aged 8, daughter of a University Professor, says: "Charlie N. is the meanest boy I know. He plays hookey all the time and his father had to be sent to jail. He makes faces at the children and the teacher, and makes very low grades in spelling. He cannot read well. Neither can he write well. His desk is very dirty because he is a dirty boy and never washes it. He tells stories too."

"The meanest boy I ever knew was very mean in school. He would be very saucy to the teacher and try to hit her and when the teacher would call on him sometimes he would n't answer her. He would make faces at the teacher and she would be mad at him and take him in the cloakroom and whip him. He would whisper and say funny things to the children and make them laugh. His name was Roy. Sometimes he would have to stand on the floor."

"He is so mean that he never has his lessons but it does no good to whip him he will just be meaner still."

The prevalence of the tribal instinct in boys is indicated by such expressions as, "He is always getting up a club of boys to do some mischief."

The irrelevancy of the child mind appears at times, as in the example of Margie, aged 10, who forgets the bad boy to tell of his little rabbit which had an eye scratched out by a cat.

In making out a case of meanness the children often attribute a number of mean acts to their subject but the following catalogue of sins is unique:

The meanest girl I ever knew. The girl slapped her brother. She would n't let her sister play. She stole candy. She soiled the curtains with ink. She tore her dresses and copied lessons. She pushed roughly through the crowd. She would n't share anything. She kicked the boy. She stole prunes. She spilt the coffee and broke the cup. She hollowed loud. She was a flatterer. She caught a woodchuck. She called names. She punched his feet. She pulled the girls hair. She threw stones. She broke the vase. She tore the calendar. She pulled the cat's tail and made him mew. She told falsehoods. She spilt ashes. She broke her sister's doll. She disobeyed her teacher. She followed her mother. She moved the hands of the clock. She broke the teacher's blackboard. She would not do what she was told. She broke the hinges on the door. She would not play with the baby and broke the baby's toys and rattles. She put crumbs on the floor.

III.

CHILDREN'S FAULTS AS SEEN BY PARENTS.

We here give a brief statement of the results of an attempt to ascertain what parents regard as faults in their children. Because of the small number of responses from parents little emphasis is placed upon this part of the study. Its chief value is for purposes of comparison with the tables of faults given in Parts I and II.

One thousand copies of the questions given below were put into the hands of parents.

1. Without consultation with any one, will you frankly name the most serious faults of your own children or grandchildren, or any troublesome traits which give or have given you most concern, (a) giving the essential characteristics of each, and (b) where possible, illustrating by incidents and examples.

2. All children do not have serious faults. After mentioning such faulty traits as do appear in your own children, as desired above, please state fully, from your experience and observation of children in general, what faults are to be regarded as most serious.

3. Give the sex of the child exhibiting the fault, and if any exist, any differences in the manner in which the different sexes are affected by the fault.

4. State if possible, the causes for the fault or faults.

5. State, as nearly as you can, the age when each fault first appeared.

6. State the age when the fault became most troublesome.

7. If afterwards less troublesome, what method of correction, if any, was used?

Great interest was aroused among those receiving the questions, but for various reasons, the principal one being the personal aspect of the case, only ninety-one parents responded. These were, for the most part, intelligent and consecrated mothers who, putting aside a natural reluctance to making public the inside of family life, gave conscientious and helpful accounts of their children. A mother who recognizes what is implied in a confession of faults in her children, says, "The faults of my own children are many, but I realize, as will you before you get through with your study, that the child is not to blame. You ask rather difficult questions of us, because we of the Mothers' Club realize that in telling our children's faults, we are acknowledging our own lack, or the children's lack, of home training."

No use has been made of the answers of question two above. It was noticed, however, that the faults attributed to children in general, were, as a rule, of a more serious nature than those possessed by their own children.

Tabulation of the faults of their children which they regard as most serious, gave the following results:

<i>Faults Named by Parents.</i>	Times named.
Willfulness, Self-willed, Stubbornness, Desire to have own way, Obstinacy, Setness of Purpose, Disobedience, Rebelliousness, Slow to Mind, Wanting to take his own time, etc.,	34
Fighting, Teasing, Quarreling, Bickering, Cruelty to Playmates,	13
Violent Temper,	12
Selfishness,	12
Deception in its various forms,	18
Stealing, No sense of the property rights of others,	5
Lack of application to study, Hatred for Books, Laziness, Idleness, Dullness, Indifference, Lack of Self-confidence, Lack of Ambition, Easily Discouraged, Don't care spirit toward learning,	16
Carelessness in putting away playthings and tools, Thoughtlessness, Heedlessness, Shiftlessness,	11

In addition to the above, the following miscellaneous list of faults was given:—Swearing, abusive and insolent language to parents, a superior manner toward other members of the family, rudeness, scolding, sauciness, greediness, argumentativeness to attract attention, desire for notice, too ambitious with slight envy, jealousy of other children, whining, sulkiness, negative attitude toward everything, too much pride, undue self-esteem, sensitive to slights, not affected by praise or blame, too much play of imagination, imitation of what is harmful and bad from

other children, running away, desire to visit continually, disposition to be out of nights, uncommon mischievousness, curiosity, spying into things, repeating things heard, wants good time to the exclusion of everything else, restless desire for something new, nervousness, somnambulism from eating too much candy, no will-power, untidiness.

From the parents' list it will at once be seen that in the children cited in these papers little else than "selfish" traits appears. The different standpoints of the home and the school are herein made evident. In the home attention is largely centered upon the conduct side of life, while with the teacher the intellectual phase is uppermost. The difference appearing here is, perhaps, in part accounted for by the fact that in many cases the parents are reporting children below school age. No doubt remains, however, that the parents' problem is in dealing with the budding will of the child.

Many of the mothers' contributions deserve publication because they show so well the results of wise experience; that is not possible here, however. Only sufficient extracts are given, therefore, to characterize the conditions referred to in these homes.

Of willfulness one mother says: "In my child I would hardly call it a fault, rather a characteristic. It is a setness of purpose to carry out any plan she has set her mind on. Good, ultimately, but very troublesome in a child whose judgment is not to be relied upon. As an infant she showed impatience and fretfulness at any interference of will." Another: "I think the most serious fault we have found in our baby is that of willfulness, and when corrected a disposition to talk back to us. She has a quick temper but it is not of long duration." A third says "I notice a desire to have their own way, a fault we all possess but one very hard to overcome in children. This is a trait of both sexes."

The first appearance of the traits mentioned in this group is variously stated. The large majority of the expressions of the parents indicate its appearance during the first year of life. Characteristic expressions used are, "as an infant," "as a child in long clothes," "as soon as able to express desire," "ten months," "fourteen months," "six months," "two years to two and a half years," etc.

The causes assigned for these faults are, as we should expect, hereditary and environmental. A grandmother says, "I have a little grandson whose greatest fault is disobedience and abusive language and he is only seven years of age. His mother is very amiable, unusually mild and lovely, but she made an inharmonious marriage and she feels that the child inherits these faults from his father."

Other typical expressions are, "inherited and developed by over indulgence," "the only child and petted by so many," "youngest child and is indulged," "not allowing his will to be crossed," "fault is my own by at first allowing the child to use his own pleasure in regard to time."

Among corrections used, were the following: "Making my children feel that I have their welfare at heart," "talking to and shaming her," "showed her how others regarded her," "corrected by the development of reason and judgment." A full account of the correction of a case of this kind is here given:

"I find the most serious fault of our child to be a determination to have her own way and a display of ill-temper when she finds that she must obey the requests that are made of her. Particularly is this true when she is asked to relinquish any playthings to those with whom she is playing. It does not seem to be selfishness as much as to have her own way, for on some occasions she is quite willing to share all she has; especially is this true of anything in the way of candy or nuts. The fault first appeared at the age of two years. The cause for the fault seemed to be that she had no children with whom to play and was humored too much by parents, relatives and friends. We have used several methods to correct it and found that the best was to have her, whenever she manifested an ill-temper, sit on a stool in a corner facing the corner until she could say something pleasant to us. At first she was some time in making up her mind that she was in a good humor and it was some time before the method took effect, but each time we would insist that we never acted that way to her and that until she could smile at us and look cheerful we did not want to see her face. It has worked nicely. She seldom has to sit in the corner and I think she obeys us much better. And as to displaying ill-temper, she has almost ceased it entirely."

The teasing and bullying period of life is a trying time within the home. The following is a typical case:—"My little boy had the habit of teasing other children, oftentimes pinching them to see them cry. If there were no children around he would at any time slip up and pinch older people and would not let go immediately but hang on, and the more he was told to stop the harder he would pinch, all the time laughing." This trait seems to appear in children between the years of three and five, though one mother says it showed itself as soon as old enough to resist the others. Causes assigned are such as, "inborn," "keeping company with bad children," etc. Violent temper appears at a very early age. Indeed some of our correspondents say in infancy. In its worst form it is often the sign of a neuropathic disposition. Heredity and teasing by other children are the causes most frequently assigned.

"I had two children who had very bad tempers. The boy exhibited this fault from early babyhood, the girl at about three years of age. The cause of the girl's temper was being tormented by other children."

"My little girl possessed a very violent temper. Not only did she give way to it on slight provocation but she seemingly gave way en-

tirely and without reserve. It showed most plainly in her play with her brother. When angry with him for teasing or opposition she was likely to throw, and with intent to hit, the thing nearest to her hand. This temper did not exhibit itself in infancy. She was remarkably sweet tempered as a baby. Still I could account for it only as an inherited trait, and feared that as such it might be permanent. My fears happily were groundless. It was much less noticeable at adolescence, and at maturity she is an even-tempered and self-contained young woman."

Selfishness, in the broad sense, covers all the traits so far mentioned. It asserts itself in various forms. We quote two examples:—"Selfishness—manifested in desiring to be captain, driver or leader in all the games. Taking the best playthings, taking the lion's share of sweetmeats, etc. Desiring to be held or petted to the exclusion of the other members of the family. To be favored in going with father or mother when taking a drive or making a visit. It is most often exhibited in the younger members of the family." "One little girl seemed to fear that I thought more of the other one than of her. The fault was shown when very young, not more than one year old, but was almost entirely overcome before sixteen."

Deception stands very high on all three lists. A majority of the parents fix the time of its appearance at about two years. Examples:—The most serious faults are falsifying and disobedience—lying often resorted to to shield from consequences of willful disobedience—deceiving in various small ways." "The most serious fault has been a tendency to cover up her failings by deception." "I am the mother of three children. At about the age of two it seemed natural for each child to tell wrong stories and to take what did not belong to it." "The most serious fault that I have noticed in my own children and in children in general, is their habit of exaggeration and prevarication—in plain words, lying." "I am both a mother and grandmother and have had a very general knowledge of children all my life, and to my mind the most serious fault of childhood is deception in some form or shape."

Causes:—"Hereditry," "As near as I can conscientiously state, his father's family over," "Directly traced to his association with other children," "Just for the pleasure of the thing," "It is trained into children oftener than not by the eternal doubts of parents and teachers." "From parents telling children what they soon learn is false, as that medicine is good when as soon as they taste it they know it is not." "Where children have been punished for telling the truth they get in the habit of lying to avoid punishment," "Parents who lack patience and judgment punish their children so frequently that the children early learn to lie," "To avoid going to school," "Prohibition and suppression."

Methods of correction:—"Moral suasion," "By presenting the example of a truthful boy," Appeal to conscience "through talks of the dear, kind Father," "Paid no attention and she outgrew it." "Asking him to 'be sure' every time he told anything."

The faults of intellect, such as dullness, lack of application, etc., require no word of comment. What was said regarding them when the teachers' list was under consideration applies here. The causes assigned are much the same also. In one case, however, a candid parent says the cause of dullness was, "Too much cordial when a baby, I suppose."

What the parents say of carelessness confirms the remarks made in Part I regarding the need of early training in the formation of habits of care in the child.

CONCLUSION.

The study serves to emphasize the statement made in the introduction that a norm for judging faults can have relative value only. There will be as many lists of faults as classes of people making them. St. Augustine gave as the seven deadly sins: Licentiousness, intemperance, avarice, sloth, anger, envy, and pride. This is the order in which Dante, later, finds them punished in the *Inferno*. It would be worth the effort to see how nearly a list of faults given by a large number of modern theologians would conform to this.

It remains to note that, aside from furnishing anthropological material, the chief value of a study of this kind must be of an indirect nature. It is admitted that no definite decision can be reached, as the result of the study, as to what constitutes a real fault. The faults given by each of the three classes are merely the reactions of a class, and the tables given are merely census tables of what each of the classes reporting regard as faults or mean traits. These numerical statements may, however, be safely taken as indicating the degree of seriousness with which the alleged traits are regarded; as such they have real value. The testimonies, of which typical cases are quoted, reflect accurately the minds of those contributing. Truthful pictures of certain traits of childhood are presented and incidentally certain interesting sidelights are thrown on the writers. The teachers who furnished the material for the first part of this study are above the average in their profession, yet one cannot read their contributions without feeling impelled to enter a plea for a closer study of child psychology.

The parents, too, are typical of the better class, yet they recognize the fact that the "mother instinct" may fail of wise direction, and many frankly stated their need of such help as psychology could give in their important task.

This study was begun several years ago when a student of Clark University, at the suggestion of Dr. Wm. H. Burnham, and I wish in closing to acknowledge my indebtedness to him. I wish to thank Superintendent Balliet for advice and suggestion and also to thank those superintendents and others who helped in the gathering of material. I desire also to express my gratitude to President Hall for his interest and help in the work and especially for suggestions on the wider phases of the subject not herein included.

A STUDY IN JUVENILE ETHICS.

By LINUS W. KLINE,
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The following questions among others inspired the present study: (1) What is the relative importance of city and of country in creating and shaping ideals of occupations, and of character? (2) Upon what conditions and mental processes do children's judgments of right and justice depend? (3) Are children as selfish as the popular mind and some psychologists declare? (4) What is the nature of the individual strength and the prevalence of sympathy and pity among children?

The material for investigation consisted of answers made to a questionnaire¹ prepared under the stimulus of the above queries. I need hardly say that the investigation led into other problems as well.²

The following syllabus was sent to the cities, villages, and county public schools of the State of Virginia and to two grammar schools of Duluth, Minn.

A STUDY IN JUVENILE ETHICS.

To the Teacher:—Provide each child with pen and paper. Read the story and directions three times. Permit no communications. Please have the pupils give their age, sex, and the occupation of their parents. After writing this information have them do the three following things:

1. To write briefly what they wish *to be* and *do* when they grow up.
2. To tell who had the best right to the pony in the following story,—the father, Henry, or the neighbor's son, and give a reason: "Henry's father gave him a pony for a birthday gift, but Henry often forgot to give it food and water and neglected to rub and curry it. By and by it grew quite poor and shabby looking. His father took the pony and gave it to a neighbor's son."

¹I have no defence to offer for using the questionnaire method in such an investigation. The results obtained by those using it will either vindicate or banish it from scientific circles.

²The following paper is really three in one. But since all three bear directly on the problems of altruism, sympathy, etc., in childhood, it is thought best to present them as one paper.

3. To finish the following story and have it end as they think it should: "It was Pearl Nelson's first day at school. She had looked forward to it with delight, but now she was frightened as she went into the schoolroom filled with strange faces. The rows of desks looked so straight and uncomfortable, and she began to think it would not be very nice after all to sit in one all day long. The little boys and girls all seemed to know each other and she did n't know any of them but Stella May. Surely Stella would speak to her. But no, Stella was very smart in a new frock and hat, and did not notice the poor child in her faded dress. A big lump rose in Pearl's throat. She noticed all the other children had prettier clothes than she had. She hung up her plain little hat on a peg in the hall. The teacher gave her a seat and then did n't notice her any more. The lump in her throat grew larger. She felt as if she would choke. When the bell rang for recess, she ran quickly out of the room, snatched her hat and started home. She did not notice that she had taken Stella's smart new hat instead of her own. But Stella saw it in a minute. She took Pearl's hat, and with several girls ran after her."

Two thousand five hundred ninety-four children returned to me individual papers. Of this number one hundred and thirty-two were negroes; these were not used owing to the limited number, thus leaving for study 2,384 individual cases. Of which number 1,469 were girls and 915 were boys.

The first rubric required two things: (1), to tell what they wished TO BE; (2), to tell what they wished TO DO. Two thousand and sixty-eight individual papers were received in answers to both questions. Of this number 1,537 expressed themselves on what they wished TO DO only, 64 declared themselves on their preferred ideals only, while 467 chose both activities and ideals. These figures show that 26% of all the children chose ideals. 28% of the girls chose ideals and 22% of the boys. That only every fourth child (26%) made a choice of an ideal is due in the first place to the fact that a number of children had not as yet differentiated ideals as pertaining to character from activities and occupations. The girl of 10 who says, "I wish TO BE a dressmaker and make dresses," or the boy of 8 who says, "I wish TO BE a preacher and speak the word of God to sinners" has evidently made no such differentiation. Being and Doing are one with them. In the second place, a number of children are attracted more readily to the active side of life to the neglect of its ultimate aims and ideals. It would seem that both of these classes had no ideals as applied to character. And in the third place, a large number, doubtless, thought that they were to express a choice in activities only,—that being the easier of comprehension.

The fact, however, that 531 pupils including all ages from 8 to 18 years (see Table II), did declare themselves directly on both ideals and activities makes it evident that the differentiation is not beyond the child mind, and raises the suspicion that those who did not do so either had no ideals to declare or were too readily attracted to the occupation phase of the subject. Although a larger percentage (see above) of girls than boys named ideals, yet the former chose only five-sixths as many different kinds. (92) ninety-two different activities were chosen. Of this number 62 were peculiar to the boys, 16 to the girls and 14 were common to both boys and girls, *i. e.*, the boys named (76%) over three-fourths of the activities. This finding agrees with Taylor's (State School Rp't N. Y. 96.), and with Miss Willard's, who (Studies in Ed.' p. 243) finds the boys naming two-thirds of all the activities. We naturally expect boys to choose a greater variety for the obvious reason that their field of choice is larger and richer. A detailed examination of the activities selected by the boys shows that 45 out of the 62 could be and are being performed at present by women. (See list of activities.)

The papers were divided into country and city children, and the following table shows their line up on the questions of preferred life activities and ideals:

	ACTIVITIES.			IDEALS.		
	Common.	Not Common.	Totals.	Common.	Not Common.	Totals.
City Girls,	1,154	15	16	6	13	
Country Girls,	139	15	1	6	0	19
City Boys,	663	25	44	3	18	
Country Boys,	112	25	8	3	3	24

(Common refers to those activities and ideals chosen by both city and country children.)

ACTIVITIES (COMMON).

Boys: Artist, blacksmith, book-keeper, carpenter, civil engineer, doctor, drummer, editor, engineer, electrical engineer, florist, farmer, lawyer, merchant, mechanic, musician, plumber, preacher, sailor, soldier, statesman, teacher, telegraph operator, undertaker.

Girls: Artist, bookkeeper, clerk, elocutionist, housekeeper, married, missionary, music teacher, seamstress, stenographer, teacher, trained nurse, traveller.

ACTIVITIES (NOT COMMON.)

Boys (city): Actor, architect, author, banker, barber, bookbinder, butcher, brick-mason, business man, clerk, contractor, chemist, dentist, druggist, detective, fisherman, hobo, tramp, horse-jockey, insurance agent, journalist, military offi-

cer, miner, manufacturer, missionary, naturalist, naval officer, painter, photographer, poultry yard, postal clerk, priest, printer, prize fighter, R. R. man, real estate agent, ship builder, stenographer, stock raiser, superintendent, tailor, tobacconist, travel.

Boys (country): Cigar maker, depot agent, fireman, hunter, post master, shoemaker, teamster, telegraph messenger.

Girls (city): Actress, author, bookbinder, cook, doctor, do what I please, druggist, inventor, laundress, milliner, old maid, optician, printer, telegrapher, telephone girl, travelling companion.

Girls (country): Worker of the Lord.

IDEALS (COMMON.)

Boys: Christian, good, honest.

Girls: Altruistic, Christian, cultured, good, honest, noble.

IDEALS (NOT COMMON.)

Boys (city): Cultured, congressman, do my best, get a home, good time, go to heaven, Gov. of Va., gentleman, fraternity, great man, healthy and strong, inventor, nice and polite, rich, well thought of, Pres. of U. S., success, smart.

Boys (country): Help others, kind, true.

Girls (city): Beauty, do my best, famous, generous, healthy, independent, lady-like, obedient, popular, society life, successful.

A comparison of the country children with the city children on the above lines shows that the country children selected only one-half (49 country—100 city) as many activities and not quite one-third as (12 country—40 city) many ideals as their country cousins. This might be interpreted as showing a greater conservatism among country children. Perhaps it is nearer the truth to say that it reflects a narrower range of knowledge in such matters on the part of country children. The country child may have heard of such activities as "contractor," "stenographer," "tailor," "barber," "bookbinder," etc., but he has never seen them in the concrete and they are therefore more or less unreal to him.

It is suggested in this connection that the small range of choice among the girls in both activities and ideals is not so much an expression of conservatism as it is of an unfamiliarity with the larger field of activities and ideals well known to their brothers. The fact reflects a difference in training and experience rather than any innate conservatism. (See Table I.) The number of girls is nearly twice that of the boys, yet they named only one-fourth of the activities. The returns show that they are more likely to give a reason for their

choice. 19% of the girls and 16.8% of the boys gave a reason for their choice.

Of the 2,068 who made a choice of activities 311 gave either a selfish or an altruistic motive as a reason. They were purposely not asked to give a reason, on the grounds that if any did do so it would more likely, than otherwise, be spontaneous, definite, and free from any sort of deception. For these reasons more than the usual value is attached to the evidence.

Their answers divide into three parts: (1), those which can not be interpreted as either altruistic or selfish, *i. e.*, they are neutral or indifferent; (2), those who assign an altruistic motive as a reason for their choice, and (3), those who justify their choice by a selfish motive. Typical answers of the different groups follow in the order named.

Indifferent Group.

1. F., 8. "I want to go off to school and come back and teach."
2. F., 12. "When I am grown I want to be a central girl in the telephone office."
3. F., 12. "I wish to be a type-writer. If not needed I would like to be a good housekeeper."

TABLE I(A).

Of Boys' Occupations Grouped into Kindred Classes.

AGE.	NO.	%	Trades and manufactures.	Farmer.	Professor and teacher.	Doctor.	Lawyer.	Less common professions.	Missionary and preacher.	Army, navy, Police Sup't, postal service.	Artist, Musician, Actor, Orator.	Prize fighter, horse jockey, hobo, fisherman.	Merchant.	Commerce.	R. R. Man and travel.	Technical.	Stock and poultry raiser.
8	18	16	11	5.5	5.5	5.5	0	11	11	0	0	22	33				
9	16	0	18	0	12.5	18	0	0	6.2	6	00	25	37				
10	41	9	13	0	11	13	0	6.5	11	2.5	0	13	27			4.5	
11	78	12	5	2.5	8.8	11	2.5	5	7.5	5	0	14	28		10		
12	146	13	2.7	1	11	8.8	2.7	4.7	6	3.4	.6	11.6	24.6	5.4	6		.6
13	166	8	4	1	15	7	6.6	2.4	7	4	.6	9	20	4	20	0	
14	172	11	2.9	.5	10	5	6	2	8	2.9	.5	5	15	2.9	13		2.7
15	95	9	0	1	9	2	3	1	9	6	2	8.4	23	1	21		
16	28	21	0	1	11	11	7	7	3	0	0	0	18	3	18		
17	6	0	16	1	16	16	16	0	0	0	0	0	0	16	0	0	
18	2	0	0	0	0	50	0	0	0	0	0	0	0	0	50		
Total	771	11	4	1	11	7	4.4	3	7	3.7	.6	8.7	21.7	3	13		.7

4. F., 12. "I have not decided at present what I would like to be,

but I think I would like to be a musician or a scientist, and the height of my ambition is to be a Ph. D. of Cornell University."

5. F., 14. "I wish my work will be that of a trained nurse."

6. F., 15. "First of all I wish to be a good and noble christian woman, for this is the first duty we owe our Creator. I would like to be well educated and an accomplished musician. I wish when I have finished my studies here at the High School to continue them in some good Female Institute, graduating with honor and credit. Further than this I have not thought what I would like to do when grown."

TABLE I(B).
Of Girls' Occupations Grouped in Kindred Classes.

AGE.	Teacher.	Housekeeper, Wife, Cook.	Old Maid.	Seamstress, Milliner.	Author, Inventor.	Artist, Actress, Musician, Educator.	Telephone, Telegraph, Clerk, Typewriter, Book-keeper, Stenographer.	Doctor, Nurse.	Printer, Book-binder, Laundress.	Missionary, Help Par-ents.	Do what I please.	Druggist.	NO. AT EACH AGE.
	%	%	%	%	%	%	%	%	%	%	%	%	
8	67.5	7	0	5	0	10	2.5	0	0	5	0	0	40
9	57.0	0	3	5.4	0	19	3	5.4	0	5.4	0	0	37
10	70	7	0	3.5	0	15	9.7	0	0	3.5	0	0	57
11	52.0	5.3	0	2	3	11.8	15	3	0	3	2	0	93
12	43.6	5.8	.5	12	1.4	18	15	1.9	0	7.2	.5	0	206
13	36.0	1.6	.3	9.3	2.2	17	22.6	1.3	0	2.2	1.9	0	309
14	30.6	3.2	0	7.3	2	15.9	22	3.2	1.2	6.9	3.2	0	245
15	26.0	1.7	0	6.8	1.1	26	17	4.5	0	2.3	3.9	.6	176
16	19.7	5.2	1.4	6.6	1.3	14.4	26.3	6.6	0	7.9	2.6	0	76
17	40.0	11.4	0	2.9	0	14.3	17.1	5.7	0	5.7	0	0	35
18	53.0	7.7	0	0	0	7.7	23.1	7.7	0	0	0	0	13
	486	49	5	98	21	221	236	37	3	50	26	1	1287
Total	37.7	3.8	.4	7.6	1.6	17.1	18.3	2.8	.2	3.8	2	.08	

8. M., 14. "I would like to be a dairy farmer. I like to be around cows and I can usually get along very well with the animals."

9. M., 13. "I wish to be a carpenter and understand my work well."

10. M., 11. "I wish to be a noble man and a noble character, not chew, nor smoke nor drink. I want to be an engineer."

11. M., 11. "I wish to be a christian; and second, I wish to be a lawyer if I have enough sense."

12. M., 12. "When I am a man I want to be a farmer. It is the happiest life in the world. I want to drive pretty horses. I am going to fish when I get grown in the country. You see the apple blossoms. I want to hunt when I get grown. I can run birds now."

13. M., 10. "I had rather be a farmer and raise wheat and grass and *not* tobacco."

14. M., 11. "I wish to be an honest, intelligent man well educated, and a merchant like my father."

15. M., 11. "I want to be a printer and make proofs."
 16. M., 16. "I intend to adopt a profession, but which one I have not yet decided. Whether it be low or high I shall make it honorary before God and man."
 17. M., 17. "I would like to be a lawyer and defend my clyant."
 18. M., 12. "I want to be a machanical engineer because mechanics always had a fascination for me, I love to look inside of a locomotive or anything that has machinery about it. I want to go about this country and others so as to study all about it."

Altruistic.

19. F., 8. "I want to be a teacher and help my parents."
 20. F., 12. "When I am a woman I would like to be an artist, so I could paint fine pictures, and send them to the asylums, and to people who cant go around and see places."
 22. F., 8. "When I grow up I want to make fine dresses because Mamma is a dress-maker and I do not want her to be a dress-maker, because I am afraid she will get sick. I want to make dresses for the college girls."
 23. F., 14. "I would like to be a missionary and go to foreign lands to teach the heathen."
 24. F., 15. "It is my desire to be an artist. I would like to paint pictures and sell them for high prices. And if I made a good artist and plenty of money I would help the poor and helpless, give plentifully to churches and hospitals. I would do all the good I can."
 F., 15. "I want to be a trained nurse so I can help to wait on the sick."
 25. F., 14. "I wish to be when I am grown up an honest business woman and a good housekeeper and to do all the good I can to make others happy in every way."
 26. M., 10. "I wish to be a preacher and speak the word of God to sinners."
 27. M., 11. "I want to be in the army or navy when I am grown, because I shall have a chance to serve my country, and to grow up sturdy and strong."
 28. M., 12. "I want to be a good noble man, a merchant. I want to take care of my mother and father when I get grown and they get old."
 29. M., 13. "I wish to be a doctor and shall always try to see the poor people first."
 30. M., 14. "I wish when I am grown to be a first-class stationary engineer and also a decent, respectable young man of good habits. I also expect to take care of my mother, father and sisters as long as I am able, so far as getting married I cannot tell yet, and one other thing I wish to remain faithful to God as long as I live."
 31. M., 17. "I would like to be a man of fine character and assist in some religious work."
 32. M., 13. "When I finish my education, I wish to be a teacher; so as to help others out in their education."
 33. M., 13. "I hope to be a Sup't of a R. R.; so that I could make enough money to build an institution for the blind and be of some good to the world."
 34. F., 13. "When I am grown I should like to be a comfort and stay to my mother and father, and provide a home for them in their old days, that is if the "Good God" wills it so. I would not care for riches and elegance, but a comfortable, neat, and tidy dwelling, and make life happy and pleasant for them. After we became settled I would take them on a trip to the "Old World," and visit the homes of

our ancestors, after there we would settle down and live in our cottage until God forbids, and takes them away."

Selfish Group.

35. F., 7. "I want to be a rich married lady. I want a pretty husband and I want people to bring me flowers."

36. F., 7. "When I get grown I want to be married and live in a pretty house and I will send out my washing."

37. F., 8. "I want to be a rich lady. I do not want to do anything."

38. F., 8. "I want to be a store-keeper because I love candy then I can get as much as I want."

39. F., 9. "I wish to be a rich lady and have a summer home in the country and a winter home in the city."

40. F., 9. "If I am poor I shall work and if I am rich I shall not do so."

41. F., 10. "When I am grown I want to be a school teacher, because I think it is a nice occupation for a woman."

42. F., 12. "I would like to travel to various parts of the world. I would like to have a summer home in the mountains of Va."

43. F., 15. "I would like to be very wealthy and travel all over foreign countries. I would build me a fine country residence and furnish it very fine."

44. F., 15. "I would like to be a rich man's wife, and live very happy."

45. F., 18. "I wish to be well educated, then teach and travel around on my money and have a good time."

46. F., 15. "My desire is to be wise and do something that nobody else has ever done."

47. M., 13. "When I am a man I want to be a post-master so I can look over the letters, and live in New York."

48. M., 13. "I want to be a sailor. After receiving a good education I would go into the navy. I think a sailor has the jolliest time in the world roaming over the deep."

49. M., 15. "When I am a man I want to be a book-keeper, because there is good pay in it, then it is nice work."

50. M., 12. "When I am grown I wish to become a good man. I have not yet decide what I would like to do. I would not like to be a doctor, nor a preacher. A lawyer has a very good place if he does not tell too many stories on the case he is trying."

"I would not like to work on the train because the men do not get a very good salary, and besides, their lives are nearly always in danger. A soldier in the army is in danger too. I would like to own a farm and live on it and have my business in a city not far from my home."

51. M., 16. "I wish to be a mechanic and do the work that pays the best."

52. M., 16. "I wish to be a lawyer in my native State; and I would like to be a senator."

Eight per cent. of the 2,068 children were altruistic and six per cent. selfish. Among the 775 boys 9% were altruistic and 7.8% were selfish. Of the 1,293 girls 8.2% were altruistic and 5.7% selfish. From these returns, then, it appears that the altruism of the boys and girls is about equal and that the altruism of both boys and girls from 7 to 17 years inclusive exceeds their selfishness. Particular attention is called to the fact that the higher percentages of altruism are not confined to the adolescent years (see Table II A and B).

Altruism is in excess of selfishness among the city boys at ages 8, 11, 13, 14, 16 and 17; selfishness is in excess among the same class at ages 9, 12 and 16. Among the country boys, there are more altruistic at ages 7, 8, 10, 11 and 12 than there are selfish ones. The reverse is true of boys of the same class at ages 13, 14. Among the city girls, there are more altruistic than selfish from ages 9 to 15 inclusive. At seven the two impulses balance, while at 8, 16, and 17 selfishness predominates. Among the country girls, ages 8, 13, 14 and 16 show an excess of altruism over selfishness, the reverse is true for the same class at ages 10, 11, and 12. There is no evidence either way at ages 9 and 15. The country boys show a higher percentage (14%) of altruism and a lower percentage (5%) of selfishness than the city boys—percentages for the latter being 8.3% altruism and 6% selfishness. The country girls are more altruistic (10%) than the city (8%) girls, they also show a higher percentage of selfishness (see Table II). The literature on altruism *vs.* selfishness, pronounces the pre-pubertal child selfish and the adolescent altruistic. Published papers on "Children's Ambitions,"¹ "Children's Hopes,"² "The Collecting Instinct"³ and "Psychology of Ownership,"⁴ give the impression that the pre-pubertal child is altogether selfish, that the selfish instincts control the majority of his activities. This uniform verdict, I am persuaded, is due to the fact that they were all studies made exclusively on "selfishness." These investigators consciously and unconsciously magnify the subject of their papers. The altruism of childhood—pity, sympathy, self sacrifice, generosity, have all yet to be studied. When the evidence is all in on this phase of child life, we shall doubtless have to modify our conceptions of the intensity and extent of the selfish instinct. The present investigation points unmistakably in that direction. Furthermore, the interpretation of the large percentage of boys in certain localities who choose money making occupations as reflecting innate selfishness is highly questionable. Training and environment will fully account for such phenomena.

My attention was attracted to the frequent declaration made by the country girls that they desired to do *this* or *that* "in order to be independent," "in order not to be dependent upon others," or "in order to make my own living." An "official"

¹ Willard, H. M.: Children's Ambitions, Studies in Ed. pp. 243-252.

² Taylor, J. P.: Children's Hopes, Rep't State Supt. Pub. Ins., N. Y., 1895-96.

³ Burk, Caroline Frear.: "The Collecting Instinct," *Ped. Sem.*, July, 1900. Vol. VII. pp. 179-207.

⁴ Kline and France: "The Psychology of Ownership," *Ped. Sem.*, Dec. 1899. Vol. VI. pp. 421-470.

count showed that 10% of the country girls and 1.8% of the city girls had expressed themselves on the matter of independence—an interesting item for the sociologist and the statesman.

TABLE II (A).

Of City and Country Boys from 7-18 Years showing the Percentages of Imitation, Selfishness, Altruism.

AGE.	No. City.	No. Country.	% EXPRESSING IDEALS.		% IMITATION.		% SELFISHNESS.		% ALTRUISM.	
			City.	Country.	City.	Country.	City.	Country.	City.	Country.
7	0	4		50	0	0	0	0	0	50
8	12	6	16	50	32	33	8	0	16	33
9	11	5	18	20	27	20	18	0	9	0
10	31	13	16	7	19	38	0	8	0	15
11	40	38	45	26	12.5	21	10	2.6	12	16
12	138	8	21	62	13	25	6.5	0	3.6	12
13	157	9	14	0	13	0	6	22	9.5	11
14	160	12	23	16	7	16	7.5	16	8	14
15	85	10	23	10	16	0	17.5	0	9	0
16	25	3	36	0	8	0	4	0	24	0
17	4	2	0	0	0	0	0	0	0	
18		2	0				0		0	
Total	663	112	22	25	13	18	8	5	8.3	14

18% of the country boys and 13% of the city boys chose the occupation of their fathers. To speculate: the greater imitativeness in the country lad may be due to conservatism, to a narrower range of knowledge, and to a more intimate acquaintance with his father's occupations and interests. To many a city boy his father's occupation is unknown until he is quite a lad, and even when grown his acquaintance with it may be very vague. The city boy, therefore, is less likely to be attracted to his father's life work.

Teaching is by far the favorite occupation with girls at all ages without exception. The highest percentage occurs at 10 (70%) and the lowest at 16 (19%). Miss Willard and Mr. Taylor both find that teaching gives way to dress-making at 13. These studies were made some ten years ago when the percentage of women teachers was less and the teaching profession held in lower esteem than at present. The number who selected teaching for the sheer love of it, for a larger opportunity "to serve and help others," for "the good I might accomplish," is small compared with those who choose it because it is "nice," "respectable," because it brings social prestige, and furnishes a convenient and comparatively sure means to a more prosperous, highly esteemed and cultured life. They say that they prefer it because it is "easy," "lady like," "genteel," "I shall be well liked." Some of this type express

TABLE II (B).

Of City and Country Girls from 7-18 Years showing the Percentages of Altruism, Selfishness and Independence, etc.

AGE.	No. City.	No. Country.	% EXPRESSING IDEALS.		% INDEPENDENCE.		% SELFISHNESS.		% ALTRUISM.	
			City.	Country.	City.	Country.	City.	Country.	City.	Country.
7	0	6					33		33	
8	26	10	19	30			9		4	10
9	33	4	12	50			5.8		8.8	
10	36	21	16	43			8.5	4.6	11	
11	81	12	18	8	5	9	2.4	16.6	6	
12	193	13	20	38		8	3.7	8	7.9	
13	302	6	23.8	33	1	16	3.9	16.6	6.9	33
14	233	12	30.9	42	1.5		5.4	16.6	11.3	25
15	163	13	34	15	2.4	8	6.7		7.9	
16	63	13	41	69	.3		16	8	14.3	23
17	21	14	38	50	9			64	14.3	28.5
18	3	15	33	50				10		10
Total	1154	139	26	38	1.8	10	5.5	8	8	10

a desire to teach so long as they "have to," or until they "get married," or "until sufficient money is earned to defray the cost of an art or musical education, or of a trip to Europe," etc. The following table shows that teaching as a life occupation does not become an ideal until 12, while it is chosen as a means to "something better" at the age of 10. Ages 8 and 9 gave no reasons save a few of an imitative sort.

Ages,	10	11	12	13	14	15	16	17	18
Teaching as an ideal,			2.6%	7.4	4.8	6.9	11	28	
Teaching a means or a trade,	10%	7.1	6.5	5.5	12.8	4.6		66	16

The attitude of these school girls toward teaching as a vocation is a faithful picture of its present status among their grown up sisters. Teaching has at last become altogether respectable. The daughters of our worthiest families in every section give some of their most buoyant years to the work. And this is a decided gain to the public free school system. One of the virtues of the Jansenists was their advocacy of woman's active participation in education, and from that time to this the gradual growth of the feminine ideal in education has proved an inestimable blessing to the child and the race.

Now all this rings true, and who would gainsay it? Yet a survey of actual conditions persuades one that "It is too much of a good thing." A certain amount of electricity is a wholesome therapeutic, but over 500 volts sent through the human body is dangerous to life. The phenomenal high percentage

of women teachers, the conditions favoring a still higher increase, and the rapid exit of men from the field of primary and secondary education may justly provoke apprehension among educators and parents. In some sections the teaching force is composed entirely of women, the majority of the school officers and several members of the school board are women. The influence of a male teacher is not encountered until the high school is reached, and even then for only a small fraction of the time, owing to the preponderance of women in the faculty. This condition may in some measure account for the small percentage of boys completing the high school course. Even boys in the grammar grades are known to quit on account of the lack of male teachers. I have witnessed a few such cases.

No one desires to alter the ratio of female to male teachers in the primary schools. Experience has demonstrated woman's admirable fitness for this work. The zone of desirable change in favor of a higher percentage of male teachers is in the grammar and high schools. Preaching and agitation, however, will not change the present undesirable ratio. The returns show (see Table I A and B) that one boy out of every hundred chose to be a teacher. The teaching profession must be made more attractive from several standpoints before our more promising young men will devote the best of their years in its service. Professor Munsterberg has made some timely observations in this connection.¹ "Social honor, large income and the delights of productive work draw to German Universities the best material. Nothing similar stands as yet as a temptation before the young American. Our best young men must rush to law and banking and what not. (See Table I a of present paper on this point.) The American is not anxious for the money itself; but money is to him the measure of success, and therefore the career needs the backing of money to raise it to social respect and attractiveness, and to win over the finest minds."

Next to teaching comes "commercial-business;" occupations among the girls such as clerking, booking, typewriting, stenographic and telegraphic work. The artistic life (artist, actress, musician, etc.,) is a close second. The fourth favorite occupations are seamstress and milliner, while the fifth favorite belongs to the time honored professions of doctor and nurse. For convenience some of the occupations among the boys as with the girls were grouped, *i. e.*, counted together, *e. g.* Trades and manufacturers includes machinist, tailor, barber, miner, painter, printer, blacksmith; carpenter, shipbuilder, undertaker, etc.

¹ Munsterberg, Hugo: Productive Scholarship in America. Atlantic Monthly, Vol. LXXXVII, pp. 615-629. May, 1901.

Others, for obvious reasons, were counted separately. Of this latter class the doctor ranks first, 11% for the boys, followed by merchant 8.7% and this in turn by lawyer 7%. Farmer ranks fourth 4%—doctor, merchant, lawyer, farmer is the order for these ungrouped occupations.

Commerce 21.7% (banker, business-man, drummer, tobacconist, insurance agent, real estate agent, book-keeper, etc.) and technical 31% occupations, lead all others among the grouped occupations. Public-service (army, navy, police, superintendent, postal service, etc.) and the less common professions rank next.

PONY STORY.

The second rubric required two things: (1) to tell who had the best right to the pony, (2) to give a reason.

Over two thousand children responded and of that number 1,982 were creditable papers. These formed the basis of my study. 1,212 were girls and 770 boys.

As was anticipated three dispositions were made of the pony: (1) it should belong to the father, (2) it should belong to Henry, (3) it should belong to the neighbor's son. The following cases show this together with the reasons assigned.

Father Group.

1. M., 8. "I think his father ought to have the pony because Henry would not tend to it."

2. M., 9. "His father ought to have the pony, because he would take care of it, and feed it, and give it water."

3. M., 9. "I think the father had the most right to the pony, because he paid his own money for it."

4. M., 12. "The father had the best right to the pony, because he had the rule over the boy and if the boy did not take proper care of the pony, the father ought to have it."

5. M., 12. "I think Henry's father had the best right to the pony, because the neighbor's boy might not attend to the pony either."

6. M., 15. "His father because he did not want to see him treated unkind."

7. M., 15. "Henry did n't deserve the pony, if he did not take care of him, and the neighbor's son deserved it if he treated the pony well; otherwise the father deserved it."

8. F., 8. "The father had the best right to the pony, because he paid his money for it."

9. F., 8. "Henry's father ought to have made him feed the pony, and keep it."

10. F., 8. "I think the father had better keep the pony, because the N's son might do him just the same as his son did him. And the father would treat him best of all."

11. F., 11. "The father, because when he gave the pony to Henry he saw how the pony was treated. So he gave it to another boy."

12. F., 9. "I think the father had the best right to the pony, because Henry would n't feed it and take care of it, so the father did n't want the animal to starve on his place and he had the right to give it away."

13. F., 14. "I think that Henry's father had a right to the pony, he gave it to him, and as he did not attend to it right he could give it to whom he choose, and then the father had control of his son till he becomes of age."

14. F., 14. "It depends upon the age of the boy, because if he is not 21 years of age his father possessed him."

15. F., 14. "I think his father should give his boy another chance to care for the pony and then if Henry does not he should give him to the N's son to let Henry see that you can not have things if you dont tend to them."

Henry Group.

16. M., 9. "henry had the best right to it, because henry was the first one the father gave it toe."

17. M., 12. "Henry had the best right to the pony because his father gave it to him. Henry's father did not have any right to the pony after he had given it to his son, unless the boy gave it back to his father."

18. M., 12. "Henry had a legal right but not a moral one to the pony, because he would not give it proper attention. The father gave his right to the son; therefore the N's son had no right to it."

19. M., 9. "I think Henry ought to have the pony because his father gave it to him."

20. M., 14. "I think Henry has the most right to the pony because his father gave it to him first. The N's son might not have taking care of the pony either. And the father had no right to take it away from him after he had given it to him."

21. F., 9. "I think that Henry ought to have the pony because his father gave it to him."

22. F., 12. "I think Henry ought to have the pony, because if you give a gift, you ought never to take it back."

23. F., 11. "I think Henry had the best right to the pony, because his father gave it to him, and you cant take back what you have given away."

24. F., 14. "I think Henry had the best right to the pony, because his father had given it to him, and should not have taken it away from him, but taught him to take care of it."

25. F., 15. "Henry, because it was a birthday gift."

Neighbor's Son Group.

26. M., 10. "The N's son had the best right to the pony because Henry's father gave it to him."

27. M., 11. "The N's son ought to have the pony because he would feed him and give him water."

28. M., 11. "I think the N's son ought to have it because Henry would n't feed or curry it and take good care of it and it got poor and the neighbor's son would."

29. M., 12. "I think the N's son had the best right to the pony (1) because Henry was so lazy that he did not deserve the pony, (2) because Henry often neglected to feed, water, and curry him and the pony would suffer, (3) because he deserved to be punished."

30. M., 14. "I think the N's son had the best right to the pony because Henry did not treat the pony right and did not feed and curry it and because his father did not make him tend to it and gave it away instead."

31. M., 14. "If the father told the boy that if he treated the pony cruel he would take it away from him, the neighbor's son had a right to the pony, but if he did n't Henry had a right to it."

32. M., 12. "The neighbor's son. The father had a right to give

the pony away because a father has the right to do anything he wants to until his son is 21 years old. He has given it to the neighbor's son and therefore it belongs to the son because the father of Henry has no control over the neighbor's son."

33. M., 15. "The neighbor's son because when the father gave it to his son, he having control of his son also had control of the pony, but when he gave it to the neighbor's son he lost control of the pony."

34. M., 18. "I think the neighbors son had the best rite to the pony becaus he was kinder to ward it.

F., 10. "The neighbors boy ought to have the pony because he took care of it."

35. F., 11. "I think the neighbor's son ought to have the pony. Because the N's son was a good and kind boy that would take care of poor creatures."

36. F., 10. "The neighbors son ought to have the pony because Henry would not tend to the pony."

37. F., 11 "The neighbors son had the best right to the pony, for Henry would not feed and water it, and the father gave it to the neighbors son."

38. F., 15. "I think that the neighbor's son ought to have the pony because Henry would not attend to it."

39. M., 12. "Neighbors son because father is too large and the pony is more suitable for a boy who tends to it."

40. M., 12. "I think that the neighbor's boy ought to have the pony because the father gave it to him. If Henry would have taken care of the pony his father would have let him keep it."

These answers present the typical reasons assigned for the best right to ownership in the three possible cases.

The rights of the father are based on the following reasons: (1) It belonged to the father first, he paid his own money for it, he was the first owner, bore the expenses of feeding it; (2), Father had the best right by law. Henry was a minor and could not hold property in his own name; (3) Father had the best right to it because Henry neglected it, besides it was not known that the neighbor's son would treat it properly; (4), The father pitied the pony, and his kindness and thoughtfulness toward the pony entitled him to it; besides the N's son had given no proof that he would treat it any better than Henry; (5), The father giving it to whom he pleased showed that he was the real owner; (6), The father should own it that he might teach Henry a lesson; (7), A few state that the father should own the pony without giving a reason.

The reasons assigned for Henry's ownership are few. The most frequent reason given is (1) That it was a birthday gift and that you cannot take back what you have given away. The second most frequent reason given is that it was Henry's by right of gift and he should have been made to take care of it. The third group, consisting of ten girls and six boys, gave no reason.

The reasons why the neighbor's son should own the pony grouped themselves as follows: (1) It was a gift to the N's son. A father may have the right to take away gifts from his

own son but he has no right to take back a gift made to some one else's son. (2) The neighbor's son because he took care of it, was kind to it. (3) The neighbor's son should have it because Henry neglected it (idea of punishing Henry). (4) It belonged to the N's son because Henry's father could do as he pleased with it. (5) The N's son should have it because it would serve as a lesson to Henry, he deserved punishment for his ungratefulness. (6) As in the two previous groups some gave no reason.

Of the 1,212 girls 416 (34%) judge the father to have the best right; 190 (15%), Henry; 606 (50%), the neighbor's son. And of the 770 boys 231 (30%) rest the best right in the father, 153 (20%), in Henry; and 386 (50%) in the neighbor's son. These figures acquire some significance by examining the principles on which the children based their decisions. These reasons and principles have already been given in detail. I summarize and restate them again for convenience of further explanation.

(1) Sympathy, mercy and pity toward the pony, (2) Sympathy and kindness deserve their reward, (3) Neglect, cruelty and ungratefulness deserve punishment, (4) Economic considerations, (5) Legal, (6) Custom.

1. *Pity, Mercy and Sympathy.* These emotional sentiments, operating as motives, determined the judgments of 24.2% of the boys and 25.5% of the girls and they are strongest at the ages of 15 for both sexes: 28.3% for the boys and 29.2% for the girls. Some decide in favor of the father and others in favor of the neighbor's son. In either case property rights are a secondary matter, the welfare of the pony is the uppermost desideratum. I interpret this as reflecting not only sympathy among children for animals but an altruistic and unselfish trait.

2. *Sympathy and Kindness Deserve their Reward.* Here the welfare of the pony is not so much in mind as is the desire to reward kindness to dumb creatures. They place a premium on kindness. The decisions in this group were all in favor of the father.

3. *Neglect, Cruelty and Ungratefulness Deserve Punishment.* This group showed a decided spirit to punish neglect, cruelty and ungratefulness. Henry by his ungratefulness and cruelty not only destroyed his property rights but rendered himself amenable to punishment and liable to a lesson through consequences. The notion of punishing the boy by means of the "consequences" is confined almost entirely to the girls, a slight justification of Spencer's theory on this question. The numerical strength of this group is 25.3% of the boys and 26.6% of the girls. It is strongest at the age of 8 and 17 for the boys and 11 for the girls.

4. *Economic Considerations.* The laws of trade, barter and sale, simple honesty and justice are all principles underlying the father's rights. He bought and paid his own money for the pony, bought the food which the son failed to give it and furnished it pasture and shelter. These are all commercial considerations. They are met with from boot-blackdom to the stock exchange; profit and loss not mercy and kindness operate on this plane. Many in this group give as an additional reason the old principle of priority—the father was the first owner. This eye for an eye and tooth for a tooth justice principle is strongest for boys at twelve and for girls at thirteen.

5. *Legal Reasons.* Decisions made on this principle occur most frequently at the age of 16 for boys and at 18 for girls. They hold that both pony and boy belonged to the father and that he could do with the pony as he chose. If he chose to give it to the neighbor's son, however, he would relinquish all property rights therefrom.

6. *Custom and Taboo.* Property rights "running with a gift" appear to be unalterable and very real to a large group of children—25.5% of all the boys and 21.9% of all the girls. Both Henry and the neighbor's son are judged to have the best right to the pony on this ancient principle. Those who make such a decision are unusually positive and decided and defend their judgments with marked spirit. The seriousness of the act of giving approaches in their eyes that of a sacred vow. To them it appears more sacred than a promise or an obligation, it belongs to the category of unalterables. Therefore to take back a gift or to give it to another is severely contemned and opprobrium is heaped upon the one who commits it. Every one recalls how soon the "Injun giver" of our childhood days fell into disrepute. The almost universal use of the term "Injun giver" among English speaking children shows the strength of this traditional custom. Spencer¹ in his chapter on Presents indicates the very ancient custom of present-making, and connects it with the ceremonial rites of sacrifice. It appears that we have here run upon the remnant of a sacred custom that is kept alive in childhood by tradition.

THE FIRST DAY AT SCHOOL.

The third rubric required the pupils to finish the story of the little school girls and have it end as they thought it should.

Two thousand and sixty-seven stories were received, 1,280 were from girls and 787 from boys. Any attempt at classification and grouping of the stories must be artificial and incomplete, and even inaccurate. Their emotional reactions to the

¹Spencer, Herbert: Principles of Sociology, Vol. II, pp. 96-97.

story were unique and varied. It seems to have aroused all the good fairies and bad fairies of childhood. The climax of Samaritan mercy and the depths of piratical cruelty are well imagined and cleverly described. I submit a classification, despite all its defects, of the stories as it will form a ready and convenient introduction to their nature and content. The main thought in their stories is taken as the typical ending.

Typical Endings of the Stories.

	No. by Boys.	No. by Girls.
Accused Pearl of stealing,	12 %	12.5%
Could not catch her,	.2	.1
Effect of clothes on Stella,	2.9	5
Effect of clothes on Pearl,	3.5	4
Fussed at and scolded the poor girl,	8.9	6.4
Injustice done Pearl corrected by others,	4.8	6.4
Injustice done Pearl corrected by Stella,	7.6	9.8
Inflicted corporal punishment on Pearl,	6.9	2.8
Made fun of Pearl because she was poor,	2.9	4
Pearl runs home to her mother,	7.5	11
Pearl apologizes,	9.7	10.3
Pearl willingly returns to school,	9	14
Pearl unwillingly returns to school,	1	2.7
Pearl never returned to school,	12	7
Pearl is a heroine and wins her way,	2.8	2.7
Pearl learns a lesson to be careful about taking things,	1.4	1.2
Stella apologizes to Pearl,	2	5
Stella is teased by the other pupils,	.6	—
The two girls become friends,	9	11.6
The two girls become enemies,	4.5	2

Some Unusual Endings.

Both girls get new hats.
 It wound up in a fight.
 Pearl died.
 Pearl gets married.
 Moralizing.
 The teacher is blamed for the occurrence.

'Pearl willingly returns to school' is the favorite ending for the girls (14%); the next in frequency is "accused Pearl of stealing" which is 12.5% for girls and 12% for the boys. The least frequent ending is the quite laconic one "they could not catch her" .1% girls .2% boys. 9% of the girls and 6.4% of the boys make the effect of clothes on conduct a feature in the ending of their stories. The girls seem to regard the influence of dress greater on the rich girl—Stella, while the boys make it more effective on the poor girl. 8.9% of the boys have the story end in a quarrel "fussed at and scolded the girl," only 6.4% of the girls end the story thus. 6.9% of the boys end the story with corporal punishment inflicted on Pearl, 2.8% of the girls use this form of ending. On the other hand 4% of the girls as against 2.9% of the boys indulge in the ending

which describes Stella and her playmates as poking fun at Pearl because she was poor. Mutual apologies and becoming fast friends is a more favorite mode of ending with the girls: girls 26.9%, boys 20.7%. Twice as many boys as girls have the two become enemies: boys 4.5%, girls 2%. These several points square with the usual findings in this field, viz., that girls are as a rule more sympathetic than boys, that boys are more liable to be cruel, to tease and bully. The girls are less liable to end the story unfavorably to the poor girl, they prefer that all shall end well.

The results of an examination of the papers to find the strength of sympathy as expressed either for the rich or for the poor girl are shown in table IV. The papers classified into three groups, *sympathetic*, *unsympathetic* and *indifferent*. There are more sympathetic than unsympathetic girls, the reverse is

TABLE IV.
Sympathy—Percentage.

AGE.	BOYS.				GIRLS.			
	Sympa- thetic.	Unsym- pathetic.	Indiffer- ent.	To- TAL.	Sympa- thetic.	Unsym- pathetic.	Indiffer- ent.	To- TAL.
8	7.7	53.0	39.3	13	50.0	22.0	28.0	32
9	21.9	25.0	53.1	32	61.0	17.5	21.5	57
10	35.3	27.5	34.2	58	44.0	24.0	44.0	75
11	39.3	35.7	25.0	84	44.8	33.0	21.2	85
12	39.7	39.0	21.3	141	33.3	41.4	25.3	198
13	26.6	49.1	24.3	169	43.8	34.0	22.2	297
14	38.8	43.3	17.9	162	41.3	31.2	27.5	240
15	35.2	47.2	17.6	91	54.2	29.0	16.8	179
16	50.0	40.0	10.0	30	54.2	22.2	23.6	72
17	40.0	60.0		5	71.4	22.8	5.8	35
18		(100)?		(2)	60.0	40.0		10
Total	276	329	182	787	556	383	275	1280
%	35.1	41.8	23.1		45.8	31.5	22.6	

true of the boys; also, the percentage of sympathetic girls (45.8%) is much higher than that of the boys (35.1%). A few cases of the sympathetic, unsympathetic and indifferent story-endings are here given.

Sympathetic.

F., 14. "I hope Stella did not scold the little girl for taking her hat as it was a mistake. I hope all the little girls will play with Pearl."

M., 11. "Stella should not have let a crowd of girls with her but gone by herself because she would have frightened her still more. Stella came up with her and got her smart new hat and gave the poor

child her old hat back again, then went back to school while the poor child went on home."

F., 14. "I think it should end that Stella was very ugly in treating the little girl in such a manner, the poor little girl was so hurt and had only taken the hat through mistake, and of course, Stella should not have run after her with so many many girls, but should have gone alone and corrected the mistake."

M., 13. "Stella May could not catch her, so Pearl got home, slipped into her room and locked the door behind her. So Stella May had to wear Pearl's old hat, and Pearl wore Stella May's new hat."

Unsympathetic.

M., 11. "When Stella overtook Pearl, she started a fuss and snatched her hat off her head, and threw Pearl's hat on the ground. Then she ran back to her school, and left Pearl going home."

F., 12. "After they had caught her they took her to the teacher who told her that she must be more careful and scolded her."

F., 12. "In Pearl's haste to get away from the unwelcome place she tripped up and fell into a mud puddle. By this time Stella and the girls came running up to the spot, and Stella seeing her pretty new hat covered with mud of course was very angry, but it taught Pearl to be more particular about whose things she took hereafter."

Indifferent.

M., 14. "They soon found the girl, and Stella got her own hat, and went back to school. The other girl went home and did not come back."

M., 14. "The girl ran after her and got the hat and gave her hers."

M., 12. "I dint know that I had your hat, well sayed, Stella. I will ecqeeze you but dont do it again. I am very sorry said Pearl."

The highest percentage of sympathy is shown at seventeen among the girls, at sixteen among the boys. The highest percentage of unsympathetic girls falls at twelve, and for boys at sixteen and seventeen. A further examination of Table IV. shows an increase of sympathy with age among both boys and girls from eight to eighteen. The increase, however, is neither large nor uniform. The unsympathetic spirit remains fairly constant from eight to eighteen among the girls. The boys, however, show a decided increase; in fact their unsympathetic spirit increases more rapidly with age than the sympathetic.

The following are typical of a majority of the endings.

Accused Pearl of Stealing.

I. M., 13. "When Stella caught Pearl She said 'You nasty thief hand me my hat.' The little girl turned around at hearing Stella's voice. Stella said she did it on purpas but Pearl had taken her hat and run. She was called thief the rest of the term until the end of the term but Pearl worked faithful and got the hiest marks on the finel."

2. M., 14. "Pearl was caught after a long chase and the hat taken from her. The other girls would not accept any apologies from her and she was watched very suspiciously from that time although she was not what she was thought to be—a thief.—(Note: If this story was in what are termed the "good books" it would end with a "and

she was happy at school ever after." But that she was not suspected after this little incident, is not "human nature.")

3. F., 15. "At last they overtook the poor child as she trudged tearfully along. Stella's shrill voice rang out and startled her with, 'Why Pearl Nelson you took my hat! aren't you ashamed?' she asked indignantly, 'and left me this shabby affair,' in a tone of contempt as she held up the hat. Could they think she had taken Stella's hat? she asked; 'Certainly she took it,' said one, and after tormenting her until they were worn out they exchanged hats, and skipping gaily away leaving Pearl to go alone her face burning with shame because of the undeserved accusation."

4. F., 10. "Stella called loudly for Pearl, but she did not hear her, but at last she caught her. Stella was very angry and told her she just came there to steal. Then Pearl answered, 'I was in such a hurry that I did not know I took your hat.' With that Stella took her hat and Pearl's too, and ran back to the school house. Pearl ran after her, but Stella would not give her hat to her, and then started away, but soon turned back, and said, 'Stella, I did not mean to take your hat, and—' but here she was interrupted. Stella threw down her hat, and said in a rough tone, 'Here thief, take your hat and go home.' Pearl tried to tell her all about it, but Stella would not hear her. The other girls did not like this, and took up for Pearl. A week passed, and not a school girl saw Pearl. Then as Stella did not have any one to play with, she soon got tired, and determined to go to see Pearl, which she did. Stella knocked at the door, Pearl opened it, and Stella told her that she was sorry for what she had done. Then Pearl told her it was all right, and they became good friends right straight. They went to school next day together. Stella introduced her to the girls, and then the girls began to play with both Stella and Pearl, and everything seemed bright. The teacher told her she was glad she was back at school again, and as Christmas was near, she got many pretty presents, and was happy again with the children. Her father began to have many little customers, as the school children bought all their things from him. And then Pearl, always, not fancy clothes, but nice, neat looking clothes."

Could not Catch Her.

5. M., 10. "Pearl got home without being caught by the girls."

6. F., 10. "Could not catch her."

Effect of Clothes on Stella.

7. M., 15. "I would have gone to her mother and told her that Perl had took my hat by mistake and ask her to please take hers and give me mine, but I guess Stella caught Perl and slapped her to be smart, because she had better clothes. But clothes does not make the lady, it is the behaviour and the smartness."

8. M., 12. "The other children ran after her and told her that she had on Pearl's hat, and when she got home her mother told her she has got some old shaggy hat on, when she saw it she was perfectly disgusted, and when she went back to school she saw Pearl and snatched her hat off of her head, and went on saying "I would n't wear that hat for nothing."

Effect of Clothes on Pearl.

9. F., 12. "When the girls reached Pearl, she had stopped, because she was so tired. Stella May snatched her hat out of Pearl's hand in such manner as to nearly knock the little girl down. After she had gotten her hat back Stella asked Pearl why she had left

school. she was crying now, but she told Stella that she could not go their any more, because those other children had on such nice clothes and her dress was so ugly. Stella felt sorry for her, and told her that she was going home now, and her mother would get Pearl a nice dress. Pearl had no mother and went along gaily."

Fussed at and Scolded Her.

10. M., 13. "Stella and the girls overtook Pearl, and said 'You old rogue; you old poor nothing.' They took Stella's hat and went back to school."

Injustice Corrected by others and Corporal Punishment.

11. M., 13. "The girls caught Pearl and Stella slapped her and made her cry. she went home and told her mother and the next day her uncle came and gave her a pretty hat and dress after that Stella got a whipping and Pearl got along alright."

12. M., 11. "Stella and the girls overtook Pearl and snatched her hat off her. And knocked Pearl down, and got switches and whipped her. Pearl never came to that school any more."

13. F., 13. "When Stella reached Pearl, Pearl gave her hat to her and did n't murmur. Stella threw Pearl's hat in her face and the pin in it stuck her in the eye. From that day to this Pearl has not been able to see. The teacher ever after treated Stella as she had treated Pearl."

14. M., 11. "The girls caught Pearl and exchanged hats, and asked her where she was going and she said 'I am going home.' Then they asked her why, and she said 'because I have n't any pretty dresses to wear and when I went into the school room nobody spoke to me.' Then the girls ran Pearl away and threw rocks at her. When Pearl got home she told her father about it and he got mad and said 'I'm going to hide near the place where they come by going home and scare them.' late in the evening. When the girls came marching by Pearl's father who had hidden behind the tree made a curious noise and scared them so that they ran back to the school house and told the boys all about it. Then each boy got a club and went marching down there. When they got there they heard a curious noise again and dropped their clubs and went running away. After that the girls went another way, a mile further. Pearl went to the school the rest of the session and did n't have any more trouble and got a good education."

Stella Makes Amends.

15. M., 13. "Stella and the girls caught Pearl after going 200 yards. When one of the girls told Pearl her mistake, she was profuse in her excuses, but when the other girls jeered at her, Stella went up to her, and taking her by the hand, carried her back to school. She gave Pearl her new hat, and after this their were no better friends in school than Pearl and Stella."

16. F., 12. "After Stella and the other girls had caught up with Pearl they asked why she took Stella's hat but Pearl did not answer for some time-after awhile she said 'I did not know I had your hat.' 'Well' said Stella 'Why did you run away from school?' Pearl told them why she had gone. The little girls all felt very sorry for Pearl and told her they were coming to see her that evening which they did. Pearl's father was dead and her mother was an invalid Pearl was very poor. That evening sure enough the little girls came to Pearl's house each little girl had a basket on their arm which contained something for Pearl and her mother. One had a nice hat dress, and coat, and another had something nice to eat. Each of the

little girls had something. But Stella had another hat and dress and she actually brought some money for Pearl's mother. The next day Pearl came to school looking very neat and clean, and always did after this."

17. F., 13. "Pearl ran home as fast as she could, and did not stop until she was safe in her mother's arms. 'What is it, dearie?' asked Mrs. Nelson. 'Oh, mother! the girls at school are so mean, not even Stella May would speak to me because I did n't have on a nice frock and hat as they did, and so I came home.' Just at that time Stella May came panting up to the door and Mrs. Nelson asked her to come in and have a seat, until she could recover her breath. After resting awhile, Stella May gave Pearl her hat and said, 'You made a mistake, but it's all right, I don't mind. But why did you run away to-day in such a hurry? I was looking forward to play with you at recess.' 'Well, I came home because you would n't speak to me and I felt lonesome.' 'I could n't, you see we are not allowed to talk in school and I could n't speak to you. Are you satisfied now, come on go back and I will ask the teacher to allow us to sit together.' 'All right,' and Stella May went joyfully back to school with Pearl, and got to school just in time to go in with their line."

Pearl Becomes a Heroine and Wins Her Way.

18. M., 12. "At last they caught up with Pearl and exchanged hats. Pearl told Stella that she was sorry that she had made the mistake, but the girls were very unkind to her and told her that she tried to steal it because her hat was so ugly and had run off because she did not want Stella to know it till she had gotten out of sight, and they laughed at her faded dress. Pearl did not reply but went home crying, and told her mother all that had happened, her mother told her that the next time the girls teased her to look as well pleased as they did, never to speak a cross word, be good and study hard and if she did this the children would stop teasing her and like her. The next day she went to school. Pearl was always bright and cheerful and when Stella teased her she would laugh and look as if she enjoyed it as much as they did. The girls were surprised for they expected her to cry, but she won Stella's and all the other girls love at last and Stella became her best friend, she also won the teacher's esteem. Pearl was a very bright girl and soon stood at the head of her classes. She went to Harvard when she was twenty years of age, then she taught English in Harvard for awhile, then she went home and married a prominent Virginia lawyer."

19. F., 15. "When Stella May caught Pearl she accused her of stealing her new hat. Pearl became angry but controlled her temper and explained to Stella that she had made a mistake. Stella did n't believe her but she took her hat and went home. Her mother had heard all about it and when Stella came home she whipped her for talking so rough to Pearl. Pearl went to school and became a teacher while Stella turned out to be the worst girl in school."

20. F., 15. "When Pearl reached her yard she flung herself down on a bench and burst into sobs. In a few minutes she saw Stella and the other girls coming up the walk. Pearl dashed the tears from her eyes, wiped her face, and sat up very straight. Stella came in and putting Pearl's hat on the bench said, 'Pearl here is your hat, I would like to have mine please.' Then Pearl noticed that she had Stella's hat. 'Your hat? Oh! why certainly I had n't noticed it,' she said coldly. As Stella and her friends departed, she tripped on what seemed to be a small stick; when it moved, however, she found it to be a snake. The others ran but Pearl picked up a stick and killed it. Pearl was very popular after this with all the girls."

Became Enemies.

21. M., 15. "Stella saw it in a minute and got Pearl's hat and some other girls and ran after her and caught her and traided back. Pearl apologized and asked all pardon. They never had any use for each other again."

22. M., 11. "Stella ran after Pearl but she did not catch her until she got home, and she would not speak to her when she next saw her."

Became Friends.

23. F., 10. "When Stella caught Pearl she snatched her hat off of Pearl's head and threw Pearl's hat on the ground. Pearl came to school the next day, she knew her lessons much better than Stella and Stella asked Pearl to tell her her Geography. Pearl started not to tell Stella but a thought came in Pearl's mind that said return good for evil, then Pearl told Stella the Geography. At recess Stella came to Pearl and said that she was very sorry that she had treated her in that way. After that Stella always went with Pearl."

Pearl Apologizes.

24. M., 13. "When Pearl got nearly home Stella came running after her. she says to her you have stolen my hat. When Pearl took off the she saw that she had made a mistake, and apologized to Stella May but she only slapped her jaws and ran back to school."

Miscellaneous.

25. F., 12. "But Pearl was already around the corner and out of sight before Stella reached it. Now and then they could see her flying figure fly around the corner. At last they saw her dart up the steps of a shabby looking house. They started to follow her, but one of them stopped and looked in at the window. 'Girls! look here she called.' The room was very neat and clean. There was Pearl pouring out her story. The father was reclining on an invalid chair, his face wore signs of suffering. Two little boys played on the floor, on a bed was a child whose thin form and flushed face told them that she was dying. There was a lump in Stella's throat as large as Pearls. 'To think I wouldnt speak to her because her clothes wernt as good as mine,' she said 'I heard father say Mr. Nelson was a fine man, but he has been crippled all winter and they have enormous bills to pay for doctors and medicine.'

"Pearl was at school next day in a frock as pretty as Stella's own."

26. M., 13. "Stella May called Pearl and said, 'You have my perly hat instead of your old rag.' 'Have I,' said Pearl. 'I did not know I had it,' said Pearl 'I was in such a hurry to go home.' 'No you wer'nt, you were trying to steal my hat,' said Stella. Pearl ran home and told her mama what Stella had said, and they both cried for though, they were poor they were honest."

27. F., 13. "When they caught Pearl they laughed at her and said she did it on purpose. But of course she did not do it on purpose. When Stella May grew older her father lost the money he had invested in bank. She then became even poorer than Pearl. But Pearl did not laugh at her, she was kind to her. Because was a kind hearted child."

28. F., 15. "I would have let Pearl alone so that she could have had the better hat. Stella May could get another hat, but poor little Pearl could not. If I had of been Stella, I would have rather had my pureness and cleanliness in my heart, than to have had it on my body. The Bible tells us 'that God loveth a cheerful giver.' So I think that little Pearl was more of a cheerful giver than Stella May."

29. F., 14. "They all got together and ended in a fight."
30. M., 13. "I think that Pearl and the other girls had a fight over their hats. But they ought to have thought more of themselves."
31. M., 15. "The girls caught her and Stella got her hat. And through Pearl's away. Stella slapped Pearl and she went home crying and the next day she was taken sick, and in a few days she died. Stella heard of the little girl's death, and took it awful hard; she remembered a few days ago when she slapped Pearl."
32. M., 13. "I think they took the hat away from her in a rough manner, and might have given her a good shaking, as that is about the worst thing girls do to one another, and told her that she was trying to steal it. None of the other girls and boys ever had anything much to say to her again. I bet you she was never whipped in her studies, if she was whipped in the little trouble. This is to show that some children think themselves above others not dressed quite so well. And another thing, I bet you the little new schollar apologised to Stella, but I do not think that Stella ever apologised to her."

For originality in endings the country children far surpass those of the city, and among the former the boys were more original than the girls. (See stories numbered 14, 19 and 25.) Many of the boys' stories showed some unique, unconventional and even artistic features. While many of the girls showed unusual imagination and sympathy, they lacked variety and originality. The original and artistic impulses, even "in their most primitive form are very much more marked in boys and men than in girls and women."¹

The child's sense of justice, of striking a balance, of "evening up" matters is expressed in three ways: (1) Injustice is corrected by others, viz., her father, her mother, an aunt, an uncle, a schoolmate, a girl friend, and a rich lady; (2) Injustice is corrected by Stella, who may give her a new hat or a new dress, or money, or invite her to her home, or make full apologies, or introduce her to her schoolmates, or may offer to desk with her, to share lunches with her; (3) By the poor girl succeeding in life through her own persistent efforts, superior powers and high character, *e. g.*, she returns to school, wins the prizes and leads her classes; studies hard and becomes a college teacher; heaps coals of fire on her tormentors and rises above them in intellectual attainments, etc.; (4) The injustice is corrected and satisfied by the mysterious forces of luck, chance or fortune. Her father becomes prosperous in business, grows rich suddenly, discovers a gold mine, or she marries a rich man. Emerson's law of compensation has a fascination for a large group of pupils who seek to secure justice by reversing the conditions of the girls. Stella becomes poor and feels the pinches of poverty, Pearl becomes rich and enjoys the comforts of riches. Here, too, their sympathies for Pearl lead them to endow her with superior virtues, although there is nothing in

¹ Ellis, Havelock: Man and Woman, p. 326.

the story suggesting such superiority. Many of the children on the other hand attribute bad virtues to Stella and in so doing often let loose the spirit of revenge.

Corporal punishment is not inflicted because it is deserved (only 3 out of 2,067 thought that she really stole the hat) but either to magnify Stella's cruelty, or to give a faithful description of what they think would naturally happen in real life, or to indulge their own thoughtless teasing spirits, the latter motive seems to express itself more frequently among the boys. The following expressions show the various methods by which corporal punishment was inflicted: "smacked her little jaws," "pulled her hair," "punched her in the back," "beat her," "knocked her down," "gave her a good shaking," "whipped her," "pulled at her neck," "pinched her," "hit her in the face," "slapped her three or four times," "nearly beat her to death," "threw her hat pin at her and put out her eye." Nearly $2\frac{1}{2}$ times as many boys as girls wrote corporal punishment endings many of which show signs of thoughtless cruelty and teasing.

A number of the papers have double endings; one in which the writer tells how it ought or should end; and a second in which the writer tells how it actually did end. The former set forth high ethical standards for life and conduct, the latter places human nature at a decided discount. According to this group, what *is* and what *ought to be* are widely separated. The ideal and the real have but little in common for these critical minds, their ideals of conduct have far outgrown their experience with human nature. Hence the greenness, immaturity and artificiality of their ethical standards.

These double endings from twelve years on begin to give way to single ones which are devoted entirely to moralizing on the situation. (See case 28.) The highest percentages of moralizing occurs at 14, 15, and 16.

SUMMARY AND CONCLUSIONS.

1. In naming preferred ideals and occupations, girls are more conservative in their choice, but are more likely to express their choice and *give a reason* than boys. The same principle obtains between country and city children, *i. e.*, a given number of country boys will name fewer ideals and occupations than the same number of city boys but more of the former will express themselves and give a reason.

2. Imitation is more common among young children and it is stronger in the country boy than in the city boy. Independence, too, is far more common among country than city girls—independence in the sense of being able to care for one's self comfortably. These two facts support the proposition that

the home life of the country child is more effective in shaping ideals and character than that of the city child.

3. The industrial occupations (machinists, farmers, merchants) are preferred by the younger children. The professional and technical occupations increase roughly with age while the industrial and mechanical decrease. 1% of the boys and 38% of the girls wish to be teachers.

4. The judgments¹ of right and of justice among children from 8-18 years are more likely to issue from emotional than intellectual processes.² This is strongly supported from the evidence received on the pony rubric. There are two big exceptions to this dominant emotional basis. The first rests on economic principles, those of barter and sale, or according to Ribot on the "principle of equivalence" (the father should have the pony because he paid his own money for it—an intellectual reason). The second exception consisted of a group of judgments based on a semi-sentiment or a taboo running with a gift (Cant take a gift back).

5. Children from 8-18 years as a rule are altruistic rather than selfish. Country children are more so than city children. Girls are far more apt to be sympathetic than boys and are more easily prejudiced too. Evidence on this latter point consists in the fact that the girls through their sympathies for the poor girl (in rubric 3) endow her with virtues which the syllabus does not suggest. The contrast in the advantages and conditions of the two characters prejudice them in favor of the one and against the other. But children are also (and the boys more than girls) cruel in the punishment which they inflict.

6. The returns show that in some homes and schools moralizing has been carried to an excess. They bear the unmistakable stamp of sentimental morality, of a feverish desire to express their ethical views. Some children went at once to probe into the rightness and wrongness of Stella's actions—making no attempt to finish the story which was the very thing they were asked to do. Perhaps after all we try to do too much moral teaching and incite the young to torture out the moral of every story and situation which confronts them, instead of having them get simply the healthy moral tone through suggestion, imitation, and wholesome experience. The fact that many have one code of ideals for themselves and another for human nature at large is very suggestive that their ideals have grown too fast for their experience. The substitution of a healthy moral tone for direct moral teaching, I believe, would help to correct this mushroom growth of moral ideals.

¹ I use the term judgment in the broad "psychological laboratory" sense and not in that of formal logic.

² Ribot, Theodore: *Psychology of the Emotions*, p. 299.

7. Boys are more original than girls, and country children more than city children.

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To the teachers of Prince Edward Co., Va., for their hearty and full co-operation in getting returns from country children, and to Supt. Fox of the city Public Schools of Richmond, for so thoroughly interesting his teachers in securing nearly two thousand papers from city children, I wish to offer my sincere thanks. To my wife I am greatly indebted not only for constant aid in making long and tedious tabulations but for valuable suggestions and criticisms in writing the paper.

BOOK NOTES.

The Educational Systems of Great Britain and Ireland, by GRAHAM BALFOUR, M. A. Second edition. Oxford, Clarendon Press, 1903. pp. 307.

The second edition of Mr. Graham Balfour's excellent outline of the educational systems of Great Britain and Ireland contains much new material and gives the main provisions of the Education Act of 1902; an act passed as he believes "in response rather to ecclesiastical pressure than to the united enthusiasm of the Cabinet for education." The general trend of progress in English education since the publication of the first edition is noted in the preface. "In the first place," says Mr. Balfour, "it has proved far more difficult than before to treat the subject in three water-tight compartments as elementary, secondary, and higher. The three grades are in fact becoming parts of that organic whole which it is essential for us to form." This is the only account of the educational system of England we know of that is up to date. W. H. B.

The Place of Industries in Elementary Education, by KATHARINE E. DOPP. University of Chicago Press, Chicago, 1903. p. 208.

The industrial epochs of the hunting, fishing, pastoral and agricultural age, and that of metals, are first discussed. Then general precepts are laid down for the stages of childhood. Attitudes and motor rhythms are here given due place. The book is a distinct and valuable addition to the literature of this subject.

The Problem of the Jewish Sabbath-School. A paper read before the Hebrew Sabbath-School Union of America by Rabbi Abram Simon, of Omaha, Nebraska. pp. 23.

The precepts, which this author would follow, are, first, that a child reproduces in his soul the life history of the race; second, food should follow appetite; third, the Old Testament is the text-book of religion, but Jewish literature, which is an enlarged edition of Jewish life, must not be neglected; fourth, all methods that quicken the will and rouse to endeavor are good; and, lastly, the education of the Jewish child should be distinctive only in its relation to his historic mission. The Jew has his high born mission to be the exponent of religion. Dawson's views are in general approved. The Sunday School should number four classes, divided by the ages 6, 8, 13, 16, 20. The Bible is really a study of God in nature, history, conscience and personal life.

Quarter of a Century and Twenty-Fifth Annual Report of the New England Watch and Ward Society for the Year 1902-1903. Boston, 1903. pp. 57.

In this report, which marks the twenty-fifth anniversary of this society, a brief account of its work is properly given. Few realize what it has accomplished in the suppression of obscene books and pictures, of gambling and pool rooms, policy, Louisiana lottery, in the suppression of indecent theatre posters, the social evil, exposing and checking the evils of bond investment companies, certain second class hotels with kitchen bar rooms, dance halls, etc. It has afforded pro-

tection to young women, made beaches safe public resorts, improved the character of agricultural and other fairs, held many meetings, etc.

The Souls of Black Folk. Essays and Sketches, by W. E. BURGHARDT DUBOIS. A. C. McClurg and Co., Chicago, 1903. pp. 264.

Many of these articles have been printed elsewhere. The author is perhaps the most prominent leader of the colored men who, differing rather radically from Booker Washington, would see them given every opportunity and allowed every privilege open to the whites. To us it is the most interesting discussion of men, traits and problems, which show what being black to-day really means.

A Service in Memory of Alice Freeman Palmer Held by Her Friends and Associates in Appleton Chapel, Harvard University, January 31, 1903. Houghton, Mifflin and Co., Boston, 1903.

This touching and tasteful memorial contains both the programme and the report of the Cambridge service in Mrs. Palmer's honor. It was made in order that friends who were present may preserve, and those who were absent may experience the feelings of beauty, thankfulness and courage inspired by thoughts of her on that unique occasion. As if to compensate for the music, which alone is omitted, five photographs—the first when she was six and the last representing the woman of recent years as she appeared in private life—are given. All who knew her will cordially agree with the sentiment expressed by President Eliot that her life and labors have set, perhaps, one of the best examples to American womanhood.

Chapters from a Musical Life. A Short Autobiographical Narrative, by MRS. CROSBY ADAMS. Chicago, 1903. pp. 139.

This is a brief account of the author's musical experience for the benefit of teachers who have found her compositions of use in their classes. It is very personal and autobiographic, and must be full of interest to every teacher of music. The author wishes to gain a larger view of her vocation; would really find the ultimate art principle; tells how music first came into her life and the people who influenced it, etc.

Recherches Anthropométriques sur la Croissance des Diverses Parties du Corps, par PAUL GODIN. A. Maloine, Paris, 1903. pp. 212.

These studies are based upon 36,000 measurements of one hundred subjects, individually followed from thirteen to eighteen years. It brings out very forcibly the unique character of the adolescent period.

A Historical and Critical Discussion of College Admission Requirements, by EDWIN CORNELIUS BROOME. The Macmillan Co., New York, 1903. pp. 152.

The writer discusses admission from the colonial period to the present, with special chapters on flexibility in requirements, the accrediting system and uniformity.

Boys' Self-Governing Clubs, by WINNIFRED BUCK. The Macmillan Co., New York, 1903. pp. 218.

The writer discusses the place of the club in relation to play, equipment, meeting place, constitution, ethical lessons, outside activities, adaptation to age and race, club advisers and parliamentary law.

The Moral System of Shakespeare, by RICHARD G. MOULTON. The Macmillan Co., 1903. pp. 381.

The first book is on certain root ideas of Shakespeare's moral system, heroism, innocence, retribution, pathos. Book two treats of

Shakespeare's world in its moral complexity, and the third discusses the forces of life in Shakespeare's moral world.

Discourses on War, by WILLIAM ELLERY CHANNING. Ginn and Co., Boston, 1903. pp. 229.

This very timely and attractive work is prefaced by Edwin D. Mead, whose knowledge of and enthusiasm for Channing is well known. The sentiments it contains are eminently wholesome and pertinent to present issues.

History of Ancient Education, by SAMUEL G. WILLIAMS. C. W. Bardeen, Syracuse, N. Y., 1903. pp. 298. Price, \$1.12.

This work grew out of lectures by the author at Cornell, and constitutes the first half of his course on education ending with Plutarch.

The Nature Study Idea, by L. H. BAILEY. Doubleday, Page and Co., New York, 1903. pp. 159.

The three parts of this book are, first, what is nature study? second, the interpretation of nature; and, third, practical inquiries and some ways of answering them. The style is lively and interesting and the book is eminently practical.

Kunsterziehung. Ergebnisse und Anregungen des Kunsterziehungstages in Dresden am 28 und 29, September 1901. R. Voigtländer, Leipzig, 1902. pp. 218.

This tasteful little volume is made up of lectures, discussions and various treatises on manual training, picture books, drawing, how to enjoy nature, preliminary training, wall decorations, school buildings, etc.

Versuche und Ergebnisse der Lehrervereinigung für die Pflege der künstlerischen Bildung in Hamburg. Alfred Jansen, Hamburg, 1902. pp. 171.

This is a collection of papers on artistic culture written by various teachers. The chapters included are: art museums, drawing, painting, modelling, poetry, theater, concerts, etc.

Geographen-Kalender 1903-1904. (H. Haack.) Justus Perthes, Gotha, 1903.

This is a valuable, new compilation intended to present the present state of geographical knowledge, literature, school geography, etc. It gives an interesting synopsis of the most important researches for the year 1902 and contains a dozen interesting maps showing world regions of special interest at present. Especially interesting is the story of the two polar regions.

Athletics and Outdoor Sports for Women, edited by Lucille Eaton Hill. The Macmillan Co., New York, 1903. pp. 339.

This is a book of composite authorship, each of the following topics being presented by a different expert: physical training at home, gymnasium work, dancing, esthetic and social, cross-country running, swimming, skating, rowing, golf, running, lawn tennis, field hockey, basket ball, equestrianism, fencing, bowling, track athletics. The work is illustrated by 237 cuts showing attitudes, postures, acts, etc.

Tales from Wonderland, by RUDOLPH BAUMBACH. Translated by Helen B. Dole. Adapted for American children by William S. M. Silber. A. Lovell and Co., New York, 1903. pp. 122.

The tales are the magic bow, the Christmas rose, the clover leaf, the adder queen, the water of forgetfulness, the witching stone, the doukey's spring, the Easter rabbit.

NATIONAL EDUCATIONAL ASSOCIATION.

BOSTON, MASS., JULY 6-10, 1903.

The annual meeting of the National Educational Association in Boston, which closed Friday evening, July 10th, in some respects not only greatly exceeded expectations but broke all previous records. Many years ago, when the annual meeting of this Association was held in Boston, the attendance was small, the New England teachers indifferent; and Boston was finally decided upon as the place of this meeting only after long consideration and with a good deal of anxiety concerning the result. It was this that prompted the managers to make more strenuous efforts than have ever been made before and to incite meetings of teachers all over the country, and especially in New England towns and cities, to secure pledges of attendance and membership. As it was, over seven thousand New England teachers were enrolled, and although many prominent Boston teachers were not seen at the sessions and expressions of indifference from some, whether rightly or wrongly, were freely quoted, New England, as a whole, Massachusetts and even Boston outdid themselves.

It was frequently remarked that no previous meeting was so elaborately organized. For some days on every train that entered Boston, especially those from the West and South, agents with red bands on their hats—often Boston teachers—passed through to give information and assign rooms in advance to all who desired. One of these agents told the writer that on one train between Worcester and Boston he enrolled over two hundred teachers, marshalled them off the train at the Huntington Avenue station, and took them to the large tent from which their baggage was distributed and where they could wait their turn for registration. Never has it been so impossible for any one to enter any meeting, rest-room or other resort, take any excursion or enjoy any privilege without a badge, and in every way registration and the two dollar fee has been made almost inevitable. The high school boys of Boston in their natty uniforms were ushers in the halls and churches and at every entrance challenged admission unless the badge was shown. A hospital was provided for men and women with efficient and complete service, which the intense heat made very opportune. Trips to all the beaches and public institutions, golf, polo, bathing, canoeing, sight seeing, visits to all the surrounding towns, and even shopping in many of the large establishments were offered teachers, that had the open sesame of a badge, at reduced rates.

Another feature to be commended was the absence of all advertisements and circulars of all kinds of books, school supplies, devices for teaching, etc., which usually make the streets and halls so littered and unsightly at the end of a four days' session. All this was strictly forbidden, and better yet the rules in this respect were enforced, not without much chagrin to those whose interest in education is solely commercial.

This thorough organization, however, seemed somewhat excessive in the methods adopted for providing the many programmes. All speakers were required to furnish five or seven copies of their papers at a certain date three or four weeks before the meeting; no paper was allowed to exceed twenty minutes or twenty-four hundred words; and

two weeks before the meeting five to seven abstracts of three hundred words were required. The results of this somewhat mechanical but Draconian law were both good and bad. Free discussion from the floor was reduced to a minimum and often made entirely impossible for lack of time. These opportunities for personal discussion, which often enlivened meetings, were cut out. The best result was that those appointed to follow leading papers had the advantage of having read them weeks in advance and thus could make their discussions much more pointed and effective. Many eminent men and women attended the meetings, who would have gladly spoken and who would have been very eagerly heard, but they had no opportunity. The precise time limit was often transcended by speakers who injected added or extemporized matter into their papers, who thus made many section sessions too long or crowded out those who came late in the very full list of speakers for each occasion.

The large meetings were held in Mechanics Hall, which was far too large except for the first session. The voices of but very few speakers could possibly be heard in its vast spaces. There is here, of course, no space to speak of special sessions, but that devoted to child study deserves special praise. Its President, Professor Luckey, of Nebraska, took great pains in organizing the programme. His selections of speakers were wise, and he resisted the strongly urged solicitation of fusing with the kindergarten section or with that of high schools. The meetings were marked by the attendance of perhaps the brightest and best of the younger element of all the meetings, and the large church was crowded, even in all its galleries, and often all the standing room was taken by those who could not find seats. It was by far the best session that this section has ever held, and never has it been so apparent that here is to be found the leverage for the ultimate decision of most of the important questions of the education of the future. The severe criticism of a few years ago, which frightened off the camp followers, did great good, and now the body of literature in every land, the many academic chairs, the new standpoints and lines of work, have launched this great movement beyond all peradventure out into the open sea of growth and prosperity. More than any other section, the character of papers read here was sometimes scientific and based upon careful and sometimes elaborate research. It is greatly to be hoped that the new President and other officers will maintain the integrity and prestige now secured.

Among the other interesting features was the Indian exhibit. Although there were several Indian girls and representatives of our National Bureau present, most of the Indian baskets, which were the most salient feature of this exhibit, were made in white schools by white children. This new fad has some strange results. While the work itself is surprisingly good and its educational value is not to be questioned here, these baskets made by white children have immensely lowered the price of those made by Indians themselves. With the new interest and present demand this art might be taught in Indian schools by native teachers and made in such a way as to make many Indians self supporting and to greatly maintain their own self respect. But they themselves have unfortunately been compelled to take up the white man's burden and do and make things in which the white men excel them as much as they do the whites in basketry, their own indigenous pottery, birch bark, bows and arrows, beads, leather, hide and feather work.

Among the more interesting sections were those of the higher education, including colleges and universities, where the question of a two, three and four year course was well ventilated; the high school

section which had several lively debates, particularly on coeducation; the kindergartners, who broke away from their tendency to idealize Froebel only and invited men like President Eliot, Booker Washington, Hamlin Garland and others to speak, who were liable to commit the heinous offence of criticising Froebel and even Miss Blow; the manual training section; that of libraries, and others.

The entire afternoon was given to excursions, although very many extra sessions of sections or of committees and even departments were held. Many Boston people returned from their country homes and opened their houses for teas and for scores of receptions; lawn parties were held; guides showed visitors through all the museums and collections; admirable concerts were given, mainly gratuitously, and volunteer work by musical societies; and in some cases theater parties were organized. The intense heat, which steadily increased during the session, made the last day or two somewhat languid; and, as everywhere, there was a discontented minority who found fault and magnified personal inconveniences. Perhaps these culminated and were most justified in the inadequate provisions for registration which kept two thousand people in line on the hot streets during a good part of the first forenoon in order to pay their fee and get their badges which carried with them all admissions and other privileges.

On the whole, this meeting is sure to make the work of the next city and the officers who preside over the next meeting exceedingly difficult, because never has so high a standard been set. It is doubtful, too, whether the quality of the programme has ever been equalled, and its quantity certainly outstrips that of all previous meetings.

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EDITORIAL.

Dr. Theodate L. Smith has made a very thorough and apparently first study of the statistics of Yale College through the last century and reaches the remarkable conclusion that the fecundity of this century is not exceeded per wife by that of the last. The Editor has gathered and compiled similar figures from the three leading colleges for girls. These show even more than was expected that marriages of college graduates are late, few, and unfertile. Ten years after graduation were allowed before averages were struck.

Curiosity and interest underlie more and more all modern methods of education. In this article the same writers as above have tried to compile from many sources data to indicate the prevailing directions of interest in children and to give sufficient illustrations of the same to make the showing of practical use to teachers. A real question is a prayer for knowledge and should be treated almost sacredly. Some perhaps arise but once in a life-time. Perhaps we shall come to see that it is immoral to force knowledge upon unwilling minds.

Mr. Conradi has carefully gone over the question of children's natural interest in language and gives very copious lists of words that are favorite for various reasons, with an attempt to classify slang and to explain its prevalence and charm. His paper bears not only upon language generally but upon the

question of the best basis of English composition. His conclusions in favor of writing poetry are interesting and novel, and the curves for slang, reading craze and precision are at least suggestive.

Miss Smith, in answer to many inquiries, has attempted to briefly set forth the questionnaire method and to show the reasons for its high pedagogic value.

The usual reviews and book notes follow.

MARRIAGE AND FECUNDITY OF COLLEGE MEN AND WOMEN.¹

By G. STANLEY HALL and THEODATE L. SMITH.

During the past year much has been said in regard to the decrease in the size of the American family, and this has been especially emphasized in the case of the liberally educated class. The note of alarm sounded by the President of Harvard and the President of the United States, has been taken up by the newspapers until "race suicide" has become a theme for the comic papers. In all this it has been assumed, with no investigation of causes or conditions, that such a state of affairs is wholly bad, and that the prosperity and even the very life of the nation is threatened. For the present investigation, data have been collected from class secretaries, from published class reports, and from the valuable collection of biographies, of early Harvard graduates, by Mr. Sibley,² and the careful work of Mr. Dexter³ for the first sixty-three years of Yale. The record of Harvard from 1658-1690 was compiled from Mr. Sibley's biographies, the record of each graduate being made out from the individual biographies. The class records earlier than 1858 were not sufficiently complete on the points included in the tables to be available for the present study. The record of Harvard graduates for the 18th and first half of the 19th century is still to be worked up, though much material has already been accumulated. The class reports from 1860 to the present time are fairly complete, and they have been supplemented by the courtesy of the class secretaries⁴ in all cases where the report was not of recent date. The Yale record has been compiled from Mr. Dexter's biographies for the years 1701-1763, and the later periods covered in a more general way by Mr. Clarence Deming, of New Haven, in an article published in the Yale Alumni Weekly, March 4, 1873. Mr. Deming⁵ made use only of the classes which had sum-

¹These data were collected and tabulated with aid from the Carnegie Institute which is thankfully acknowledged.

²Biographical Sketches of Harvard University, John Langdon Sibley, 1885.

³Yale Annals Biographies, J. Franklin Dexter.

⁴The courtesy of Mr. Kiernan of the Harvard Library and his assistant is gratefully acknowledged, the Harvard records having been placed at the author's disposal.

⁵Permission to use Mr. Deming's data has been granted by courtesy of the editor of the Yale Alumni Weekly.

marized reports, but his results show so great a uniformity with the other data that they have been incorporated with them. Amherst has furnished tolerably complete records, 1825-1878. Middlebury from 1844-1878. Wesleyan from 1833-1871. Bowdoin from 1861-1878, and two other colleges, some scattered data. All of these records have some deficiencies, for the work of a class secretary is no sinecure, and the most conscientious secretary can only appeal to his classmates and cannot compel them to send in their records, but in taking the averages by decades, the results are so uniform that minor inaccuracies and deficiencies are shown to be practically ruled out. In nearly all cases the averages are probably slightly too low, as some members of the class fail to report in spite of the appeals of the class secretaries, the value of whose work deserves recognition, since through their efforts much valuable statistical and historical material is accumulated and preserved.¹ The reports which contain summaries have been of especial value in the present work. All the data which have been tabulated show that for the past century the average number of children per class member has steadily decreased, and that since 1870 scarcely a class has reproduced itself, *i.e.*, the average number of children per class member is less than two. These are the statistical facts, and the evidence is overwhelming that there is a steady and progressive decrease in the number of children born to college graduates. But, admitting the fact, does it follow that this is an indication of degeneration and wholly a matter to be regretted? Turning to the United States Census Reports for 1900, it would seem that the population of the United States as a whole is not in immediate danger, the actual increase in population for the decade from 1890-1900, being 12,946,436, as against an increase of 1,379,269, in the years from 1790-1800. By percentages this increase of over 12,000,000 inhabitants in a single decade is a drop from 31.1% to 20.7%, but during the last one hundred years the population has been multiplied by nineteen, and with its present population even the large territory of the United States could not support such an increase of population for many generations. Statistics in regard to the proportion of foreign born in the population extend back only to 1850. They are here given:—

	NATIVE BORN.	FOREIGN BORN.
1850	90.3%	9.7%
1860	86.8%	13.2%

¹ Especial thanks are due to Mr. Wm. P. Bacon, of New Britain, Conn., class secretary of Yale, 1858, who placed his valuable collection of class records at the author's disposal, and whose class record is the most complete of all those examined.

	NATIVE BORN.	FOREIGN BORN.
1870	85.6%	14.4%
1880	86.7%	13.3%
1890	85.2%	14.8%
1900	86.3%	13.7%

An examination of these percentages shows that while there was a sudden increase in emigration between 1850 and 1860 there has not only been no marked increase since that time, but during the last ten years a drop of 1.1% in the proportion of the foreign born to the entire population. In the year 1900, there were in the U. S. under the age of one year 1,158,585 native white children of native white parents, 493,466 native white children with one or both parents foreign born, and 4,076 foreign born children, from which it appears that the population of the U. S. has not become entirely dependent upon emigration for a very respectable birth-rate. But is there, notwithstanding this increase in the population as a whole, a decrease in the number of the educated classes? Turning to the report of the Com. of Education for 1900 we find that the increase of men students in colleges from 1890-1900 was 60.6%, and of women students, 148.7%. From these figures it appears that the educated classes are not threatened with extinction so long as the present rate of increase continues, even though it be true that less than one seventh of the entering classes at Harvard are descendants of previous graduates. But the question still remains, does the falling off in the number of children of college graduates who are the descendants of some of the best blood in New England imply physical degeneracy or a falling off in the ideals of family life and parenthood? While the causes of this decline are complicated and many of them beyond the reach of sufficient data, economic considerations and increased luxury of living on the part of both men and women are undoubtedly a potent factor. For the majority of college men, marriage is deferred much later than in former years, because in the sharp competition of the present day, whether a man enters one of the professions or goes into business, a period of from five to ten years and often more, elapses before he is ready to take upon himself the support of a family. It may, perhaps, be argued that the financial condition of the progenitors of these men was no better, and that, nevertheless, they married young and their family record was all that could be desired. But is this as true as it seems from a perusal of the bare statistics?

As a matter of fact, the study of the individual biographies of Mr. Dexter and Mr. Sibley show that these statistics are really misleading, because it has been erroneously assumed

that they show the average number of children per married couple, whereas that they do not show this becomes evident from a study of the mortality record among women and the number of remarriages recorded in the early biographies, which reveals the fact that a second and third, and sometimes even a fourth or fifth wife was required to bring up these large families. If a man has 12 children and marries five times (this is an actual record) the true average of children per couple for that family is four and not twelve. It is true that the later wives sometimes had few or even no children of their own, but in the estimate of children this makes no difference as these women were required to bring up those of others. On this biological blunder of estimating the increase of population per man instead of per woman and too narrow a study of statistics is based much of the alarmist outcry in regard to the future population of the United States. If, instead of reckoning the increase in population per man, the number of wives concerned in bringing up the families of the early graduates of Yale and Harvard had been taken into account, the decrease in the size of families would appear much less alarming than has been assumed. A comparison of the columns in Table XII shows that while as reckoned per man, the decrease in the number of children has been very marked, that the per cent. of decrease as reckoned per woman is much less owing to the great decrease in mortality among women, and the small number of second marriages in the present century, as compared with the early records. While the average number of children per married man in the Harvard record falls from 3.44 to 2.22 and 1.92 for the two last decades included in the record the average per woman falls from 2.98 to 2.07 and 1.84, and in the Yale record the corresponding figures are a fall from 5.16 to 2.55 per man, and 3.87 to 2.25 per woman. The following table reveals some facts in regard to mortality among the women of the past century, which when added to the great mortality among children and the enfeebled constitutions of many more, cause grave doubts as to whether the actual increase in population alone considered is the most important factor in the prosperity of a country, and whether quality and the vitality of the succeeding generation may not prove a compensating factor in the long run.

TABLE II.

Mortality Record of Wives of Yale Graduates from 1701-1763.

The number of graduates from 1701-1745 was	483
(of whom one-half were ministers.)	
Of these 29 were unmarried, and of 36 there is no record	65
Deducting these 65 men the recorded marriages =	418
(19 of those unmarried died young leaving slightly over 2% of those living to marriageable age unmarried.)	

Of the wives of these graduates 33 died at the age of 25 and under.

55	"	"	35	"
59	"	"	45	"
22	"	"	50	"

Total deaths, 169

That is, over 40% of the wives of Yale graduates between 1701-1745 died at 50 years or under.*

Of these 35% died at 45 years or under.

Nearly 21% " 35 " "
8% " 25 " "

*The average number of surviving children per class member was 4.44.

The number of graduates from 1745-1765 was 505
of whom one-third were ministers.

Of these 30 were unmarried, and of 44 there is no record 74

Deducting these 74 men the recorded marriages = 431
(35 graduates of this period died young.)

Of the wives of these graduates 33 died at the age of 25 and under.

54	"	"	35	"
49	"	"	45	"
18	"	"	50	"

Total deaths, 154

That is 35 $\frac{7}{10}$ % of the wives of Yale graduates died at the age 50 years or under.

Of these 31 $\frac{1}{2}$ % died at the age of 45 years or under.

20% died at the age of 35 years or under.

7 $\frac{2}{5}$ % died at the age of 25 or under.

The average number of surviving children per class member was 3.83.

From this record it appears that 40% of the wives of Yale graduates between the years of 1701 and 1705 did not live to bring up their children, and it took a second, and frequently, in large families, a third woman to complete the task. The problem of superfluous women did not exist in those days. They were all needed to bring up another woman's children. The Harvard record for the preceding century, though less complete, closely parallels that of Yale, as may be seen by reference to Table IV, 37 $\frac{3}{10}$ of the wives of Harvard graduates, between the years 1658-1690, dying under the age of forty-five years. A little study into the conditions of life in the colonies during the 18th century throws a flood of light upon this great mortality among women. One half of the 483 graduates of Yale between 1701 and 1745 were ministers, and between 1745 and 1763 one-third of the graduates were ordained. The average salary of a minister during those years varied from £40 to £80 and firewood, the unusual and "liberal" salary of £120 being mentioned two or three times. Marriage was almost universal, only 2% of the graduates who lived to the age of thirty remaining unmarried, and ordination

was usually immediately followed by marriage, the average age of graduation being 21 years. The average age of marriage for women was under twenty-one, many marrying in their teens, and several marriages at the age of fourteen are recorded. Although the purchasing value of money was somewhat greater than at the present times and standards of living much simpler, the majority of ministers eked out their salaries by teaching and the aid of a small farm. A family of less than eight children was considered small, and children were born very near together. The mother of the family, with the aid of the older children, spun, wove, knitted, sewed, baked, brewed, washed and ironed, and, in many cases, made the butter and cheese for the family. It is recorded of one woman that, though her husband received "even a smaller salary" than his brother ministers, yet, by the aid of a small farm and the produce, and skillful management of his wife, he was able to bring up and educate creditably eight children. Remarriage was almost universal for both men and women, economic conditions rendering it a necessity. A minister left with a family of little children could not on his meager salary hire a caretaker for them, and was obliged to seek a second mother for his children as soon as possible. A woman left with little children, and no means of support, must perforce accept the first opportunity that provided a home for herself and children. Both men and women accepted the responsibility of bringing up families other than their own, with apparently a sense of religious obligation. Yet many of the younger women who accepted the responsibility of beginning married life with a large family lived to bear only one child. Under such conditions it is not surprising that many women laid down the burden of life before reaching the age of fifty, and many more lingered on as invalids, dying after a "long and painful illness," as is recorded with pathetic frequency. Medical practice was very primitive in those days, the minister often being the physician for the body as well as the soul, and there were few alleviations for long and painful illness. The unhygienic mode of dress among women must also be taken into account, not only tight lacing, but an unnatural lengthening of the waist being the universal fashion. The records of mortality among children are unfortunately too incomplete to be available for statistical purposes, but where given for individual families a rate of fifty or sixty per cent. or even higher rates were not uncommon. Laws of hygienic and heredity were apparently unknown, for we find such records as:

— — 10 children (9 died), first wife died of consumption at 45 years.

— — 13 children (7 died in childhood), mother died at 47 years.

— — 10 children (9 died in childhood), the father's salary was £40.

— — 14 children, first wife died at 28 years, having borne 8 children in 10 years.

— — 11 children, all by first wife, who died at 47 years, after a long, painful illness.

— — Wife died at 68, after 20 years of invalidism, for eighteen of which she was helpless, left 8 *surviving* children.

— — First wife died at 24, leaving 6 children.

— — First wife died at 19, leaving 3 children.

— — 8 children born within 12 years, 3 were feeble-minded.

— — 11 children. His wife was subsequently afflicted with long continued and distressing mental derangement.

This record could be continued for 323 women. A study of the families of over eight children shows that a large proportion of the mothers whose families reached or exceeded this size died in the forties or became invalids. In cases where this did not occur (for there were women who bore 10 or 12 children and lived to be ninety years old) there were, in many instances, more favorable financial conditions, so that the actual burden of manual labor was somewhat lightened.

The subsequent record of these large families can be traced in only a few instances, but the indications are all in the direction that very large families tend to extinction in the fourth or fifth generation and it is the families of moderate size which persist through successive generations. Mr. Sibly records one family of 20 children (8 by the 1st wife, 12 by the 2nd) none of whom have living descendants of the name except through one son. The mortality record of the original 20 is not given, but the only survivors mentioned by name were three sons and one daughter. In one New England family, where love of children is a marked characteristic and which can be traced to fourth generation, the record is as follows: The grandmother bore ten children and died before reaching the age of forty. Of these ten children the three youngest were practically invalids for the greater part of their lives. Only two lived beyond the age of fifty. Eight were married, and of these eight marriages there are only three surviving descendants and none of these have yet reached the age of forty-five. In the fourth generation there is one delicate child. On the other side of this same family the record runs: grandmother had nine children and lived to the age of 87 leaving two surviving children of whom the oldest lived to the age of 84. All were married, but in the third generation but five descendants are living of whom four are unmarried, the cause in three cases being ill health. In the fourth generation is the one child already mentioned. In another family the record is 14 children of whom 10 lived to

maturity and eight married. The surviving children of these eight marriages from the next generation but two of these died before reaching the age of 40 and of the remaining eight two are unmarried and the other six have but three living children. These records can be paralleled in almost any group of old New England families, but among the many reasons ascribed for this extinction of old families, the unwitting sins of our grandmothers seem not to have been taken into account. We cannot read the record of their lives without doing reverence to their self sacrifice and devotion. They literally laid down their lives for their children but they violated, though ignorantly, the laws of nature and sinned against themselves and their posterity who must pay the penalty of an overdrawn account of vitality. And in so far as this is true, and the indications that it is true multiply with research, is it not simply an assertion of the law of survival of the fittest and therefore best for the race as whole, however repugnant to the individual, that the families of lessened vitality should die out?

It has been shown from the census reports that the population as a whole is increasing at a ratio which cannot be continued indefinitely even with the large territory of the United States, and that the liberally educated classes are increasing with a rapidity which may well cause us to stop and consider just what would be the result if all our college classes did reproduce themselves and send their children to college in addition to the steadily increasing body of recruits from below. The professions are already overcrowded, and, though it may be a fact to be deplored, it is still a fact that college graduates consider manual labor beneath them. There are some signs of healthful reactions in this respect, but they are, at present, only signs. This being so, if college classes all reproduced themselves there would be danger at no very distant day of an overcrowding of the liberally educated class and the balance between the productive laborers of the country and the organizing element would be lost. Japan is said to be suffering from this condition of affairs at the present time. The wealth of a country depends upon its productive laborers, and for the greatest prosperity of the country the balance must be kept. History teaches that all aristocracies tend to degenerate and must be constantly recruited from the ranks below. An educational aristocracy is no more exempt from this law than any other, and our strongest men have not, as a rule, come from the classes to whom a college education has been a birth-right for several generations but from the ranks below. The decrease of one class, and that a class relatively small in relation to the entire population, does not necessarily mean any decrease in the population, and to speak of "race suicide" on the

basis of the decrease of one class is illogical (and in view of the facts reported by the latest census an absurdity). There seems to be but one element in the entire situation which calls for any alarm and that is, if it be true as has been asserted, that the sentiment of parenthood and sacredness of motherhood is declining, for if this be true of the educated classes, it will sooner or later filter downward and affect the entire population. It is certainly true that the percentage of marriage among college men has decreased and that from ten to thirty per cent. of those who do marry have no children. That this latter fact is due to deferred marriage, the dates in the marriage record gives unmistakable evidence; one college class having an unusually large per cent. of childless men, showing that over twenty of its members married later than fifteen years after graduation. Mr. Deming's statistics show $21\frac{6}{10}\%$ of the Yale classes from 1861-1879 as unmarried, and the Harvard record from 1870-1879 is $26\frac{1}{2}\%$. This, when compared with the 2% for men of corresponding age in the last century, shows the largest factor in the decreasing average of children per class member. An examination of the summary in Table VII shows that, at the present time, families of over six children are rare and a complete disappearance of families exceeding ten, with the largest relative increase in families of two, three and four and a somewhat smaller increase in families of one.

The record of deceased children in Table V, though not directly comparable with earlier records because of their incompleteness, shows a great decrease in the mortality of children. Since the indications are in favor of the survival of the smaller families as compared with large ones the decrease in the size of the family and the lessened mortality may both be considered as favorable for posterity. It is probable that the economic factor figures largely here, because conscientious parents look beyond the years of infancy to the increasing expense of the education of their children. That this is not always the case, and that families exist where the wife prefers her social pleasures and the husband his club to the duties of home and children can not be denied, for the large increase of club houses, more or less luxurious, for both men and women points clearly in this direction. As there is no way of finding out statistically how large this class is and as, if there were, it would not be likely to be influenced by any arguments which interfered with their own desires, they must be left to the action of the law of survival which forbids their perpetuation. It may be that the same factor is of importance in the decrease of the marriage rate, for it is true that many girls expect to begin married life on the same scale where their parents leave off, and this is also frequently assumed to be the case without the

assent of the woman herself. But it is also true that many women and men as well, remain unmarried from far from selfish reasons. The educated woman of the present generation has a higher ideal of motherhood than her grandmother had because her knowledge is wider. She refuses to marry even at the sacrifice of her own personal happiness, if she believes that there exists either in herself, or in the man whom she may wish to marry, any hereditary taint or physical unfitness that would deprive her children of the right to be well born. In the college records of the future we shall not be likely to find that a consumptive mother died at the age of forty leaving seven children, none of whom lived to maturity. The woman of the present has rebelled against the conditions of life which her grandmother endured uncomplainingly and as usually happens in periods of transition; she has, perhaps, gone too far in the opposite direction, but the instinct of motherhood lies far too deep in woman's nature to be permanently disturbed by any waves of social ferment and reconstruction; and with the increase of knowledge and wider opportunities, the love of children which is innate in every true woman will develop a race of mothers who will not indeed lay down their lives for their children as did their grandmothers, but, with a deepening sense of the sacredness of parental responsibility, will live for them and with them, understanding, sympathizing, growing with them, giving to them in her maturity the best which her years of preparation have given to her.

TABLE I. *Yale.*

Class.	No. of Graduates.	No. of Children who lived to Maturity.	Av. No. of Children who lived to Maturity per Class Member.	Children who Died before Maturity.	Members of Class Unmarried.	Members of Class who Died Young.	Members of Class more than once Married.
1702	1	6	6	0	0	—	1 married 3 times
1703	1	9	9	0	0	—	{ 1 " 4 "
1704	3	12	4	2	0	—	{ 2 " 2 "
1705	6	33	5.50	3	0	—	{ 1 " 4 "
1706	3	25	8.33	—	0	—	{ 1 " 2 "
1707	4	12	3	—	0	—	1 " 3 "
1708	3	17	5.66	—	0	—	—
1709	9	47	5.22	7	0	—	3 married 2 times
1710	2	19	9.50	2	0	—	{ 2 " 2 "
1711	3	11	3.66	—	0	—	{ 1 " 2 "
1712	2	9	4.5	—	0	—	—
1713	3	15	5	—	I no record	1 (33 yrs.)	1 married 2 times
1714	9	29	3.22	2	2	1 (21 yrs.) 1 (25 yrs.)	{ 1 " 3 "
1715	3	11	3.66	—	0	1 (22 yrs.)	{ 1 " 2 "
1716	3	22	7.33	11	0	—	1 married 2 times
1717	5	37	7.4	—	0	—	2 " 2 "
1718	13	49	3.76	3	I no record	1 (22 yrs.)	2 " 2 "
1719	4	20	5	—	0	—	1 " 2 "
1720	10	46	4.6	7	0	1 (35 yrs.)	—
1721	14	44	3.14	15	1	1 (28 yrs.)	{ 1 married 3 times
1722	8	16	2	—	2 no record	1 (28 yrs.) 1 (35 yrs.)	{ 4 " 2 "
1723	10	14	1.40	—	3 no record	1 (21 yrs.)	2 " 2 "
1724	18	62	3.44	26	1	—	1 " 2 "
1725	8	29	3.62	3	I no record	1 (25½ yrs.)	5 " 2 "
1726	23	90	3.91	—	2 no record	—	—
1727	10	60	6	4	3 no record	—	5 married 2 times
					2 no record	—	3 " 2 "

TABLE I continued. *Yale.*

1728	13	58	4.46	11	I I no record	—	{ 1 married 3 times 2 " " "
1729	17	47	2.76	8	I 3 no record	I (26 yrs.)	3 " " "
1730	18	75	4.16	17	I I no record	I (26 yrs.)	2 " " "
1731	13	49	3.76	9	I 2 no record	—	{ 4 " " " 1 " " "
1732	23	86	3.73	17	I I no record	I (23 yrs.)	{ 5 " " " 3 " " "
1733	16	45	2.81	18	I I	—	3 " " "
1734	14	78	5.57	5	I I no record	I (26 yrs.)	{ 1 " " " 1 " " "
1735	24	88	3.66	4	3 2 no record	I (24 yrs.) I (26 yrs.)	3 " " "
1736	19	98	5.15	7	I I no record	—	{ 1 " " " 5 " " "
1737	24	115	4.79	18	2 2 no record	—	{ 4 " " " 1 " " "
1738	15	87	5.80	9	2	—	{ 5 " " " 2 " " "
1739	10	32	3.20	4	2	—	{ 1 " " " 2 " " "
1740	21	89	4.23	6	I I no record	—	{ 6 " " " 1 " " "
1741	20	113	5.65	25	I I no record	—	{ 5 " " " 1 " " "
1742	17	49	2.88	11	—	—	{ 4 " " " 2 " " "
1743	24	105	4.37	12	3 I no record	—	7 " " "
1744	15	47	3.13	19	—	—	4 " " "
1745	27	96	3.55	17	5 no record	2 (27 yrs.)	{ 2 " " " 8 " " "
1746	12	41	3.33	9	I I no record	I (30 yrs.)	3 " " "
1747	28	110	3.92	14	3 3 no record	I (32 yrs.)	{ 4 " " " 1 " " "

TABLE I continued. *Yale.*

1748	36	148	4.11	22	3 2 no record	I (21 yrs.) I (22 yrs.) I (20 yrs.) I (23 yrs.) I (26 yrs.)	1	I 2 married 2 times
1749	23	84	3.65	17	2 2 no record	—	{ 1 1	" " " "
1750	17	64	3.76	2	2 1	—	{ 1 1	" " " "
1751	22	92	4.18	8	4 no record	I (31 yrs.)	{ 4 2	" " " "
1752	14	71	5.07	8	—	I (28 yrs.)	{ 4 1	" " " "
1753	17	53	3.70	4	3 2 no record	I (22 yrs.) I (23 yrs.) I (24 yrs.) I (25 yrs.)	3	" " " "
1754	16	51	3.18	5	2	I (22 yrs.) I (19 yrs.)	{ 1 1	" " " "
1755	23	112	4.86	10	1 2	I (23 yrs.) I (31 yrs.)	3	" " " "
1756	33	157	4.75	8	2 no record	I (20 yrs.) I (28 yrs.)	{ 1 3	" " " "
1757	40	141	3.52	23	2 no record	I (26 yrs.) I (29 yrs.)	{ 3 4	" " " "
1758	43	146	3.39	14	5 no record	I (29 yrs.)	{ 7 1	" " " "
1759	49	202	4.12	30	4 no record	I (30 yrs.)	{ 5 1	" " " "
1760	33	110	3.33	32	3 no record	I (23 yrs.) I (30 yrs.)	{ 2 6	" " " "
1761	29	81	2.79	16	3 no record	I (23 yrs.) I (27 yrs.)	3	" " " "
1762	42	162	3.85	11	5 no record	I (21 yrs.) I (29 yrs.) I (30 yrs.) I (32 yrs.)	4	" " " "

TABLE I continued. *Yale.*

Class.	No. of Grads.	No. of living ch.	Av. No. of living ch. per cl. member.	Av. No. of living ch. per married.	Un-married.	Members of cl. deceased.	Children deceased.	wives deceased.	Date of report fr. which data is taken.
1872	129	220	1.70	2.20	29	24	41	5	1897
1873	113	184	1.62	1.97	20	19	24	4	1893
1874	123	169	1.37	1.77	28	21	19	5	1889
1875	96	111	1.15	1.48	21	25	13	5	1895
1876	124	116	.93	1.63	48	30	20	—	1893
1877	119	113	.94	1.68	42	9	6	2	1892
1878	—	—	—	—	—	—	—	—	—
1879	138	50	.36	.79	65	—	—	—	1885
1880	123	152	1.23	1.63	30	16	—	2	1903
1881	129	107	.82	1.84	71	15	11	3	1896
1882	121	144	1.19	1.58	31	14	10	—	1889
1883	149	5	.03	.45	138	3	1	0	1886
1884	137	157	1.14	1.58	118	5	13	7	1901
1885	118	48	.40	.94	67	6	6	—	1896
1886	138	144	1.04	1.73	45	10	4	—	1901
1887	150	80	.53	1.11	78	6	—	3	1897
1888	120	32	.26	.54	61	2	—	—	1895
1889	120	84	.70	1.001	57	11	—	—	1899
1890	146	110	.75	1.22	56	1	—	—	1903
1891	185	91	.49	1.	94	4	—	—	1903
1892	176	106	.60	1.16	85	12	—	2	1903
1893	184	92	.50	1.06	98	12	3	3	1903
1894	—	—	—	—	—	—	—	—	—
1895	—	—	—	—	—	—	—	—	—
1896	276	50	.18	.50	226	2	4	3	1902
1897	—	—	—	—	—	—	—	—	—
1898	301	16	.05	.36	285	3	4	0	1902

TABLE III.

Table showing size of families for Yale graduates from 1701-1763.

83	men had families of 0 children.	4	married 2 times,	1	married 3 times.				
83	" " 7 "	25	" 2 "	3	" 3 "				
75	" " 6 "	12	" 2 "	3	" 3 "				
				1	" 5 "				
73	" " 4 "	3	" 2 "	2	" 3 "				
71	" " 8 "	29	" 2 "	2	" 3 "				
65	" " 5 "	5	" 2 "	2	" 5 "				
57	" " 9 "	27	" 2 "	5	" 3 "				
				1	" 4 "				
57	" " 1 "	4	" 2 "	1	" 3 "				
				1	" 4 "				
49	" " 3 "	5	" 2 "						
43	" " 10 "	20	" 2 "	3	" 3 "				
				1	" 4 "				
31	" " 11 "	12	" 2 "	5	" 3 "				
				2	" 4 "				
24	" " 12 "	11	" 2 "	1	" 3 "				
15	" " 13 "	5	" 2 "	2	" 3 "				
15	" " 0 "	4	" 2 "						
9	" " 14 "	7	" 2 "						
3	" " 18 "	2	" 2 "	1	" 3 "				
2	" " 16 "	2	" 2 "						
2	" " 17 "	2	" 2 "						
Total number of families, 757.									

TABLE IV. Yale, 1701-1763.

Table showing distribution of families according to size and per cent. of remarriage.

1.9 per cent. had families of 0 children.				Remarriage was 26.6 per cent.	
7.5	"	"	1 child.	"	15.7
10.96	"	"	2 children.	"	7.2
6.4	"	"	3 "	"	10.2
9.6	"	"	4 "	"	9.5
8.5	"	"	5 "	"	13.8
9.9	"	"	6 "	"	29.3
10.9	"	"	7 "	"	37.3
9.3	"	"	8 "	"	46.4
7.5	"	"	9 "	"	70.1
5.6	"	"	10 "	"	67.4
4.09	"	"	11 "	"	90.3
3.1	"	"	12 "	"	108.3
1.9	"	"	13 "	"	60.
1.19	"	"	14 "	"	77.7
.2	"	"	16 "	"	100.
.2	"	"	17 "	"	100.
.3	"	"	18 "	"	133.

The class of '75 has issued no report since '93.

" " '79 " " " '84.

Several of the class secys. have found it impossible to obtain complete reports, and the averages are consequently considerably too low.

TABLE V.
Harvard, 1658-1690.

Class.	No. of Graduates.	No Record of Children or Marriage.	No. of Children Lived to Maturity.	Average No. of Living Ch. per reported Graduates.	Children who Died before Maturity.	Un-married.	Married and no Children.	Members of Class who Died Young.	Members of Class more than once Married.
1658	7	0	21	3	1	0	1	1 (26 yrs.)	2 married 2 times
1659	10	1	36	4	4	1	1	—	2 " 2 "
1660	8	2	20	3.33	1	1	—	1 (23 yrs.)	—
1661	12	3	20	2.22	8	0	1	1 (25 yrs.)	2 married 2 times
1662	6	0	36	6	7	1	—	0	1 " 4 "
1663	6	2	10	2.5	0	—	1	1 (25 yrs.)	—
1664	7	2	17	3.4	2	1	—	1 (27 yrs.)	—
1665	8	0	24	3	8	1	—	{ 1 (22 yrs.) 1 (20 yrs.)	—
1666	4	1	5	1.66	—	0	2	1	—
1667	7	0	14	2	4	2	—	{ 1 (20 yrs.) 1 (22 yrs.)	—
1668	5	0	11	2.20	—	—	—	1	—
1669	8	0	24	3	2	2	—	—	{ 2 married 2 times 1 " 3 " 1 " 2 " 1 " 3 " 1 " 2 " 1 " 3 "
1670	4	1	11	3.66	7	0	—	—	—
1671	11	0	50	4.54	21	1	—	1 (24 yrs.)	—
1672	0	—	—	—	—	—	—	—	—
1673	4	0	19	4.75	—	—	—	1 (21 yrs.)	—
1674	3	2	3	3	—	—	—	—	—
1675	9	2	40	5.71	8	—	—	1	{ 1 married 2 times 1 " 3 " —
1676	3	0	1	.33	5	1	—	1 (26 yrs.)	—
1677	0	0	28	6.75	6	1	—	1 (22 yrs.)	1 married 3 times
1678	4	0	0	0	—	1	—	{ 1 (20 yrs.) 1 (22 yrs.)	1 " 3 "
1679	4	2	0	0	—	1	—	{ 1 (24 yrs.) 1 (30 yrs.)	2 " 2 "
1680	5	2	7	2.33	5	1	—	—	—

TABLE V. continued.

1681	9	2	29	4.14	10	1	1	1	1 married 3 times
1682	0	0	25	8.33	11	—	0	1	" " 2 "
1683	3	0	42	5.25	12	1	1	{ 1	" " 2 "
1684	9	1	26	2.36	8	—	{ 1 (19 yrs.) 1 (24 yrs.) 1 (27 yrs.)	{ 1	" " 3 "
1685	14	4	27	4.50	3	—	—	1	" " 2 "
1686	7	1	50	5.55	17	—	—	{ 2	" " 2 "
1687	11	2	—	—	—	—	—	{ 1	" " 3 "
1688	0	—	40	4	12	—	{ 1 (23 yrs.) 1 (25 yrs.) 1 (29 yrs.)	{ 1	" " 2 "
1689	14	4	—	—	—	—	—	{ 1	" " 3 "

Mortality Record of Wives of Harvard Graduates 1658-1690.

The number of graduates from 1658 to 1690 was 202.

Unmarried = 15

No Record = 34

—

49

Deducting these 49 men of the wives of the remaining 153 graduates 57 died before reaching the age of 45 years = 37 $\frac{3}{10}$ %.

TABLE VI.

Harvard 1860-1879.

Class.	No. of Graduates.	No. of Surviving Children.	Average No. of Surviving Child'n per class member.	Average No. of Surviving Child'n per married man.	Unmarried.	Married and no Children.	Members of class deceased.	Children deceased.	Members of Class more than Once Married.
1860	110	170	1.54	—	—	—	23?	37	—
*1861	81	141	1.74	2.71	34?	—	—	22	—
1862	96	133	1.38	2.60	35?	10	—	12	4 men marr'd twice
1863	†151	245	1.62	2.45	51	21	39	45	9 " " "
1864	99	140	1.41	1.86	24	22	21	30	9 " " "
1865	86	153	1.77	2.39	22	13	27	20	8 " " "
1866	112	196	1.75	2.20	23	15	25	41	{ 11 " " " 3 times 2 " " " "
1867	95	158	1.55	2.23	24	9	32	—	—
1868	80	146	1.82	2.43	20	10	14	22	3 men marr'd twice
†1869	111	—	—	—	—	—	—	—	—
1870	131	207	1.58	2.22	38	31	23	32	—
1871	158	208	1.32	2.18	53	12	40	23	4 men marr'd twice
1872	114	165	1.42	2.1	29	20	24	16	4 " " "
1873	131	187	1.42	1.85	34	60	23	16	6 " " "
1874	165	247	1.49	1.98	39	21	23	36	5 " " "
1875	133	172	1.29	1.84	40	22	30	24	7 " " "
1876	142	204	1.35	1.93	35	25	31	20	2 " " "
1877	195	291	1.49	2.10	37	25	34	34	10 " " "
1878	152	211	1.38	1.83	37	30	18	19	5 " " "

* 1861—22 members have no report.

† 1863—151 includes temporary members of class.

† 1869—No complete record of this class.

TABLE VII.

Table showing size of families for Harvard Graduates 1658-1689.

Number of families 147.			
18 men had families of	1 child	=	12.2 per cent.
17 " " " " "	2 children	=	11.5 " "
14 " " " " "	9 " "	=	9.5 " "
13 " " " " "	5 " "	=	8.8 " "
12 " " " " "	7 " "	=	8.1 " "
12 " " " " "	4 " "	=	8.1 " "
11 " " " " "	3 " "	=	7.4 " "
10 " " " " "	6 " "	=	6.6 " "
7 " " " " "	11 " "	=	4.7 " "
7 " " " " "	8 " "	=	8.7 " "
4 " " " " "	10 " "	=	2.7 " "
3 " " " " "	13 " "	=	2 " "
3 " " " " "	14 " "	=	2 " "
2 " " " " "	12 " "	=	1.3 " "
1 man had family	15 " "	=	.6 " "
1 " " " " "	20 " "	=	.6 " "

TABLE VIII.

Table showing size of families for Harvard graduates, 1860-1879.

1861-1872. Number of families 580. Number of children 1,792
Average children per man 3.09.

139	men	had	families	of	2	children	=	22.4	per	cent.
222	"	"	"	"	3	"	=	21.	"	"
112	"	"	"	"	1	child	=	19.2	"	"
98	"	"	"	"	4	children	=	16.8	"	"
60	"	"	"	"	5	"	=	10.3	"	"
28	"	"	"	"	6	"	=	4.8	"	"
9	"	"	"	"	7	"	=	1.5	"	"
5	"	"	"	"	8	"	=	.8	"	"
6	"	"	"	"	9	"	=	1	"	"
2	"	"	"	"	10	"	=	.3	"	"

1872-1879. Number of families 581. Number of children 1,612.
Average children per man 2.77.

165	men	had	families	of	2	children	=	27.8	per	cent.
127	"	"	"	"	1	child	=	21.8	"	"
127	"	"	"	"	3	children	=	21.8	"	"
88	"	"	"	"	4	"	=	15.1	"	"
32	"	"	"	"	5	"	=	5.5	"	"
27	"	"	"	"	6	"	=	4.8	"	"
10	"	"	"	"	7	"	=	1.7	"	"
4	"	"	"	"	8	"	=	.6	"	"
1	man	had	family	"	9	"	=	.17	"	"

Omitting fractions and arranging per cent. shows the change in distribution of families according to size for dates given.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	20	Families.
1858-1889.	12	11	7	8	8	6	8	8	9	2	4	1	2	2	$\frac{1}{10}$	$\frac{1}{10}$	Per cent.
1861-1872.	19	22	21	16	10	4	1	1	$\frac{3}{10}$	0	0	0	0	0	0	0	"
1872-1879.	21	27	21	15	5	4	1	$\frac{17}{100}$	0	0	0	0	0	0	0	0	"

TABLE IX. *Amherst.*

Class.	No. of members in class.	No. of children reported born in class.	Average number of children per member.	No. of fathers.	Average number of children per father.	No. of children born to fathers who lived 25 yrs. or more after graduation.	No. stated unmarried.	No. stated married and childless.	No. with no statement concerning marriage or children.	No. stated married. Children not stated.
1825	25	95	3.8	19	5.	84	5		1	
1826	30	81	2.7	25	3.24	59		2	1	2
1827	23	90	3.91	18	5.	90	1	3		1
1828	40	119	2.97	29	4.10	91		4	5	2
1829	41	145	3.53	32	4.53	109	1	3	3	2
1830	32	106	3.31	25	4.24	91	1	3	3	
1831	60	205	3.41	42	4.88	198	2	10	4	2
1832	38	110	2.89	24	4.58	99	5	7	1	1
1833	38	126	3.31	29	4.34	92	4	4	1	
1834	39	142	3.64	33	4.30	128	4	2		
1835	40	142	3.55	32	4.30	130	5	3	3	
1836	38	121	3.18	28	4.32	114	6	4	4	
1837	53	224	4.24	44	5.08	191	2	6	1	
1838	42	110	2.61	32	3.43	97	3	4	3	
1839	57	142	2.49	41	3.46	134	9	6	1	
1840	44	141	3.20	31	4.54	134	9	1	2	1
1841	32	100	3.12	22	4.54	99	6	2	1	1
1842	28	81	2.89	19	4.26	80	1	2	3	3
1843	21	56	2.66	14	5.	53	1	5		1
1844	30	53	1.76	15	3.53	52	7	4	2	2
1845	30	104	3.46	23	4.52	100	4	1	1	1
1846	26	59	2.26	18	3.27	43	4	1	3	
1847	18	42	2.33	13	3.23	34	1	2	2	
1848	30	93	3.1	23	4.04	85	3	2		2
1849	36	95	2.63	27	3.51	91	5	2	1	1
1850	25	57	2.28	15	3.8	52	4	3	3	
1851	41	142	3.46	30	4.73	133	6	2	1	2
1872	48	88	1.83	26	3.38	86	7	6	3	6
1873	54	92	1.70	32	2.87	88	3	2	10	7
1874	66	90	1.36	33	2.72	80	10	6	9	5
1875	49	87	1.77	30	2.9	69	5	5	3	6
1876	68	111	1.63	38	2.92	104	5	5	9	11
1877	74	108	1.45	45	2.4	102	5	4	7	13
1878	81	109.	1.34	45	2.42	99	9	1	11	15

TABLE X.

Table showing size of families for Amherst graduates 1825 to 1852 and 1872 to 1879.

1825 to 1852. Number of families 703.			
120	men had families of	2 children	= 16.9 per cent.
116	" " " "	4 " "	= 15.06 "
109	" " " "	" " "	= 15.05 "
94	" " " "	5 " "	= 13.3 "
77	" " " "	1 child	= 10.9 "
68	" " " "	6 children	= 9.6 "
46	" " " "	7 " "	= 6.4 "
26	" " " "	8 " "	= 3.6 "
20	" " " "	9 " "	= 2.8 "
12	" " " "	10 " "	= 1.7 "
9	" " " "	11 " "	= 1.2 "
4	" " " "	12 " "	= .5 "
1	man had family	13 " "	= .09 "
1	" " " "	14 " "	= .09 "
1	" " " "	16 " "	= .09 "
1872 to 1879. Number of families 241.			
68	men had families of	1 child	= 28.1 "
64	" " " "	2 children	= 26.1 "
46	" " " "	3 " "	= 19.08 "
32	" " " "	4 " "	= 13.1 "
23	" " " "	5 " "	= 19.08 "
8	" " " "	6 " "	= 3.3 "
5	" " " "	7 " "	= 2.07 "
2	" " " "	8 " "	= .08 "
1	man had family	of 9	= .04 "

TABLE XI.

Class.	No. of Mem. in Class no matter how long they lived.	Av. Number of Children per Member.	No. of Fathers.	Av. Number of Children per Father.	Unmarried.	Total Children.	Living Sons 1902.
1861	52	2.19	—	—	—	113	51
1862	42	1.45	—	—	—	61	26
1863	41	1.58	—	—	—	66	27
1864	33	1.81	—	—	—	60	21
1865	21	1.85	—	—	—	40	9
1866	24	1.08	—	—	—	26	15
1867	25	1.08	—	—	—	27	15
1868*	23	1.04	—	—	—	22	13
1869*	32	1.03	—	—	—	33	15
1870*	30	1.40	—	—	—	42	21
1871*	19	1.05	—	—	—	20	8
1872*	23	1.08	—	—	—	25	16
1873*	35	1.02	—	—	—	34	25
1874	38	1.00	—	—	—	38	18
1875	45	1.44	—	—	—	64	35
1876	43	1.27	—	—	—	55	29
1877	45	1.57	—	—	—	71	28
						797	372
							425 girls.

* Number of children probably underestimated.

TABLE XII.
Middlebury College.

Class.	No. of Graduates.	No. of Surviving Children.	Av. Number of Surviving Children per Class Member.	Av. Number of Surviving Children per Married Man.	Unmarried.	Children Dead.	Members of Class more than Once Married.
1844	3	5	1.66	2.50	1	—	—
1845	6	11	1.83	1.83	0	—	2 married twice
1846	8	16	2.	2.66	2	—	{ 1 married twice 1 married 3 times
1847	13	49	3.76	4.08	1	—	2 married twice
1848	9	29	3.22	3.62	1	—	—
1849	5	19	3.8	3.8	0	—	—
1850	7	15	2.14	2.5	1	—	—
1851	10	26	2.6	2.88	1	10	2 married twice
1852	9	23	2.55	2.55	0	2	1 married twice
1853	11	27	2.45	2.45	0	12	{ 1 married twice 2 married 3 times
1854	8	25	3.12	3.12	0	4	1 married twice
1855	4	10	2.5	3.33	1	—	2 married twice
1856	9	11	1.22	1.22	0	1	3 married twice
1857	16	34	2.12	2.26	1	7	4 married twice
1858	13	19	1.46	1.58	1	5	2 married twice
1859	6	13	2.2	2.6	1	3	3 married twice
1860	18	43	2.52	2.68	1	11	2 married twice
1861	13	39	3.	3.	0	3	2 married twice
1862	6	12	2.	2.	0	—	2 married twice
1863	9	28	3.11	3.11	0	2	4 married twice
1864	10	28	2.8	3.11	1	5	1 married twice
1865	7	16	1.42	1.42	0	—	—
1866	11	29	2.63	2.63	0	2	2 married twice
1867	6	16	2.66	3.2	1	—	1 married twice
1868	15	24	1.6	2.	3	2	—
1869	13	25	1.82	1.82	0	2	2 married twice
1870	16	22	2.	2.5	2	2	2 married twice
1871	15	22	1.46	1.57	1	3	3 married twice
1872	7	17	2.42	2.83	2	—	—
1873	7	7	1.	1.	0	—	1 married twice
1874	11	11	1.	1.57	5	1	—
1875	6	11	1.83	2.2	1	1	—
1876	14	27	1.92	2.45	3	1	1 married twice
1877	9	11	1.22	1.37	2	1	—
1878	7	6	.86	.86	0	2	—

TABLE XIV.

Harvard.

	No. of Graduates having Reports.	Number of Children who Lived.	Av. Number of Children per Graduate.	Av. Number of Children per Married Man.	Av. Number of Children per Married Woman.	Unmarried.
1658-1668	64	203	3.17	3.44	2.98	5
1668-1680	48	187	3.89	4.45	2.92	6
1680-1690	56	246	4.39	4.64	3.46	3
1860-1869	910	1482	1.62	2.22	2.07	243 = 26.7%
1870-1879	1321	1892	1.43	1.95	1.85	342 = 26.5%

Yale.

	No. of Graduates.	No. of Living Children.	Av. Number of Children per Graduate.	Av. Number of Children per Married Man.	Av. Number of Children per Married Woman.	Unmarried.
1705-1715	44	217	4.93	5.16	3.87	3
1715-1725	88	401	4.55	4.77	3.89	4
1725-1735	155	597	3.85	4.17	3.26	12
1735-1745	189	823	4.35	4.72	3.42	15
1745-1755	212	810	3.82	4.09	3.33	14
1755-1765	292	1111	3.80	4.04	3.40	17
1810-1841	371	1534	3.43	4.13		76 = 17%
1841-1861	838	2245	2.67	3.33		167 = 20%
1861-1879	1104	2204	1.99	2.55		238 = 21.6%
1872-1878	704	914	1.27	1.96	1.70	188 = 25.2%

Amherst.

	No. of Graduates.	No. of Living Children.	Av. Number of Children per Graduate.	Av. Number of Children per Married Man.	Unmarried.
1825-1835	365	1219	3.33	3.56	23
1835-1845	345	1170	3.56	3.95	49
1845-1852	206	592	2.87	3.30	27
1872-1879	440	685	1.55	1.72	44

TABLE XIV continued. *Wesleyan.*

	No. of Gradu- ates.	Number of Children who Lived.	Av. Number of Children per Graduate.	Av. Number of Children per Married.	Unmarried.
1833-1843	214	502	2.34	2.86	39
1843-1853	238	479	2.01	2.39	38
1853-1863	275	622	2.26	2.53	30
1863-1870	208	436	2.09	2.31	20

Middlebury.

	No. of Gradu- ates.	Number of Children who Lived.	Av. Number of Children per Graduate.	Av. Number of Children per Married.	Unmarried.
1844-1854	81	220	2.71	2.97	7
1854-1864	102	234	2.29	2.41	5
1864-1874	101	200	1.98	2.19	10
1874-1879	47	66	1.40	1.60	6

Bowdoin.

	No. of Gradu- ates.	Number of Children.	Av. Number of Children per Class Member.	Unmarried.
1861-1871	342	490	1.43	No data
1871-1877	248	307	1.23	" "

TABLE XV. *Brown University.*

Class.	No. of Gradu- ates.	No. of Gradu- ates Living.	No. of Living Children.	Children Dead.	Av. Number of Children per Class Member.	Av. Number of Children per Married.	Unmarried.	Remarks.
1872	—	44	106 TOTAL CHIL.	9	2.4	—	—	Taken from re- port of '97.
1874	45	32	72	—	1.6	2.25	13	Two members who are married have no children.
1875	40	30	64	10	1.6	1.88	6	
1876	50	—	103	—	2.06	2.39	7	

TABLE XV, continued. *Dartmouth College.*

Class.	No. of Graduates.	No. of Graduates Living.	No. of Living Children.	Children dead.	Av. Number of Children per Class Member.	Av. Number of Children per Married.	Unmarried.	Remarks.
1867	38	27	73	14	1.92	2.28	6	5 married 2 times Only 21 members of this class were heard from and the average is based on the 54 children reported by 21 graduates.
1868	45	34	54	11	—	2.57	—	
1874	67	63	116	14	1.73	2	9	14 of this class who are married have no children.
1876			158	19				14 of this class who are married have no children. 4 are not reported.
1877	68	60	93	16	1.36	1.63	11	

Williams College.

Class.	No. of Graduates.	No. Married.	No. of Children born.	Children deceased.	Wives deceased.	Members of Class deceased.	Date of report.
¹ 1876	44?	30	58	4	7	0	1896
² 1878	42	35	68	6	6	2	1903

¹ 6 members of this class married twice, and one three times. 9 are married and have no children.

² 2 members of this class married twice.

Turning now to colleges for girls the following data has been gathered. Every class secretary was written to and most have cheerfully sent data and have taken pains to make them as complete as possible. Whenever the secretary failed to respond or could not give the facts we have fallen back on the official records of the college. To all informants we hereby express our gratitude. If there are errors in the results they probably represent slightly too few, rather than too many marriages, births and deaths. Of course, too, if graduates are given but a year or two to marry as appears in the Vassar bulletin, or if all classes down to any recent date are included, say even 1900, as is often done, marriages would be far fewer. In general, the longer the interval allowed up to ten or twenty years, the more marriages.

TABLE XVI. *Vassar College.*

CLASS.	No. of Graduates.	No. Married.	No. of Mothers.	No. of Sons.	No. of Daughters.	Average No. of Children.	Unmarried.	No. who have Died.	No Report.	Those who have Taught.
1867	4	3		5	2	2.1	1			3
1868	25	15	10	18	13	3.3	10	7		14
1869	34	21	15	25	19	2.2	12	6	1	14
1870	34	22	16	19	25	2.2	12	3		11
1871	21	12	9	20	9	3.3	9	6		9
1872	29	11	7	15	5	2.2	16	3	2	12
1873	47	21	15	23	25	3.3	19	8	7	18
1874	42	27	20	30	28	2.2	12	10	3	15
1875	41	23	12	18	19	3.1	17	12	1	18
1876	46	24	14	31	16	3.3	20	7	2	16
1877	45	22	15	19	20	2.2	21	6	2	17
1878	42	20	14	24	20	3.3	22	3		21
1879	36	18	11	22	13	3.3	17	4	1	19
1880	46	28	16	26	21	2.2	17	4	1	17
1881	35	15	8	12	7	2.2	20	4		13
1882	39	20	12	12	14	2.2	18	3	1	15
1883	39	21	13	21	13	2.2	18	4		17
1884	30	18	9	10	11	2.2	12	4		12
1885	35	19	9	5	11	1.1	13	1	3	12
1886	31	11	7	9	4	1.1	19	5	1	13
1887	36	10	6	8	4	2.2	24	1	2	25
1888	36	19	10	12	6	1.1	16	3	1	12
1889	49	18	13	16	14	2.2	31	1		24
1890	46	19	12	8	14	1.1	25	1	2	18
1891	36	13	7	4	5	1.1	23			19
1892	54	21	9	4	5	1.1	28	2	5	26
1893	55	15	6	2	5	1.1	38	3	2	28
1894	72	12	8	11	1	1.1	58		2	42
1895	100	24	9	6	5	1.1	73	3	3	51
1896	119	18	5	2	3	1.1	94	2	7	64
1897	105	13	6	5	1	1.1	88	1	4	53
1898	86	7	2	1	1	1.1	77		2	29
1899	117	2					111		4	33
1900	125									

Total Number of Graduates to 1893 (26 classes), 958.

Total Number Married to 1893 (26 classes), 471.

Average Number of Children per Marriage, 1.61+.

Average Number of Children per Mother, 2.62+.

Thus it appears that in Vassar College, during the first ten years ending with the class of 1876, there were 323 graduates, of whom in the spring of 1903, 179 were married, the married being 55.41 per cent. of the graduates. The total number of children born to these classes is 365 or 3.09 per mother, or

VASSAR BULLETINS.

Class of	Date of Bulletin.	Number Reporting.	Number Married.	At Home.	Teaching, Tutoring.	Studying P. & at Insti.	Traveling or Away.
1897	Nov., 1902	101	30	18	41	14	2
1898	Mar., 1902	64	13	19	19	4	2
1899	Feb., 1901	111	7	46	38	24	4
1900	Dec., 1902	114	12	56	33	9	3

2.03 per married member, 58 married members having no children.

In the next ten Vassar classes, ending with and including the class of 1886, there were 378 graduates, of whom 192 were married, the married being 50.79 per cent. of the graduates.

The total number of children born to these classes is 294, or 2.57 per mother, or 1.53 per married member, 78 married members having no children.

In the third ten Vassar classes, ending with and including the class of 1896, there were 603 graduates, of whom 169 were married, the married being 28.02 per cent. of the graduates. The total number of children born to these classes is 135, or 1.58 per mother, or .79 per married member, 84 married members having no children.

In Smith College, during the first ten years ending with the class of 1888, there were 370 graduates, of whom in the spring of 1903, 158 were married, the married being 42.70 per cent. of the graduates. The class secretaries of these classes report the number of children born to the married members of their classes. The total number of these children is 315, or 2.08 per mother, or 1.99 per married member, 7 married members having no children. Of these children 26 had died.

In the next ten Smith classes, ending with and including the class of 1898, there were 1,130 graduates, of whom 331 were married, the married being 28.35 per cent. of the graduates. Of these classes six report the number of children born, which is 161, or 1.22 per mother, or .77 per married member, 7 married members having no children. Of these children 9 had died.

The data for those classes whose secretary is not named is derived from the report of Mrs. Elizabeth L. Clarke, Secretary of the Association of Collegiate Alumnae, whose statistics are brought only to February, 1903.

TABLE XVII. *Smith College.*

Class.	Secretary.	No. of Graduates.	No. Married.	Married and no Children.	No. of Children Born to Graduates.	No. of Graduates Deceased.	No. of Children Deceased.
1879	Mrs. Kate M. Cone, May 18, 1903.	12	7	3	11	2	5
1880	Mrs. Netta W. Higbee, May 16, 1903.	9	5		6	0	1
1881	Mrs. Anna H. Washburn, May 30, 1903.	27	14		29		1
1882	Miss Sophie C. Clark,	40	13		36	7	4
1883	Miss C. C. Gulliver, Sept. 3, 1903.	48	20		56		6
1884	Miss Frances M. Tyler, May 21, 1903.	44	19		47	1	
1885	Miss Mabel Fletcher, May 20, 1903.	46	18	3	20	7	2
1886	Miss Mary Eastman, May 21, 1903.	49	27		40	3	2
1887	Miss Clara M. Reed, June 1, 1903.	40	11	1	25	0	1
1888	Miss Lelian Du Bois,	55	24		45	4	8
1889	Miss Lucy E. Allen, May 19, 1903.	50	20		28 or 30	1	2
1890		63	23			4	
1891		79	28			2	
1892	Miss Eliza W. M. Bridges, May 19, 1903.	88	25	4	39	2	2
1893	Miss A. N. Stevens,* Aug. 11, 1903.	108	39	8	21	2	
1894	Miss Edith A. Harkness, Sept. 14, 1903.	111	44	34	16		
1895	Miss Amey Aldrich,* Sept. 13, 1903.	155	41	16	31		4
1896		146	49			1	
1897	Miss N. Gertrude Dyar, May 22, 1903.	184	40	16	26		1
1898		146	22			1	
1899		192	29			2	
1900	Miss Eliza J. Goodsell, May 30, 1903.	223	20	16	4	2	0
1901		257	15	11	4		
1902		232	10			0	

*Secretary of 1893 does not know whether 15 of married graduates have children or not.
*Three did not reply as to children. Twenty of children born were boys.

TABLE XVIII. *Wellesley College.*

Class.	Secretary.	No. of Graduates.	No. Married.	Married and no Children.	No. of Children Born to Graduates.	No. of Graduates Deceased.	No. of Children Deceased.
1879	Mrs. Louise M. North, June 4, 1903.	18	8	1	11	1	0
1880	Mrs. Edwina S. Chadwick, June 12, 1903.	41	18	4	47		4
1881		23	10				
1882	Mrs. Helen K. Lake, July 2, 1903.	29	17	5	31		5
1883	Mrs. Emma S. Eaton, May 28, 1903.	51	33	7	56	8	8
1884		48	22				
1885	Miss Alice M. Allen, May 21, 1903.	46	19	5	27		3
1886	Miss Susan W. Peabody, June 10, 1903.	59	27	9	50		
1887	Mrs. Maryette G. Mackey, June 14, 1903.	61	21	5?	42		1
1888	Miss May E. Cook, June 2, 1903.	60	28	4	47		4
1889	Miss May Banta, June 22, 1903.	85	29	7	54		5
1890		110	31				
1891		112	30				
1892		113	33				
1893	Mrs. Mary P. St. John,* July 28, 1903.	108	44	10	54		5
1894		108	23				
1895	Miss Helen M. Kelsey, June 13, 1903.	118	38	18	31	1	
1896	Miss Mary A. Dartt, June 10, 1903.	118	29	14	20	3?	
1897	Mrs. Judith B. Ranck, Aug. 5, 1903.	146	29	15	17	2	1
1898		144	10				
1899	Miss Olive Rosencranz, June 14, 1903.	130	16		2		
1900	Miss Chloe Curtis, July 9, 1903.	133	20		6		
1901							
1902	Miss Florence N. Hastings, June 15, 1903.	150	2	2	0		

* Six of those married not heard from.

In Wellesley College, during the first ten years ending with the class of 1888, there were 436 graduates, of whom in the spring of 1903, 203 were married, the married being 46.55 per cent. of the graduates. The class secretaries of eight of these classes report the number of children born to the married

members of their classes. The total number of these children is 311, or 2.37 per mother, or 1.81 per married member, 40 married members having no children. Of these children 25 had died.

In the next ten Wellesley classes, ending with and including the class of 1898, there were 1,162 graduates, of whom 296 are married, the married being 25.47 per cent. of the graduates. Of these classes, five report the number of children born, which is 176, or 1.67 per mother, or 1.04 per married member, 64 married members having no children. Of these children 11 had died.

The data for those classes whose secretary is not named is derived from the official report, which accounts for 1,851 graduates, of whom 455 or 24.58 per cent. are married.

Of all the view points of this many faceted question, that presented above, of the rotation of social classes, is a very important one. It is possible to regard college graduates as representing the advanced guard of culture and progress, bearing the chief burden of advance, and the more of them that fall in the front line of battle, making room for others to take their place, the harder and more costly does progress become. In the past the religious world thought it wise to set apart selected classes as monks and nuns *ad majorem gloriam dei*, as if the good they did by devoting themselves to a life of service more than compensated the loss entailed by the sterility of the best individuals. To give to mankind what was meant for wife, husband, and children is often a noble idea, and no doubt is illustrated by many individuals. In the ideal community it may be necessary that many of the best should give all that is in them, as well as life itself, to storming the ever steeper heights of attainment and making way for the masses below them.

No one would claim, however, that this accounts for the progressive infertility of the growing agenic and agamic classes in our communities to-day. This tendency is illustrated not only in most aristocrats of the world, past and present, whether those of wealth or learning, but also in the middle classes who, in our democratic age, are struggling up to something better. It is characteristic of the native stock in New England and is favored by growing urban life and by all those influences which demand an ever increasing length of time for apprenticeship to life as civilization grows more complex. As a class, the rich no doubt illustrate it as much as or more than college graduates. It is probably increased by luxury. To take President Eliot's figures for the Harvard classes of 1872-77 from which he finds twenty-eight per cent., mostly now between forty and fifty years of age, unmarried and those married not reproducing themselves (although our figures show that his are

too unfavorable), the facts are bad enough. His data were gathered and published in the interest of a special plea for shortening the college course. This is not only a limited point of view but it is, at least, an open question whether the facts do not point to the opposite conclusion, viz.: toward at least maintaining if not prolonging the period of apprenticeship to life. The three years' course, if it means three-quarters of the preparation now needed, might have the effect of a still greater handicap and therefore delay in attaining competence to support a family.

Again selfishness is no doubt, to say the very least, as large a factor here as altruism. To give our youth \$10,000 tastes and aspirations on \$1,000 incomes tends to delay or repress the desire for families in the earlier years of maturity. The ambition to start anywhere near the present level of their parents or their more favored academic colleagues, is even bad economy from the standpoint of races, because the best years for genesis are lost during the struggle for individual possession and income. It is a moderate assumption that there is a general consensus that the average man should be married at thirty and the woman at twenty-five. Of old this was felt to be a religious duty and was both urged and practiced as such. While bachelors were not taxed progressively beyond a certain age, as some now urge should be done, it was felt that a real obligation was avoided by those who shirked marriage and children without adequate and sufficient reason. In the best period of the best races, too, there has been a wholesome sentiment that both wedlock and childhood were needed for the full maturity of the individual, and that if this stage of development were not attained, the moral, mental, and physical nature was liable to warp or check.

I. Galton has shown us by convincing figures that if a woman is not married before twenty-eight and the man a few years later, even the most fertile races are doomed to extinction, because there are not enough children born after this age to keep up the population. Here we enter upon a maze of biological and social principles which it is perhaps now impossible to entirely disentangle so as to give each its due place and value.

II. Unless we insist on extreme Weismannism, as few biologists now do, we must admit that the child born of generations of cultured ancestry has some advantage, even though these do not live to see their birth, over those born of the lowest classes, postnatal environment and nurture being the same in the two cases. If this be so, each generation ought to add a little, infinitesimal though it be, to progress in that most ancient form of wealth and worth which birth bestows. If the old phrase that an ounce of heredity is worth a ton of

education have any truth in it, rotation of classes, while it may have many advantages, is thus bought at a very dear price.

III. Another principle involved, suggested by the statistics of natality and by biological considerations, is that, while children born of parents slightly immature are liable to remain undeveloped or, at least, have peculiar difficulties in coming to full maturity of powers of mind and body, those born of parents in slightly post-mature years tend more or less to precocity. This principle the writer gathers from studies in this field to be highly probable if not established.

IV. Closely connected with this is a principle brought out with ominous suggestiveness by child study, viz., that only children, and to some extent, offspring limited to a pair of children, tend to be feeble and need special care.

V. Another general consideration also pertinent in this discussion is, that the children of the rich tend to be prematurely or over individualized and those of the poor to be under individualized, even where the age of parenthood remains the same.

VI. Not only are families produced by parents who marry late, small; but another consideration, often overlooked in this discussion, is that they are still more outbred by those who marry young, because, while the latter have four or sometimes even five generations per century, the former have perhaps three or even less. This reduces still more the ratio of increase.

VII. Yet another principle which seems to follow from the above is that if the children of post-mature parents mature early, such children themselves, if they marry, should do so earlier than those who mature late, hence, if they marry at the same age at which their parents did, they are biologically and psychologically older when they do so than were their parents, so that the evils of post-mature fertility increase even if the age of marriage remains the same in successive generations.

VIII. One test of the complete domestication of an animal species is not only that it tends to grow larger than its wild congeners but to breed well. This, too, is a test of the possibility of permanent captivity. Now if we consider civilization as the domestication of man by himself, with which it has many analogies, we may apply this criterion as an effective test of the soundness of a civilization itself. This principle, too, would seem to apply to any trade or industry, or to any social class, or to the educated classes. If this be so it would seem to follow either that education is *per se* bad when considered from a large racial point or else that a postulate is laid upon us to find, as the right way of education, one which shall not tend to sterility. Otherwise, if higher education became universal,

posterity would gradually be eliminated and the race progressively exterminated.

With these ideas in view a peculiar pathos attaches to those who early in life have not wanted children, but do so when it begins to be a little too late. Many such parents console and perhaps deceive themselves with the principle *unus sed leo* and lavish upon the one or two that perpetuate their enfeebled existence, care enough for half a dozen children. The result of this is, that instead of broadening by retarding their development, their offspring are robbed of many elements of a proper childhood, pass rapidly over the developmental stages, and are hastened on to maturity by the excessive stimulus of too much adult environment and influence and too little wise neglect. They are infected too early with the insights and sometimes even the sentiments of early senescence and show all the mingled charm and sadness of precocity. Their life has the flavor of fruit that ripens before its time. The buds are picked open and the tree of knowledge blooms and bears its fruit before its time. These phenomena are not in the line of real progress, but it is such families, though not these alone, that manifest the phenomena of decline and perhaps extinction. It is certainly well for the race that the law of rotation of classes plows them under. A larger view is, however, that we must develop such a system of higher education as shall conserve youth and increase not only viability but natality, and not begin the sad process of elimination by interfering with the monthly function in the early teens during the critical years when a recent writer, M. Genet¹ proposes the extreme suggestion that one entire school year for boys at thirteen or fourteen, and girls a little younger, be set apart for no school work whatever, unless it be a slight review, to avoid brain strain that reduces the mammary function and power to nurse in girls as the first stages of sterility.

Not to pursue this subject further here it is probable that many of the causes for the facts set forth in this paper are very different, and some of them almost diametrically opposite in the two sexes. It is a comparatively easy matter to educate boys. They are less peculiarly responsive in mental tone to the physical and psychic environment, tend more strongly and early to special interests, and react more vigorously against the obnoxious elements of their surroundings. This is especially true in the higher education, and more so in proportion as the tendencies of the age are toward special and vocational training. Woman in every fiber of her soul and body is a more generic creature than man, nearer to the race,

¹ L'age scolaire, La Plata 1902, p. 94.

and demands more and more with advancing age an education that is essentially liberal and humanistic. This is progressively hard when the sexes differentiate in the higher grades. Moreover nature decrees that with advancing civilization the sexes shall not approximate but differentiate. Thus for women it is more necessary than for men to study their nature and needs and to base everything upon these. This is the great postulate which our educational institutions have too much and too long ignored. Before we solve it we shall probably be obliged to carry sex distinctions into every topic of the higher education. Now that woman has by general consent attained the right to the best that man has, she must seek a training that fits her own nature as well or better. So long as she strives to be manlike she will be inferior and a pinchbeck imitation, but she must develop a new sphere that shall be like the rich field of the cloth of gold for the best instincts of her nature.

Men and women differ in their dimensions, senses, tissues, organs, in their abilities, in crime and disease, and these differences, which science is now multiplying and emphasizing, increase with advancing civilization. In savagery women and men are more alike in their physical structure and in their occupations, but with real progress the sexes diverge and draw apart, and the diversities always present are multiplied and accentuated. Intersexual differences culminate during the sexual period. Little boys and girls play together, do the same things, in many respects have the same tastes, are unconscious of sex, and again in senescence there is re-approximation. Old men and women become more like each other and are again in a sense progressively sexless.

Divergence is most marked and sudden in the pubescent period—in the early teens. At this time, by almost world-wide consent, boys and girls separate for a period and lead their lives during this most critical period of inception, more or less apart, at least, for a few years, until the ferment of mind and body which results in maturity of functions then born and culminating in nubility, has done its work. The family and the home abundantly recognize this tendency. At twelve or fourteen brothers and sisters develop a life more independent of each other than before. Their home occupations differ as do their plays, games, tastes. History, anthropology, and sociology, as well as home life, abundantly illustrate this. This is normal and biological. What our schools and other institutions should do is to push normal sex distinctions to their uttermost and not obliterate them, to make boys more manly and girls more womanly. We should respect the law of sexual differences, and not forget that motherhood is a very different thing from fatherhood. Neither sex

should copy or set patterns to the other, but all parts should be played harmoniously and clearly in the great sex symphony.

I have here nothing to say against co-education in college, still less in University grades after the maturity which comes at eighteen or twenty has been achieved, but it is high time to ask ourselves whether the theory and practice of identical co-education, especially in the High School, which has lately been carried to a greater extreme in this country than the rest of the world recognizes, has not brought certain grave dangers, some of which are seen in these tables, and whether it does not interfere with the natural differentiations everywhere seen in home and society. I recognize, of course, the great argument of economy. Indeed we should save money and effort could we unite churches of not too diverse creeds. We could thus give better preaching, music, improve the edifice, etc. I am by no means ready to advocate the abolition of co-education, but we can already sum up in a rough, brief, way our account of profit and loss with it. On the one hand no doubt each sex develops some of its own best qualities best in the presence of the other, but the question still remains, how much, when, and in what way, identical co-education secures this end?

Girls and boys are often interested in different aspects of the same topic and this may have a tendency to broaden the viewpoint of both and bring it into sympathy with that of the other, but the question still remains whether one be not too much attracted to the sphere of the other. No doubt some girls become a little less gushy and sentimental, their conduct more thoughtful and their sense of responsibility greater, for one of woman's great functions, which is that of bestowing praise aright, is increased. There is also much evidence that certain boys' vices are mitigated; they are made more urbane and their thoughts of sex made more healthful. In some respects boys are stimulated to good scholarship by girls, who in many schools and topics excel them. We should ask, however, what is nature's way at this stage of life? Whether boys in order to be well virified later ought not to be so boisterous and even rough as to be at times unfit companions for girls; or whether on the other hand girls to be best matured ought not to have their sentimental periods of instability, especially when we venture to raise the question, whether for a girl in the early teens, when her health for her whole life depends upon normalizing the lunar month, there is not something unhygienic, unnatural, not to say a little monstrous, in school associations with boys when she must suppress and conceal her feelings and instinctive promptings at those times which suggest withdrawing, stepping aside to let Nature do its beautiful, magnificent work of inflorescence. It is a sacred time of reverent

exemption from the hard struggle of existence in the world and from mental effort in the school. Medical specialists, many of the best of whom now insist that through this period she should be as it were "turned out to grass" or should lie fallow so far as intellectual efforts go one-fourth the time, no doubt often go too far, but their unanimous voice should not entirely be disregarded.

It is not this, however, that I have chiefly in mind here, but of the effects of too familiar relations and, especially, of the identical work, treatment and environment of the modern school.

We have now at least eight good and independent statistical studies which show that the ideals of boys from ten years on are almost always those of their own sex, while girls' ideals are increasingly of the opposite sex, or also those of men. That the ideals of pubescent girls are not found in the great and noble women of the world or in their literature, but more and more in men, suggests a divorce between the ideals adopted and the line of life best suited to the interests of the race. We are not furnished in our public schools with adequate womanly ideals in history or literature. The new love of freedom and fame, which women have lately felt, has produced a reaction toward the other extreme, which inclines girls to abandon the home for the office. "It surely can hardly be called an ideal education for women that permits eighteen out of one hundred college girls to state boldly that they would rather be men than women." More than one-half of the school girls in these censuses choose male ideals as if those of femininity are disintegrating. A recent writer¹ in view of this fact states that "unless there is a change of trend we shall soon have a female sex without a female character." In the progressive numerical feminization of our schools most teachers, perhaps naturally and necessarily have more or less masculine ideals, and this does not encourage the development of those that constitute the glory of womanhood. "At every age from eight to sixteen girls named from three to twenty more ideals than boys." These facts indicate a condition of diffused interests and lack of clear-cut purposes and need of integration."

When we turn to boys the case is different. In most public high schools girls preponderate, especially in the upper classes, and in many of them the boys that remain are practically in a girls' school, sometimes taught chiefly, if not solely, by women teachers at an age when strong men should be in control more than at any other period of life. Boys need

¹The Evolution of Ideals. W. G. Chambers, *Ped. Sem.*, March, 1903, p. 101, *et. seq.*

a different discipline and moral regimen and atmosphere. They also need a different method of work. Girls excel them in learning and memorization, accepting studies upon suggestion or authority, but are often quite at sea when set to make tests and experiments that give individuality, and a chance for self-expression, which is one of the best things in boyhood. Girls preponderate in our overgrown high school latin and algebra, because custom and tradition and, perhaps, advice incline them to it. They preponderate in English and history classes more often, let us hope, from inner inclination. The boy sooner grows restless in a curriculum where form takes precedence over content. He revolts at much method with meager matter. He craves utility and when all these instincts are denied, without knowing what is the matter, he drops out of school, when with robust tone and with a truly boy life, such as prevails at Harrow, Eton and Rugby, he would have fought it through and have done well. This feminization of the school spirit, discipline and personnel, is bad for boys. Of course, on the whole, perhaps, they are made more gentlemanly, at ease, their manners improved, and all this to a woman teacher seems excellent, but something is the matter with the boy in early teens who can be truly called "a perfect gentleman." That should come later when the brute and animal element have had opportunity to work themselves off in a healthful normal way. They still have football to themselves and are the majority perhaps in chemistry, and sometimes in physics, but there is danger of a settled eviration. The segregation, which even some of our schools are now attempting, is always in some degree necessary for full and complete development. Just as the boys' language is apt to creep in and to roughen that of the girl, so girls' interests, ways, standards and tastes, which are crude at this age, sometimes attract boys out of their orbit. While some differences are emphasized by contact, others are compromised. Boys tend to grow content with mechanical, memorized work and excelling on the lines of girls' qualities, fail to develop those of their own. There is a little charm and bloom rubbed off the ideal of girlhood by close contact, and boyhood seems less ideal to girls at close range. In place of the mystic attraction of the other sex that has inspired so much that is best in the world, familiar comradeship brings a little disenchantment. The impulse to be at one's best in the presence of the other sex grows lax and sex tension remits, and each comes to feel itself seen through, so that there is less motive to indulge in the ideal conduct which such motives inspire, because the call for it is incessant. This disillusioning weakens the motivation to marriage sometimes on both sides, when girls grow careless in their dress and too

negligent in their manners, one of the best school of woman's morals, and when boys lose all restraints, which the presence of girls usually enforces, there is a subtle deterioration. Thus, I believe, although of course it is impossible to prove, that this is one of the factors of a decreasing percentage of marriage among educated young men and women.

At eighteen or twenty the girl normally reaches a stage of first maturity when her ideas of life are amazingly keen and true; when, if her body is developed, she can endure a great deal; when she is nearest, perhaps, the ideal of feminine beauty and perfection. We have lately in this country and Europe had a dozen books of a more or less naïve or else confessional character written by girls of this age, which show the first glorious inflorescence of womanly genius and power. In our environment, however, there is a little danger that this age once well past there will slowly arise a slight sense of aimlessness or lassitude, unrest, uneasiness, as if one were almost unconsciously feeling along the wall for a door to which the key was not at hand. Thus some lose their bloom and yielding to the great danger of young womanhood slowly lapse to an anxious state of expectancy or they desire something not within their reach, and so the diathesis of anxiety and restlessness slowly supervenes. The best thing about college life for girls is, perhaps, that it postpones this incipient disappointment, but it is a little pathetic to me to read, as I have lately done, the class letters of hundreds of girl graduates, out of college one, two or three years, turning a little to art, music, travel, teaching, charity work, or trying to find something to which they can devote themselves, some cause, movement, occupation, where their glorious capacity for altruism and self sacrifice can find a field. The tension is almost imperceptible, perhaps quite unconscious. It is everywhere overborne by a keen interest in life, by a desire to know the world at first hand, while susceptibilities are at their height. The apple of intelligence has been plucked at perhaps a little too great cost of health. The purely mental has not been quite sufficiently kept back. She wishes to know a good deal more of the world and perfect her own personality, and would not marry, although every cell of her body and every unconscious impulse points to just that end. Soon, it may be in five or ten years or more, the complexion of ill health is seen in these notes, or else life has been adjusted to independence and self support. Many of these bachelor women are magnificent in mind and body, but they lack wifeness and yet more—motherhood.

In fine we should use these facts as a stimulus to ask more searchingly the question whether the present system of higher education for both sexes is not lacking in some very essential

elements and if so what these are. Although the marriage rates are higher for men than for women graduates the disparity is far less than was supposed. Indeed, considering the facts that in our social system man makes the advances and that woman is by nature more prone than man to domesticity and parenthood, it is not impossible that men's colleges do more to unfit for these than do those for women. One cause may be moral. Ethics used to be taught as a practical power for life and re-enforced by religious motives. Now it is theoretical and speculative and too often led captive by metaphysical and epistemological speculations. Sometimes girls work or worry more over studies and ideals than is good for their constitution, and boys grow idle and indifferent, and this proverbially tends to bad habits. Perhaps fitting for college has been too hard at the critical age of about eighteen, and requirements of honest, persevering, work during college years too little enforced, or grown irksome by physiological reaction of lassitude from the strain of fitting and entering. Again, girls mature earlier than boys, and the latter who have been educated with them tend to certain elements of maturity and completeness too early in life, and their growth period is shortened or its momentum lessened by an atmosphere of femininity. Something is clearly wrong, and more so here than we have at present any reason to think is the case among the academic male or female youth of other lands. To see and admit that there is an evil very real, deep, exceedingly difficult and complex in its causes, but grave and demanding a careful reconsideration of current educational ideas and practices is the first step, and this every thoughtful and well informed mind I believe must now take.

CURIOSITY AND INTEREST.¹

By G. STANLEY HALL and THEODATE L. SMITH.

This study was made with aid given by the Carnegie Institute.

In the study of the emotions as compared with other activities of the soul, psychology has as yet made little progress. In the older works of the Scotch school and in the Herbartian literature we find elaborate systems of classifying emotions, but of the study of the living emotions in their genesis, development and relation to other psychic factors, little or nothing. Since the publication of the theories of Lange and James, in 1890, we have had abundant discussion of the theories of emotion and some excellent introspective work, especially upon those emotions which have the greatest bodily resonance. In the study of the expression of emotion, Darwin stands almost alone. Experimentally, there have been since 1880 various attempts to study the emotions by observation of changes in blood pressure and circulation. The work of Mosso stands foremost in this field, but the² plethysmograph has not yet added greatly to our knowledge here. A few monographs on special emotions have been published during the last decade, and there is a considerable body of literature on the pathology of the emotions, but the field to be investigated is wide, and as yet the laborers have been few.

In studying the development of the mental attitude which we call curiosity, we are confronted by difficulties of both definition and analysis. In its fully developed form it is sufficiently easy of recognition, but to determine where and when reflex activities become merged into psychic reactions, which may properly be termed stages in the development of curiosity involves us, at once, in the intricacies of the problems of active and passive attention and the development of the will.

¹ Acknowledgment is due to Miss Lillie A. Williams, New Jersey State Normal School, who furnished the greater part of the material used in this study, and to whom the authors gratefully acknowledge their indebtedness.

² For summary of plethysmographic studies previous to 1896 see T. E. Shields, *Journal of Experimental Med.*, Vol. I, p. 1, 1896.

The material for the present study was gathered partly in reply to a group of topics contained in a syllabus on "Some Common Traits and Habits," issued in 1895, and partly by a supplementary syllabus of the present year. The data asked for was as follows:

Curiosity, wonders. Prying, spying, inquiring, asking why, what for, or how, persisting in troublesome questions. Describe the first sign of curiosity or wonder in the infant; sample the growth of the instinct by instances up toward maturity, whether manifested toward natural phenomena facts or persons seen, or read of, mechanisms, motives, religious teaching, treatment by parents and teachers, etc. Cases of breaking open toys to see what is inside, or experimenting "to see what it will do." Later promptings to see the world, know life, travel, read, explore, investigate, etc. What excites chief wonder. Secrecy as a provocative of curiosity. Age of culmination of the chief classes of interest. Utilization and dangers.

Curiosity and Interest. I. Give cases of early curiosity or interest shown by infants. State in detail how this was manifested.

II. Give cases of interest or curiosity in children, shown by active observation or experiment.

III. Give instances of destructive curiosity; toys, etc., destroyed to find out how they were made.

IV. Give cases of interest or curiosity shown by asking questions.

Give instances of strong desire to travel. Did the interest in these cases extend to reading books of travel, etc.?

Total number of cases of curiosity, 1,227. These were distributed as follows:

I. Observation.

<i>a</i> Early stages of staring,	163 cases.		
<i>b</i> Active observation,	108 "		
	271 "	=	22.08 per cent.

II. Experiments,

78 " 6.35 "

III. Questions,

477 " 38.79 "

IV. Inquisitiveness,

69 " 5.62 "

V. Destructive curiosity,

332 " 27.08 "

1,227

To these were added the material furnished by the individual child biographies and records kept by mothers. Helen Keller's "Story of My Life," has also furnished some valuable material, and a few facts for comparison have been gleaned from animal psychology. All the material collected is readily classified into the groups given above, with the addition of a group, which for convenience has been called inquisitiveness, and includes the various forms of aimless and misdirected curiosity, peeking, prying, etc.

Ribot distinguishes three stages of curiosity or primitive craving for knowledge, surprise, wonder and curiosity; the first consisting of mere shock, a disadaptation. The second stage or wonder is distinguished from the first, in that, while surprise is

momentary and fleeting, wonder is stable, and may persist until worn away by familiarity. The third stage or attitude of investigation is that of curiosity proper. But there are indications that a fourth stage, preceding these three, should be recognized in the psychic accompaniment of some early reflexes. Preyer records this first stage of Ribot's as occurring in the fifth week, Mrs. Moore on the 26th day; Mrs. Hall notes it in the fifth week, and Miss Shinn on the 25th day. It is in each case a light reaction, the first active looking as compared with passive staring and is described as accompanied by a "dim rudimentary eagerness." But Miss Shinn also records that at about the end of the second week "the baby's gaze no longer wandered altogether helplessly, but rested with a long, contented gaze on bright surfaces which it happened to encounter. It was not active looking with any power to direct the eyes, but mere staring." In the material collected for this present study, 163 cases of this infant staring are reported, nearly one-half of which occurred under the age of three months. The earlier ones are all of the same type. Some bright or moving object seems to catch and hold the baby's gaze. There is no turning towards the object, no active looking, the eyes in their wandering unco-ordinated movements are simply arrested, and, in many instances, it is stated that there is a "contented" or "pleased" look on the baby's face. Light and darkness are distinguished, and moderate light appears to be for normal children a pleasurable sensation. Prof. Sully¹ suggests in regard to this first passive staring that "it is conceivable that the eyes happening to be co-ordinated opposite some patch of brightness might maintain this attitude under the stimulus of pleasure." Out of the dim, confused, mass of light and shade, something, probably a mere patch of brightness, has detached itself, and the physical mechanism of attention is called into play, a mere reflex, but a reflex whose psychic affective accompaniment, though rudimentary, has in it the germ of future development; the first movement of that intellectual craving which, more than any other endowment, differentiates one man from another in intellectual ability. In this connection a paragraph of Miss Shinn's is so significant that it is here quoted: "It is an important moment that marks the beginning of even a passive power to control the movement of the eyes, and when my grandmother handed down the rule that you should never needlessly interrupt a baby's staring lest you hinder the development of power of attention, she seems to have been psychologically sound."

¹Sully: Extracts from a Father's Diary in *Studies of Childhood*, p. 461.

It is now a recognized principle in the education of defective and feeble-minded children that the training of the motor apparatus of attention is the first and fundamental requisite for reaching the dormant psychic activities. Until a certain degree of muscular co-ordination has been attained, attention cannot be fixed long enough to produce any lasting psychic impressions.

While the infant is acquiring the power to converge the two eyes and move the lid, its eye falls a victim to any patch of light upon which it chances to rest. Often the body, or the eye itself, or more frequently the head, gives an involuntary lurch, and then the object of vision is so lost that it seems to cease to exist. Things that are fixated and drop, or move away, appear to vanish mysteriously, whereas, these same involuntary movements, on the other hand, may bring new objects so suddenly into the narrow field of vision as to cause a distinct shock or start or other impressions of surprise. So purely automatic, and as yet unassociated with touch, are these first optical impressions, that threatening movements toward the eye do not even cause the reflex action of a wink. The light-sense in the human infant is more independent of motor power because of the inability of the new born infant to move much. Could it co-ordinate its retinal impressions with motor innervations, this relatively prolonged independence of vision would not occur.¹ In this respect the condition of the feeble-minded child approximates that of the infant before it has acquired the control of its muscular organism. In studying the material collected by the questionnaire method, careful comparison has been made with the data contained in the few continuous records made by scientific observers. Samples of the questionnaire material are here given, and also a few of the points tabulated for comparison from the individual biographies.

EARLY STAGES OF VISUAL INTEREST.

M., 2 weeks. Looked round the room and often stared at one thing quite a while (not active looking).

M., 6 weeks. Examined his hands, turned his fingers over and over.

M., 5 weeks. "It was noticed that during the latter part of the second week the eyes lost their aimless look, and began to rest upon objects. In the third week, the child looked long and steadily at a bright red waist worn by his aunt, and a week later his eyes were always attracted by the striped ribbon of her hat."

M., 8 weeks. His mother held a bright flower up before him. He opened his eyes and mouth very wide, and bounced up and down.

M., 8 weeks. Lying in his aunt's lap, looked at some flowers, reaching out his hand for them.

¹See note on the Study of Children, *Pedagogical Seminary*. Vol. I, p. 130.

M., 3 mos. Will turn his head and move his eyebrows when he hears a noise.

M., 3 mos. Would look steadily at a bright Japanese parasol fastened to the ceiling. Also seemed to look at the fire.

M., 4 mos. A lady with a bright green bird in her hat leaned over the cradle. He seemed to notice it, and kept looking at it.

M., 5 mos. Seemed much attracted by a red dress.

M., 5 mos. Hearing a door open tried to raise himself. Failing, cried. Was lifted up and laughed. Later was laid down without complaint.

M., 5 mos. Would sit for a long time and watch the light. Would hold out its hands for a hat or veil.

F., 1 m. Stared intently at a patch of sunlight on the wall for several minutes; looked pleased.

F., 5 weeks. Stared at a lighted lamp, and expression changed when it was removed.

F., 3 weeks. Gazed at a white blanket thrown across the foot of the crib for several minutes. There was a different expression on her face, and her eyes were more widely open than usual.

F., 6 weeks. Occasional co-ordination of eyes and apparent fixation of gaze, since second week, always upon some brightly-illuminated surface. In 5th week followed movements of hair brush with the eyes for some time.

It will be noted that with the exception of interest in color there is, for the most part, no greater range of variation than might be expected from individual differences in development. From the 163 cases furnished by the questionnaires, and the six continuous records, the following conclusions have been drawn. The earliest form in which the mechanism of attention develops is in the sight reflex of passive staring, when the baby's gaze is, as it were, caught and held even for a few seconds. This seems to occur in some cases as early as the ninth day, though there are more records of this phenomena from the second week onward. This staring is to be distinguished from the aimless and unco-ordinated movements in which, though the eyes may rest upon or seem to follow an object momentarily, there is no continuous fixation and the co-ordination is purely accidental. The psychic accompaniment of this passive staring is probably the first step by which the baby begins its gropings toward an intellectual life. Whether the stimulus which holds the baby's gaze be pleasure, as Prof. Sully suggests, or whether there may enter into it, at times, a vague rudimentary fear as seems indicated in some of the cases reported, something has stirred in the psychic life and a distinct step toward the unfolding of dormant powers has been made. The next step is taken when the baby really looks and actively directs its gaze toward the interesting object. This commonly happens about the fourth or fifth week, though a few cases are reported in which the active looking has undoubtedly taken place considerably earlier. In these cases, however, the baby seems to have been equally precocious in other re-

spects. From this time onward, for the next three or four months, sight interests predominate in a baby's life. Of the 163 cases of interest occurring before the sixth month, 139 were

	Mere Sensibility to Light.	Passive Staring.	Attraction of first real looking gaze by motion.		Interest in color.	Full Accommodation.
Miss Shinn	1st day	End of 2nd week	25th day	1 month	1 year	8 weeks
Preyer	"	11th day	23rd day	23rd day	23rd day	8 weeks
Tiedemann	"	—	13th day (?)	—	—	—
Mrs. Hall	"	End of 2nd week	28th day	32nd day	3rd week	8 weeks
Darwin	"	9th day	6th week	—	6th week	—
Mrs. Moore	2nd day	—	—	28th day	15th and 20th [day]	—

visual and only 24 auditory. This, however, does not show superior development of the sense of sight over hearing, as undoubtedly the baby hears and shows decided distaste for loud,

harsh or sudden sounds. The development is largely a psychic one, and the baby finds the sense of sight more useful than that of hearing in acquiring knowledge of his surroundings. While the objects which attract attention are varied, as may be seen from a reference to the samples from the returns, they are reducible to a few groups. All bright or moving objects, and anything presenting strong contrast of light and shade, whether in color or black and white, is attractive to a baby.

EXAMPLES OF EARLY VISUAL INTERESTS.

M., 5 weeks. Would lie a long time watching red paper flowers dance in the air. They were hung over his cradle.

F., 2 mos. Much interested in a bright red necktie at which she gazed intently, following it with her eyes when the wearer moved.

F., 3 mos. Gazed at a lighted lamp as if fascinated by it; became restless when turned away from and was quieted by being turned toward it.

F., 3 mos. Followed a bunch of red roses with her eyes, and when they were taken away gazed after them a long time.

M., 3 mos. Much interested in watching his own hands.

F., 3 mos. Sat and stared curiously at her father the first time he kissed her after having shaved off his beard.

M., 4 mos. Very much interested in U. S. flag; reached for it.

F., 4 mos. Appeared quite fascinated by hat with bright red flowers. Was also interested in red ball.

F., 5 mos. Lay quietly for fifteen minutes watching a glass chandelier which glittered.

F., 6 mos. Can almost always be amused with a hand mirror.

F., 6 mos. Interested in faces, especially if spectacles are worn.

M., 13 weeks. Interested in a bright red ribbon, pulled at it, tried to put it into his mouth and played with it for some time.

F., 6 mos. Interested in bright colors and surfaces; likes to listen to the piano.

F., 6 mos. Much interested in looking at strange people; would stop crying to look at a stranger.

M., 6 mos. So absorbed in watching another child of the same age that his attention could not be distracted.

F., 6 mos. Seemed quite excited over a hat with nodding white flowers, reached for it and looked disappointed when the hat was put out of sight.

M., 6 mos. Finds her grandmother's spectacles a fascinating object.

M., 7 mos. Gazed intently at a blue and white silk tie, reached for it and tried to get it into his mouth.

F., 7 mos. Delighted with lighted lamp. Smiles and moves her hands and feet eagerly.

M., 6 mos. Would watch any one who passed him as long as he could. Same child at 9 months would look fixedly at bright flowers.

F., 7 mos. Would lie contentedly watching her carriage parasol. It was lined with green and had a fringe which moved.

Every color except violet was mentioned as attractive, red being mentioned most frequently, but white had almost as many mentions, and the data furnish no positive indication as to whether color, brightness or contrast was the real stimulus. In the list of red objects which proved attractive are a red

lamp, red flowers, red and white necktie, red blanket, red hat and the American flag, but it is to be noted that in nearly every case either bright red was mentioned or contrast was involved, as in the United States flag and red and white necktie, or the object was luminous as the red lamp. The color sense of babies has not yet been experimentally tested and until it has been, inferences drawn from the apparent attractiveness of colored objects in which brightness, contrast, and motion may constitute the whole or a part of the stimulus, have little value. Preyer, it is true, mentions his child's interest and pleasure in a rose-colored curtain on the twenty-third day of its life, as a color interest, but careful and scientific as Preyer's observations usually were, in this case, he made no tests to discover whether any surface of equal illumination would not have proved equally pleasing, and Miss Shinn is correct in saying that there is no *proof* of color discrimination or interest within the first year. Hats with nodding flowers of any color, the glitter of spectacles or the radiance of a lighted lamp, all seem to possess a peculiar fascination for babies, but it is about the human face that interest centers and earliest recognitions cluster. During the first three months it is probable that this interest is due largely to differences in light and shade and to the constant changes produced by motion, recognition by sight being a development of the latter part of third month, according to the observations which can be classed as really scientific.

But though sight interests so largely predominate during the first four or five months of a baby's life the other senses are by no means excluded. Sounds are noticed within the first week of life though oftener as disagreeable than agreeable experiences, the first record of auditory impressions showing that they are often accompanied by a shock which, if not true fear, is, at least, the basis of what later develops into fear. Preyer's baby listened to the tones of a piano with evident pleasure in his eighth week, and Mrs. Moore's boy lay quietly for twenty minutes on the 20th day while some one was singing to him, though it is recorded that on the whole, his first month was characterized by lack of interest in sound. The earliest manifestations of pleasurable interest in sound seem to be chiefly of an inhibitory nature, the child ceasing to cry or lying still when interested in sound. From the 5th month onward there is a marked rise in auditory interests and these are, for the most part, mingled with the development of motor activities; the crackling and tearing of paper becomes an absorbing interest; some children love to touch the piano keys and are better satisfied with their own musical attempts than those of others; the ticking of a watch excites active curiosity as to where the sound comes from. Sight interests do not diminish

but they are supplemented by those of hearing and muscular activities, as the baby begins to co-ordinate things seen, heard, touched, tasted and smelled. Sully (Extracts from a Father's Diary) notes that in the 10th week the sound produced by striking a wine glass excited "an agreeable wonder" though the sound of the piano proved disconcerting. Later the child became fond of it and "evidenced his enjoyment by complete relaxation of the muscles." Inhibitory effects and muscular relaxation are more frequent modes of manifesting pleasure in sound than in sight, where the reaction is often shown by widely opened eyes, movements of the hands and feet, with, later, attempts to grasp the pleasing object, and looks of eagerness and desire. Thus it will be noted that, though muscles and skin sensations including temperature, are those earliest experienced, they do not form the chief centers of interest during the first months of a baby's life; the stage of muscle interest being distinctly later in development than those of sight and, even then, sight interests are not subordinated but co-ordinated with them. This acceleration of sight development beyond that of the senses, which genetically precede it, is undoubtedly due to its greater utility. In the case of hearing, as of sight, the material gathered by the questionnaire has been compared with the continuous records, and examples from both are given. It will be noticed that there is greater variation in the ages at which the different developments occur than in the case of sight. This is, in part, due to the fact that for the first eight weeks, at least, in sight, psychic developments keep pace with certain definite physical factors, which is not the case with hearing, the ability to hear being present from the first week although the psychic development comes later. It is interest in sound, which is later in development, and not the physical ability to hear. Early sensations of sounds are, in many cases, connected with either unpleasurable or negative feeling tones, light-sensations if not too strong are of a pleasurable kind. While sound frequently causes a shock or kind of rudimentary fear and often occasions crying.

CASES OF EARLY INTEREST IN SOUND.

	Sound first noticed.	First pleasure in sound.	Turning head in direction of sound.
Miss Shinn	3rd day	27th day	3 months.
Preyer	4th day	8th week ²	11th week.
Tiedmann	—	40th day	—
Mrs. Hall	3 hours	6th week	21st week.
Darwin	—	6th week	49th day.
Mrs. Moore	2nd day ¹	20th day	30th day.

¹ The child ceased several times crying when his father whistled.

² On the 11th day the child was quieted by sound of father's voice.

- F., 5 mos. Would always stop crying to listen to music.
 F., 6 mos. Turned her head in direction of sounds.
 F., 6 mos. Interested in music.
 F., 6 mos. Interested in listening to music. (M., 5 mos.) (F., 5 mos.) (M., 10 mos.) (M., 10 mos.) (F., 1 yr.).
 F., 9 mos. Much delighted with organ music.
 F., 7 mos. Always cried to be lifted up when he heard anyone talking. As soon as he could see was satisfied.
 F., 1½ yrs. Similar case.
 F., 9 mos. Would always amuse herself if allowed to touch the piano keys. Would clap her hands to the rhythm of music.
 1 yr. At this age he learned to tear paper and this interest continued for several months.
 F., 1 yr. Much interested in a toy that rattled.
 M., 1 yr. Would sit very still and listen intently to watch.
 F., 1 yr. Interested in cornet.
 F., 15 mos. Tried continually to get her rattle open, shook it, listened and then tried again.
 F., 18 mos. Much interested in ticking of clock.
 F., 18 mos. When her cousin clapped her hands, came to her and examined her hands.
 M., 20 mos. Delighted in listening to piano.

After these early stages in the development of visual and auditory interests, interest in seeing things done plays a prominent role in the baby consciousness, and closely associated with it is the desire to do. The stage of active experimenting fills the second half of the first year. It is the period in which the series of sight, auditory, muscular and skin sensations coalesce. Of the child at this age Perez writes: "His activity, doubled now by curiosity and stimulated to the highest pitch by emotional sentiments of all sorts, makes him happier and happier, and seems to him so great a necessity that a quarter of an hour of relative inactivity weighs on him as much as a whole day of ennui on a grown up person." Whatever the development of the baby's time sense may be, Perez is undoubtedly right as to the curiosity and muscular activity which characterize this age. In these months the range of interests is not only greatly increased but individual predilections begin to be apparent. A distinct interest in mechanics is observable in some children as early as the 7th month,—the wheels of a chair or carriage, or the hinges of a door proving a continued source of entertainment. A little later, the problem of a lock and key becomes an absorbing interest, the inserting of the key in the lock and trying to turn it holding the attention for astonishingly long periods. Nature interests, too, are shown in these months; the interest in animals, even when accompanied by a certain degree of fear, being marked. Not only living animals, but animal pictures, and later animal stories, are a source of delight, and the joy of outdoor life is plainly manifested by baby coaxing and pleading in sign language long before the development of speech. In Miss Shinn's little niece this interest in animals was almost a

passion, developed suddenly just at the close of the first half year and was unaccompanied by fear. A large dog, which the baby had seen all her life, suddenly roused her desire and she would pay attention to nothing else. "Day after day, for weeks, the little thing was filled with excitement at the sight of the shaggy Muzhik, moving her arms and body, and crying out with what seemed intensest joy and longing. When he came near her excitement increased and she reached out and caught at him." While this case is more marked than is usual in so young a child, the interest in animals seems common to babies in general and continues as a permanent source of pleasure unless interfered with by rousing the fear instinct, which, though it is of frequent occurrence, soon wears off under normal conditions of familiarity with animals.

The stages by which the child passes from passive to active observation and experiment are very gradual, and not only do the different stages overlap in the course of normal development, but we find the rudimentary stages persisting even to adulthood in the case of the uneducated and undeveloped and, perhaps, occasionally manifested by every one under certain conditions of shock or surprise. The inarticulate surprise, the fixed stare and hanging jaw of the dull-minded youth when brought into new and unaccustomed surroundings are familiar examples of this early manifestation of curiosity persisting beyond its time. Cases of arrested development and imbeciles never outgrow this primitive manifestation. Instead of fully developed, eager, questioning curiosity, there is only the stare of amazement and shock of surprise. This arrest in the development of curiosity is marked in cases of epilepsy and is one of the symptoms of mental degeneration. The patient loses interest in anything new, his attention is hard to gain, and he finally sinks into an apathetic state with "no wants, no desires, no affection," the power of attention completely lost. In the training of the feeble minded, the teacher's chief problem is to rouse interest and curiosity, so that the wandering attention may be held long enough to make a lasting, mental impression.

In the development of normal children, active observation begins to play a prominent part toward the close of the first year. No longer content with merely seeing things, the little investigator desires to touch, taste, smell and handle everything within reach. Curiosity as to the contents of parcels, boxes, bureau drawers, trunks, bags and pocketbooks seems to be universal. Rummaging through closets, drawers, work-baskets or writing desks becomes a delight. The mere fact of a closed space seems to exercise a fascination over the childish mind. So wide spread and deep seated is this curiosity and

interest in whatever is concealed from view, that we must look for its explanation in the phylogenetic rather than the ontogenetic series. We can trace it far back in the animal line, when undoubtedly its utility lay in the food seeking impulse, and it is probable that in primitive man as in animals the impulse to explore unknown cavities, even though exposing the explorer to danger and coming into conflict with instinctive fears was, on the whole, an advantage in the struggle for existence. Sixty-nine cases of this active curiosity in regard to parcels and boxes were described, the ages varying from one to seven years, and the larger number of cases occurring between the ages of four and six. At about the same ages, interest in discovering why the door bell rang is at its height. With some children this becomes temporarily almost a mania and all other interests are sacrificed to running to the door or to some position from which the door can be seen.

Active interest in nature, though unfortunately too often repressed by unfavorable surroundings, develops rapidly after the first year. Children of kindergarten age, three to six, respond readily to any stimulus in this direction whether of plant or animal life. The desire to touch and handle things at this age is so great that we have numerous instances of seeds regularly dug up to watch their growth, flower buds picked or blown open, and the eyes of puppies and kittens rudely exposed to light before the proper time, as well as numerous other attempts to assist nature in ways which, though detrimental to her processes, are, nevertheless, inspired by a genuine though mistaken zeal for finding out her ways. The desire to handle things seems to develop concomitantly with the power of locomotion, and so necessary to the child's development is it that we can but sympathize with the little fellow who, after encountering repeated prohibition, inquired tearfully "What can I touch?" even although the artificial conditions of social environment demand the restraint of this eager spirit of investigation. But, though repression in some directions may be a necessity, good pedagogy demands that some outlet for this instinctive desire, which is at the root of all intellectual advancement, be provided. As an educational experiment, both Mrs. Moore and Mrs. Hogan found that diverting the attention to some object equally as desirable as the forbidden one, proved far more effective than direct prohibition. In the former case, the object was soon forgotten and there was little tendency to recur to it, while direct prohibition seemed to impress it upon the memory, and constant repetition was necessary until the prohibition was sufficiently impressed for eager desire to yield to force of circumstances, though the small investigators were quite incapable of understanding why the

denied object should be unattainable. So wide is the range of interests which come under the classification of active observation, that a complete representation of the material would prove tedious to any save specialists, but a few examples are inserted to show the character of the material and the range of ages included in the present study.

ACTIVE OBSERVATION WITH AID OF OTHER SENSES.

F., 7 mos. Cake basket near her. Upset it apparently out of curiosity.

F., 10 mos. Took great interest in examining the frame of a picture which stood on an easel.

F., 1½ yrs. When taken up by a lady, began to feel of her bracelet and pin, and to smooth the velvet on her dress.

F., 9½ mos. Being put on the floor, crept to the coal scuttle and upset it.

M., 3. Greatly interested in listening to water rushing through a sewer.

F., 4. Came into the room and saw a box which had not been opened. Would not go out to play, and as soon as others left the room tried to open the box. Failing to open it, she knelt down and smelled of it.

M., 4. Visiting; eager to see the bees. Ran down the walk and pounded on the hives. The bees came out and stung him.

M., 5. Saw a garter snake which he tried to catch. Told his mother he had been trying to get a pretty piece of ribbon for her.

M., 6. Looked at and handled everything he could reach in a depot to see what it was made of. Rubbed his hand all over a sign "No smoking."

M., 6. Curiosity easily aroused about books; always wants to "see the inside."

M., 6. Greatly interested in what he saw at a basket factory.

F. Grade III. Got excused from school to see what a toad was doing; ran all the way back to the toad. He was casting his skin.

F., 8; M., 7; M., 9. Climbed trees to see the eggs in birds' nests; rarely destroyed anything.

M., 9. Has a garden which he watches very closely to see when the seeds are sprouting. As soon as they come up, he plants others in their places to see them sprout.

M., 9. Would catch and carefully examine insects.

M., 8. Wanted to be allowed to stay at home from school to watch the plumber.

M., 8. On certain afternoons always went to watch the printing of the paper; also liked to watch the veterinary treat a horse which had a lame knee.

M., 9. Wanted to see the inside of a water pipe. Started to crawl through, but received a bad cut on the head.

M., 9. Took great interest in watching the hoisting of iron girders from the ruins of fire; was unwilling to go home until he had seen the whole process.

M., 10. Much interested in machinery; very careful in observation, and could put simple apparatus together after taking it apart.

F., 11. Delighted in examining an old clock which was given to her for a plaything.

M., 13½. Greatly interested in words; delighted whenever he hears a new one.

F., 12. Delighted if she can be allowed to go into the kitchen and watch cooking processes.

So closely connected with the stage of active observation that they continually become merged in each other is the experimental stage, the earliest forms of which, in obtaining muscular control of the body, Miss Shinn has so well described. These early experiments with muscle and touch sensations are soon extended to the other senses, and though disagreeable sensations and even pain is a result, these serve as guides for, rather than deterrents from, the spirit of investigation. Experiments in touch, taste, and sound become prominent in the second year, and the latter are frequently carried to an extent which proves trying to the nerves of adults. Active experimenting with taste develops somewhat later. According to Mr. Bell's¹ studies, while ability to carry things to the mouth begins in the 4th month, and some tastes are differentiated at this time, and biting develops along with dentition, active experimenting with taste proper begins in the second year. Children from two to four or five years taste everything. One hundred and eighty-two different articles are mentioned in his list of objects tasted, including plants, hay, straw, sticks, seeds, paste, cork, rubber, soap, tar, dirt, worms and insects, in fact anything "that can be carried to the mouth or the mouth to it," quite irrespective of any edible qualities in the objects tasted. Another phase of curiosity in regard to taste is the "teasing to taste," which, according to Mr. Bell, reaches its height between the ages of seven and ten. One hundred and twenty-two different articles are mentioned in Mr. Bell's list, the majority of them edibles in some stage of preparation, but uncooked mixtures and medicines of disagreeable flavor also figure largely in the enumeration. Experimenting with mixtures of both foods and drinks is most frequent between the ages of five and ten, and a year or so later comes the stage of adolescent testing, when the desire to try everything new in a bill of fare, to sample new combinations and flavors appear to be a characteristic of the developmental period.

EXPERIMENTS IN TASTE.

M., 14 mos. Took a bite of soap. Three weeks later made a second trial, after which he gave up soap as a possible addition to his diet.

M., 3. Began to eat "rat poison" to see what it was: Was interrupted just in time.

F., 4. Wanted to taste horse radish, and being refused, tasted it when her mother's back was turned.

F., 4. Very curious about a box of paris green and narrowly escaped poisoning.

¹ Psychology of Foods, Sanford Bell.

- F., 4 and M., 4½. Tasted grafting wax but did not like the flavor.
 F., 4. Ate a raw potato to see how it tasted.
 M., 6. Experimented with different things to see if the pig would eat them.
 M., 6. Received an Easter egg; ate it immediately to see how it tasted.
 F., 6 and F., 8. "My sister and I used to mix up snow with milk and juices to make new drinks."
 F., 6. Ate green grapes to see if they would really make her sick, as she had been told.
 M., 6. Tasted tabasco sauce although he had been warned of the effect.

Another phase of experimental curiosity closely associated with experiments in taste is the smoking craze, which is rife among boys from eight to ten years and appears to begin about a year earlier in girls. Mr. Bell gives a list of seventy-one different substances tested as to their smoking qualities by boys and girls of these ages. Bark of various kinds, spices, seeds, leaves, stems, rattan, cork, in fact almost anything that could be smoked and was easily procurable, is to be found in this list. While it is undoubtedly true that imitation plays a large part in this smoking craze, its root lies in the natural desire of growing children to test new sensations for themselves, and even the unpleasant results consequent upon some of the trials do not prevent further experimentation along the same line.

Up to the age of ten or eleven years there seems to be little tendency to specialize in experiments. In the active, healthy child the desire for knowledge is omniverous. He experiments not only with his own sensations but is possessed by a desire to find out how people, animals, and plants will act under certain circumstances. He not only wants to find out what he himself can do, but what others can do, and he wants to know the why of things. His mind is open in every direction and it is the golden age for arousing the interests that may prove to be life long. To repress his activity is to stultify his mind and sympathy with his interests, and an outlet provided for his activity will do more for him at this age than all the codes of discipline ever invented, which fail to recognize that curiosity and activity are normal to his age.

A little consideration of some of the examples, which are usually classified as "naughtiness," will show that they are by no means to be entirely set down to intentional misbehavior on the part of the child and that justice demands an investigation of the child's reason for the act.

- F., 2. Active interest in closed boxes or bottles; frequently tasted things in bottles until one day she tasted oil of cloves.
 F., 2. Was trying to put her fingers in her baby brother's eyes. Said she wanted to know how they felt. "How do they feel mamma?"
 F., 2½. Touched a hot stove to see how it felt.
 F., 3. Stuck a pin in her baby sister to see what she would do.

- M., 3. Threw everything at an iron door sill to see if it would break.
- M., 4. Hammered a bell to see what made it ring.
- F., 5. Hid in an unused chamber and remained there several hours because she wanted to find out what the family would do.
- F., 3. Interested in throwing stones, tried to see how far she could throw.
- F., 4 to 5. Experimented with a mouth organ.
- F., 4. Used to scratch pictures of people to see if they had life in them.
- M., 5. Much interested in plants and watching things grow.
- M., 4. Matches were a great temptation. Always wanted to light them.
- M., 4 and M., 5. Always trying to find out what things are made of.
- M., 5. Tried to open the dog's mouth to see what made him bark.
- F., 5. M., 6. Tied a cat's hind legs together to see how she would walk. Several cases of tying up cats' feet in tissue paper.
- F., 6 and 6½. Cut each others hair to see how it would look.
- F., 6. Much interested in gardening, but forces open the flower buds because she can not wait for them to open naturally.
- F., 5. Dug up the radishes every day to see how they were growing.
- F., 5. Seeing tears in her mother's eyes when she was peeling onions: "Mamma, the onions must hurt you. Give me an onion and let me find out where the hurt is."
- M., 5. When in a drug store, opened five boxes of soap while his mother's back was turned.
- M., 6, and F. 5. Put the dog's head in a paper bag to see what he would do. Several cases of similar experiments with cats.
- F., 6. Turned on the gas and said she wanted a fire.
- F., 6. Worked very diligently, and finally succeeded in taking up enough of a carpet to find out what caused a little hump in one place.
- F., 6. Dug up seeds to see how they grew.
- M., 6½. Kept opening the oven door to see the cake baking.
- M., 7. Greatly interested in door springs, and tried to make one.
- F., 7. Interested in hats, used to make many new shapes out of paper. Experimented on everything that could be glued.
- M., 7 and 8. Having seen a steam engine tried to make one.
- F., 8. Dug up a buried canary bird to see how it looked.
- M., 8. Very much interested in a pair of new skates and the way in which they fastened. His next composition was on skating.
- F., 6, and M., 7. Very curious to know how flying felt. Went a high bank and jumped, flapping their arms.

Apparent Cruelty. Under experimental curiosity, are to be classed a large number of cases of apparent cruelty, which are due not to any real impulse toward cruelty but to ignorance and to an impulse, which, when properly directed, is the prototype of scientific investigation. When a child of three endangers the life of her pet kitten by putting it into a tub of water, there is perhaps, scarcely need for the tearful explanation that she wanted "to see if kitty could swim like the swans she saw at the park," to clear her from the charge of cruelty, but the case is not quite so clear when a boy is found cutting off the leg of a live frog. When, however, an investigation reveals the fact that he has heard that certain lizzards reproduce their tails, and wanted to find out whether the frog would "grow a

new leg" the case seems to be one of a desire for knowledge rather than intentional cruelty. In each of the appended examples there was an apparently wanton infliction of pain, and yet in no one of them was the motive primarily cruelty.

CASES OF APPARENT CRUELTY.

F., 3. Put the kitten's front paws on a very hot stove to see what it would do.

M., 4½ yrs. Broke a little chicken's leg and brought it to his mother to learn how to mend it.

M., 8. Cut a crow's tongue to find out whether it would learn to talk; had been told this was the case.

M., 8 or 9. Shut a squirrel in a dog's kennel to see how long it could live without food. Was much interested in Tanner's fast of forty days, which was the incentive.

M., 6. Cut off a frog's leg to see whether it could hop with one leg. Was not ordinarily a cruel child.

M., 8-12. Broke chickens' legs several times but always set them; became a surgeon.

M., 8. Cut off a frog's leg to see if it would grow again.

M., 6. Was found pulling the legs off a fly; said he wanted to see if the fly could walk on the ceiling without.

M., 8. Dissected a frog to see how it was made (the extent to which this was vivisection is not stated). When reprimanded said: "Well, suppose another frog was hurt, I thought maybe I could fix its wheels if I knew what was in this one."

Moreover, we find numerous instances of children deliberately exposing themselves to pain to satisfy a desire for knowledge, though probably with the same lack of actual realization of pain as in the case of experiments on animals. The child who ate green grapes to see if they really would make her sick, had previously experienced an attack of colic, but the mere memory of pain was not sufficiently vivid to check her desire for experiment. Another child, on being told that iron on a very cold day would burn her tongue, deliberately tried it; and a boy of nine exposed himself to whooping cough "to see how it felt." A little girl of five, on observing tears in her mother's eyes as she was peeling onions, remarked: "Mamma the onions must hurt you; give me an onion and let me find out where the hurt is." Many cases of what, on first thought, appears to be a shocking callousness in children to the sufferings of others, prove upon investigation to be mere inability to appreciate the situation, due to a lack in experience on the child's part of either physical or mental suffering. Most children have, of course, temporary experiences of pain, but childish memories are short, and pain, unless exceptionally sharp or prolonged, is quickly forgotten; so that the average healthy child has very slight appreciation of illness or suffering and exhibitions of sympathy are largely imitative. A child who is habitually cruel is an abnormality and will probably be found to

have other signs of degeneration, but all the cases above quoted have not cruelty, but a desire for knowledge, however misdirected, for their impelling motive.

Questions. The development of the questioning phase of curiosity is coincident with that of language, and among all its manifestations the questions of children hold the most prominent place and furnish the most valuable material for study. Though there is a residue of miscellaneous questions which form an exceedingly interesting group, the larger number can be classified under the following groups. Questions in regard to (a) forces of nature, (b) mechanical forces, (c) origin of life, (d) theology and bible stories, (e) death and heaven, (f) questions which are merely inquisitive. These last form but a small group in comparison with the others, less than five per cent. of the whole. Under the first group of questions, in regard to nature and natural forces, are included questions in regard to the sun, moon, stars, cloud, rain, fog, wind, thunder and lightning, fire, water, animal and plant life. Of four hundred and sixty-five questions asked by children under the age of ten, if questions on the origin of life be included, over one-half were on topics relating to nature and the working of natural forces. Nearly 75% of these questions relate to causation. To the active imagination of the child all the phenomena of nature furnish material for wonderment, and though he often invents explanations for himself, questions of "what" and "why" are well nigh universal. Children under seven show a marked tendency to attribute personality to the working of all unknown agencies. Questions often take the form of "who made it?" and though this is probably largely due to the fact that children's questions in regard to natural causes are answered by the phrase "God makes it," this does not at all interfere with the child's idea of some intervening agency, more within the limits of his comprehension. Many children show by their questions that they attribute sentience to wind, think that the thunder is caused by some one rolling barrels, and that the flowers and trees have a life of their own. Some of the reminiscent papers describe a state of puzzled wonder, often lasting for years, and which obtained little relief from questions, as to how the earth could turn over without tipping people out their beds, and why the water did n't run out of the wells at night. Some children brood silently for years over questions, which they do not themselves originate, but which once put into their minds recur again and again, and when put into articulate form are met only with the unsatisfactory answer: "You are n't old enough to understand it yet." Those who remember their own childish puzzles will also remember the vague feeling of injury which such an answer

roused, which, could the child have put it into words, would have probably been expressed in some such form as "Then you should n't have made me think about it in the first place." And good pedagogy is on the side of the child. The active mind of a child can originate enough questions that are, at least, partially within his comprehension and wholly within his interests, to furnish the basis of a liberal school curriculum without the addition of insoluble puzzles. Fortunately for the child, the natural tendency to accept things as they appear, has a nullifying effect upon this premature instruction in healthy, normal children, but the delicate and neurotic frequently suffer imaginary terrors induced by distorted ideas.

In a recent study of the faults of children¹ it appears that, from the teacher's point of view, the most frequent and troublesome fault in children is inattention and lack of application. Trying enough to the overworked teacher, no doubt, but from the child's point of view, there is something to be said in regard to subjects to which he is required to pay attention. A child's attention is chiefly of the passive or involuntary sort and active or voluntary attention is a later development. It is easy for a child to attend to the things which interest him; but too often he is required to pay attention to things in which he has no interest whatever. Voluntary attention is a much more complex matter, and even in adults, unstable and dependent upon nervous conditions. It is easily fatigued, and to expect a child to continue a voluntary exertion throughout school hours without an appeal to his natural interests is irrational. No study of the span of either voluntary or involuntary attention at different ages has yet been made, though some careful observers have taken occasional notes on its development in individual children. Mrs. Hall records that her child paid attention for eight minutes to the rattling of a box on the 53rd day of his life. The same child, on the 63rd day, was interested for thirty consecutive minutes in the rattling of a purse of coins. Miss Shinn also notes that, more than once in her fifth month, her little niece spent half an hour at a time in gazing out of the window. Voluntary attention is a complex development involving an effort of will and dependent upon the natural or involuntary attention, and the best educational methods demand a study of children's interests, and an adaptation of the school routine to them, so that full advantage may be taken of the simpler and earlier development.

¹Norman Triplett: A Study of the Faults of Children, *Ped. Sem.*, June, 1903.

QUESTIONS IN REGARD TO NATURE.

F., 3 $\frac{1}{4}$. "What makes the sun shine? Who puts the stars in the sky at night?"

F., 4. "If I put a ball on that hill it rolls down, and what I want to know is how God keeps the moon up in the sky?"

M., 4. Asked about conglomerate rock, how the pebbles came inside. Saw a crab shell; asked what it was, and all about its life and habits.

M., 4 $\frac{1}{2}$. Asked how the moon got up so high, and said he would n't like to be up on it.

F., 5. "What makes the stars twinkle?"

F., 5. "What do we have a moon for? Why don't it be as bright as the sun? Why don't it be round? How can it be round sometimes? What good is the man? Don't the woman let him go out ever? If I was in the moon could I see you? Why not? Can I go when I die if I want to?"

M., 5. Asked if the man in the moon ever went to sleep; why the sun stood still; what made the stars twinkle; how the dew came on the grass; what made the thunder make such a noise; what made the wheels of the clock go round and what made the pendulum swing.

M., 5. Used to wonder whether the clouds run on the sky or on wheels, and why they did n't fall down.

M., 6 $\frac{1}{2}$. "How does the man in the moon get anything to eat?" Not waiting for answer. "I guess God must feed him with manna like he did the people in the wilderness."

M., 5. "What makes the fire jump up and down?"

M., 5. "Why does the rain come down? Where does it come from?"

M., 6. Wanted to know what fog was and what made it?

M., 6. "What makes the wind blow? Is some one pushing it along? I should think it would stop when it ran into a house or big tree? Does it know it turns our papers over?"

F., 6. Watching a beam of sunlight: "Why does it stay so narrow? Why is it on this side of the room in the morning and the other at night?"

M., 6. "How can the world turn round and not tip us out of bed? How does the water stay in the wells?"

M., 6. On seeing a windmill for the first time: "Does the wind make the wheel go round? How does the wind make it go round?"

F., 7. "Where does the snow come from? Where does the sun go at night? What makes it thunder and lighten?"

F., 7. Was told that the moon was made of green cheese; and was curious to see if it really was.

F., 7. "What makes the stars shine so bright?"

F., 7. Thunder storm. "What is that, thunder? Oh dear, what good does it do to thunder? Who makes it thunder, any way? I wonder if it thunders in N. Y."

F., 7. Saw plums for the first time. "What are they? Can you eat them? Where did they come from?"

F., 7. "What makes the waves roll in? Where does the water come from?"

F., 7 $\frac{1}{2}$. "Where do all the worms come from after a shower? Do they rain down?"

F., 8. "What makes the snow? Why is n't it dirty, like dust."

M., 9. Wanted to know where the rain came from, how it got down, and why it didn't rain all the time.

M., 9. "Why is the moon different shapes? Why is it big sometimes and little others?"

M. 11. Looking at the river which was very high. "I wonder what made it so high. It has not rained very much."

M. Having had the new moon pointed out to him, wanted to know where the old moon was.

M. Wanted to know what the moon was made of and if he could get it by walking over it.

F. 2. "What is the end of the world made of? What should I see if I went where the mountains touch the sky? How many stars are there?"

M. 2. "Why don't stars fall before the frost comes? What does the frost have to do with it anyway?"

Animal Life.

M. 5. Looking at bears. "Mamma, why do they throw so much bread to bears? Because they are hungry and must have something to eat? Or do they get hungry as we do?"

M. 5. On seeing a Mink cat for the first time. "Did a dog bite of her tail in a fight? Did the cat want her tail cut off?" "Do you think I can make my cat howl?"

M. 2. On seeing a cat box. "What killed kitty? Did kitty cry?"

F. 3. "Why does kitty have fur?"

M. 5. "Do fishes go on land to sleep?"

F. 5. "How do the flies walk upside down?"

F. 2. "Why do a canary's throat feathers ruffle when he sings? How does he do it?"

Nearly twice as many boys as girls, according to the present data, show special interest in mechanics, and the beginning of this interest is shown at a very early age. Mrs. Hogan notes the interest as a persistent one in her boy at the age of fourteen months, and the five years of the record show that it was continued. Questions are but one phase of the development of this interest, the earlier manifestations being active observation passing into experiment and very fully developed in the destructive phase of curiosity. Fifty per cent of the cases of boys' interests and curiosity in all its phases are connected with motion, the desire to find out what makes things go being a powerful incentive to various forms of investigation. Children under three are apt to attribute life to things which have motion, their first experiences being connected with living beings as causal agencies. Many children and animals show fear of mechanical toys, and there is a struggle between this timidity in the presence of the mysterious and unknown and curiosity in regard to the moving object. A kitten exhibited for several weeks an amusing struggle between evident fear and curiosity whenever a mechanical seal was wound up and turned loose on the carpet. The movements of the seal were somewhat erratic and the kitten following at what he probably estimated a safe distance, was occasionally surprised by a sudden turn of the seal, which he invariably avoided by leaping into the air. Whenever the mechanism ran down, he smelled of the toy.

pushed it about with his paws, and occasionally turned it over, always starting back, however, if he happened to set the wheels in motion. Familiarity finally overcame fear, even when the toy was wound up, but it never proved as attractive an object to chase as a ball for which the kitten himself supplied the motor power. This attitude seems also to characterize young children, for a baby's early motor interests are in the things which he himself can do, and disappointed friends and relatives have often found their gifts of mechanical toys a failure, simply because they have too far anticipated the natural development, and the toy has proved either a source of fear or failed to excite special interest. In fact, even at a later period, mechanical toys which are too complicated in construction, or too delicate to bear investigation, which is apt to be clumsy, soon lose their attractiveness, while something that can be taken to pieces and put together by unskilled fingers so that it will "go again," may prove a lasting means of amusement and instruction. Kites and tops are as interesting to the children of the present generation as to their fathers, and to the children of the orient as well as the occident, because there is something for the operator to do as well as to watch, and curiosity as to just how these toys will behave under certain conditions is kept stimulated by occasional failure, and the necessity for finding a reason therefor. The few examples of questions here given suggest a range of interests which could readily be further stimulated and given an educational impulse.

QUESTIONS SHOWING MECHANICAL INTERESTS.

- M., 3. "What is inside your watch, auntie, that makes it talk?"
- M., 4. Watching the walking beam on a steamer: "What makes that thing go up and down? Is it the man?"
- F., 4½. Seeing her mother crocheting lace: "Is that the way the lace on my dress is made?" Being answered in the negative: "Then how was it made?"
- M., 7. "What makes the trolley go?" "What does that engine need water for?"
- F., 7. Always liked to watch the oiling and cleaning of the carriage. Asked many questions in regard to it.
- M., 7. After seeing a pile driver at work, and visiting a fort, overwhelmed the family with questions in regard to them.
- M., 7. "How does the steam move engines?"
- M., 7. "Why can't you see the messages on the telegraph wire? How do they go?"
- F., 7. On seeing an electric car for the first time: "What makes that car go? How can it go without horses?"
- M., 7. "Why can some people take pianos apart when others musn't?"
- M., 7. "How does pressing the button make the bell ring when it does n't move the wire any?"
- M., 7½. Asked "what made the clock run?"
- On a ferry boat with his father: "What makes the boat go?"
- M., 8. "What do all these people want to ride on the boat for? How

long are we going to stay on the boat? Do you like to ride on the boat?"

M., 8. First time he rode on a train wanted to know "how it went, why it went and how the engine was made."

M., 9. Was very anxious to know how the train run. When he got out wanted to know how the wheels staid on the track. Was told that they were grooved and that kept them on. Ran back quickly just as the train was moving off and called, "Wait a minute till I feel it."

M. Boy on a train. What is that? What are those men doing there? What are they doing it for? What makes it whistle so? How does the train move? What does c o k e spell? What is it? Did I ever see any?

M. Small boy seeing a train. What makes that train go? Why do they ring that bell? Where does that smoke go? Who made that train?

Origin of Life. The questions relating to the origin of life were asked almost entirely by children between the ages of three and eight, the greater number falling between the ages of five and eight. Very few were reported after this age. This fact is significant and has an important bearing on the question of what teaching should be given to children in this fundamental fact of life. That curiosity on this subject develops in both boys and girls before the age of seven, is attested not only by the instances sent in answer to the syllabi, which made no mention of this topic, but asked only for instances of curiosity shown by questions without suggestions as to subject matter, but by the personal testimony of a number of teachers of wide experience, and many thoughtful mothers to whom personal experience has brought home the importance of the question. That there is really a falling off of curiosity at this age is not probable, and the absence of questions indicates either that the child's requests for information have been evaded, and fanciful and unsatisfactory answers have been given until he has become hopeless of obtaining information from the proper sources, or that curiosity has been satisfied by the teaching of other children in crude and garbled form, and the child is ashamed to ask further questions. The testimony of teachers in regard to conversation overheard among children, and a number of answers by adults to the question, "How did your knowledge of the origin of life first come to you?" have shown that not only is this the case, but that in later years the way in which such knowledge has come is bitterly regretted, because the beauty and sacredness which should belong to all thoughts connected with the coming of new life, has, for them, been sullied, and this is felt as a loss and an injury which no later teaching can ever fully repair. A study of the character of the questions at different ages, here inserted, shows in the earliest years the simple, frank curiosity of childhood. Later ones betray very plainly the false notions acquired from un-

satisfactory or untruthful answers, which do not explain that for which the eager mind is groping.

QUESTIONS RELATING TO ORIGIN OF LIFE.

- F., 3½. "Mamma, where did you get me?"
 F., 5. "Where was I when you were a little girl?"
 M., 5. "Where did baby come from? Did God drop baby down from the sky?"
 M., 6. "Was I a speck of dust? Did it have blood in it?"
 F., 7. "How did God send the baby? Did he send an angel down with it? If you had n't been at home would he have taken it back?"
 M., 7. "Where do doctors get babies from?"
 M., 7. "Who is 'Dame Nature?' Did you know she was going to bring you a baby? How did you know whether it was a boy or a girl?"
 F., 6. "Mamma, where do the chickens get their eggs?"
 F., 7. "How did the expressman know where to leave the baby?"
 M., 7. "Where was I before I was born?"
 M., 7. "Where was I when you went to school?"
 M., 8. "Where do little lambs come from? Do they come out of old stumps?"
 F., 8. "How did you know baby was coming, and get his clothes ready?"
 F., 19. "When I was 12 years old, suspecting that there was to come to our home a little stranger, and imagining that my mother was occasionally engaged in some secret needlework, I determined to satisfy my curiosity by an investigation. Selecting a time when there would surely be no interruption, I went to her room for proof of my suspicions in the shape of tiny garments. My search was successful, and my curiosity satisfied, but my act was discovered later, and I was reprimanded."

Why, on this subject, on which the child most needs wise and adequate teaching, should he be left to acquire information in stealthy fashion from those totally unprepared to gratify his legitimate and natural curiosity in healthful ways. Too often the information comes from newspaper reports of criminal cases, which are read and discussed by children in the fourth and fifth school grades. Could parents realize what it may mean to a child to have his first knowledge of the origin of life associated with sin, shame and secrecy, they would be guarded against it as from deadliest poison. One wise and beautiful mother of my acquaintance, whose example is worthy of universal imitation, adopted the principle of answering truthfully, and to the measure of the child's understanding, all spontaneous questions. In a family of five children, each child has known of the coming of the younger ones, and has been allowed to see the dainty garments prepared for the tiny baby who was coming to be a part of the home. This knowledge has been a beautiful secret, too sacred to be shared with any one but "father and mother," but each child has shared in the loving preparations and joyful anticipation of the baby's coming. To the children in that household no false or wrong

impressions have ever come. They are safeguarded from evil. To them the coming of new life is surrounded, as it should be, with a sacredness and responsibility born of a pure and wisely given knowledge. In pitiful contrast to this is the stealthily acquired, half comprehended, and wholly false-in-feeling knowledge of the majority of children in our public schools. Teachers furnish overwhelming evidence that there are few children over eight years old in the public schools who have not some sort of knowledge of the origin of life, and it is, perhaps, sufficient commentary on the kind of knowledge to add that the children regard the subject as something secret and shameful. Unquestionably the home is the place for this kind of instruction, but unfortunately there are too many fathers and mothers who are either unwilling or unfitted to give it, and the educational expert who can devise some scheme for wise and systematic instruction, adapted to the age of the child, and furnishing it with a safeguard against corrupting influences, will do more for the moral welfare of the community by the prevention of evil than any number of crusades against evils already existent. The power of an idea in a child's life is very great, and false and depraved associations may so corrupt and influence the thought of the child that the baneful influence may linger through life. In regard to the manner of teaching, Miss Sullivan's perplexities with Helen Keller¹ and her solution are suggestive. In August, 1887, less than a year and a half after Miss Sullivan first came to Helen, who was then seven years old,—she wrote the following lines in a letter to a friend: "I do wish things would stop being born! new puppies, new calves and new babies, keep Helen's interest in the why and wherefore of things at white heat. The arrival of a new baby at Ivy Green the other day was the occasion of a fresh outburst of questions about the origin of babies and live things in general. 'Where did Leila get new baby? How did doctor know where to find baby? Did Leila tell doctor to get very small new baby? Where did doctor find Guy and Prince? (puppies) Why is Elizabeth Evelyn's sister?' etc. . . . From the beginning *I have made it a practice to answer all Helen's questions to the best of my ability in a way intelligible to her, and at the same time truthfully.*" "Why should I treat these questions differently?" I asked myself. . . . I took Helen and my Botany, "How Plants Grow," up a tree, where we often go to read or study, and I told her in simple words the story of plant life. I reminded her of the corn, beans, and watermelon seed she had planted in the spring, and told her that the tall corn in the garden,

¹Helen Keller: The Story of my Life. New York, 1903.

and the beans and watermelon vines had grown from those seeds. I explained how the earth keeps the seeds warm and moist, until the little leaves are strong enough to push themselves out into the light and air, where they can breathe and grow and bloom, and make more seeds from which other baby plants shall grow. I drew an analogy between plant and animal life, and told her that seeds are eggs as truly as hens' eggs and birds' eggs,—that the mother hen keeps her eggs warm and dry until the little chicks come out. I made her understand that all life comes from an egg. The mother bird lays her eggs in a nest, and keeps them warm until the birdlings are hatched. The mother fish lays her eggs where she knows they will be moist and safe, until it is time for the little fish to come out. I told her that she could call the egg the cradle of life. Then I told her that other animals like the dog and cow, and human beings, do not lay their eggs, but nourish their young in their own bodies. I had no difficulty in making clear to her that if plants and animals did n't produce offspring after their kind, they would soon cease to exist, and everything in the world would soon die. But the function of sex I passed over as lightly as possible. I did, however, try to give her the idea that love is the great continuer of life. The subject was difficult, and my knowledge inadequate, but I am glad I did n't shirk my responsibility; for stumbling, hesitating, and incomplete as my explanation was, it touched deep, responsive chords in the soul of my little pupil, and the readiness with which she comprehended the great facts of physical life confirmed me in the opinion that the child has dormant within him when he comes into the world, all the experience of the race." If, in the case of this child, blind and deaf since she was eighteen months old, and limited in language to the acquisitions of one year, the problem could be brought within her comprehension to the extent shown above, and touch "the deep responsive chords," which in all normal children answer so readily to the skillful touch, there surely need be no fear that such instruction cannot be successfully given to children who are not thus limited. The aim in moral education should be to forestall and prevent evil, rather than to devise means for its cure after it is already existent.

Very young children, if normal, will never fail to be very curious about the advent of a new infant stranger in their family. Here it would seem that certain provisional answers to their inevitable questions are necessary for years too tender either to understand or to respect reserves that society demands. Their questions, however phrased, call for but little in the way of answer, and it would be mere pedantry and affectation to deluge a three year old child with physiological

explanations in detail. It is, however, essential that the myth should be such as to give some impression that the mystery is something sweet and sacred, and if we had a complete collection of answers,—the milkman, the stork, the doctor, the gardener, God, the angels, etc., as bringers of the new baby—we should find very great differences not usually sufficiently recognized and respected. To do this, and to devise a mythic answer that is true to the heart, instincts, and needs of the child in this brief period, is a pedagogical problem still open for solution.

A little later, perhaps at four or five years of age, the curious child can be told of the babe's relation to its mother's body, and this suitably illustrated from the plant world. The mother's body and her functions are far nearer to the child than those of the father, and it is she who should perform this holy pedagogical function, and make it all as natural as possible by well chosen analogies, of which biology now affords such a copious repertory. Interest in the male function normally comes much later, and the devotees of excessive frankness no doubt often do much injury by developing a precocious interest in it. To deal suitably with it is a far more difficult problem, and our failure to solve it is probably seen in the fact that curiosity at about the average age of eight increases in intensity at the same time that it appears from our returns to vanish because it becomes so secret. Probably this is about the age where this curiosity is not only ripe for instruction, but needs it in order to prevent the pollution of the youthful mind by gross images that are outlawed by decency as well as by ethics. Nature seems almost to have provided the average child at this age with a special organ of apperception in this field, and we have here a great and challenging problem to solve. Curiosity is intense, and this constitutes a rare opportunity for parental tact and wisdom. Perhaps, as some have suggested, it is the duty, hard though it often be, for mothers to instruct their daughters, and, as some think, their sons, although it is difficult to see why the father should be exempted from this obligation, unless we assume that the mother is more normal, nearer the race, and essentially purer in heart than the father. Certain it is that these highly sensitized juvenile minds can, by eight years of age, be so told of the modes of fertilizing flowers that some of them will begin to divine analogies with the animal world. The phenomena in the latter probably ought to be taught for the simpler forms first rather than the higher, and the indirect psychic functions of love, and the meaning of marriage, are modes of approach which may give due sacredness and solemnity to this instruction. Another principle is clear, viz., that information should be personal, given on the right

occasion of environment and interest, and that it should be brief and suggestive rather than by dissertations or books that always magnify the topic. The greatest content in the least form is a good law. Much anatomy is unnecessary, and every allusion to the sexual act, if this is necessary, should be set in a background of sentiment and religion, or at least of romance, which will give it a perspective that is true to its ideal and to the interests of the race. The principle of good taste should be strongly evoked to expurgate dirtiness, and the child made to feel an insight so much superior to the information derived from surreptitious sources that it will look down on these as vulgar. It seems a grave pedagogical error, involving no end of calamity, that when interest in sex awakens it should be allowed to develop independently of the ideas of gestation and birth, with which, when it is taught, it should be brought into inseparable unity. In this, as in the theological field, there are generally so many preconceptions to be removed that it is often hard to distinguish pure and unadulterated curiosity from that which is spurious, factitious or distorted.

Religious Curiosity. Closely connected with questions in regard to the origin of life, and frequently mingled with them, are the theological and Biblical puzzles which assail the childish understanding. Over and over again come the questions, "Who is God?" "Who made God?" "Who were God's father and mother?" "Who came before God?" Often these questions take crude and bizarre forms that have an irreverent sound to the older ears, though they are but the efforts of active little brains to bring the incomprehensible within the limits of experience.

That the story of creation, as given in Genesis, should arouse in the mind of a child of four or five, visions of a sort of mud pie process of construction, or that he should picture God as engaged in baking bread in answer to the petitions addressed to him, is but one of the natural results of the literalness of childhood. The child's thought cannot transcend his experience. Nor should he, because of this, be considered as lacking in reverence. His imaginings are certainly no more realistic than those of the early Christian painters who depicted Eve as actually issuing full grown from Adam's side. The little philosopher of five who asked, "Does God make some little boys good and some bad?" was facing a problem which has puzzled the brains of theologians for centuries. Frequently, it is only through some of these occasional questions that we can get a clue to what is passing in the child's mind, for with all their frankness, children are often singularly reticent about

what they think and feel most deeply. To any one who is accustomed to being with children, the following examples will probably seem familiar and suggest a host of similar questions.

M., 4. Shown a picture of the Golden Calf and told that it was worshipped by the people. "Auntie, I wonder if it is all made of gold? Do the people worship it as we worship God? Why do the people worship it?"

M., 4. "Mamma, who is God's mother?"

M., 4. Had been gathering shingles and asked, "Mamma, do they play with shingles up in Heaven?"

M., 4. First visit to the seashore. "Who made the ocean?" "God."

M., 5. "Mamma, what is the sun? Don't you suppose that it is the end of God's cigar?"

M., 5. "Does God make some little boys good and some bad?"

M., 4½. Having been told the story of Christ calling his disciples, asked, "What did they do with the fish?"

F., 5. "If we did n't have any bread would God give it to us?"

M., 6. "Mamma, does Jesus have an oven up in heaven?" On being told no: "Well, then, how does he bake our daily bread?"

M., 6. "When Jesus was a baby did he know as much as God?"

M., 7. After listening to a number of Bible stories: "Well, if God made all those good men and is so good, I'd like to know who made him."

M., 9. Had his curiosity aroused in Sunday School and was not contented till the story of Noah had been told over and over.

Is Ish Armour my brother? What makes him black? Am I black? Why is he white and me black? Had been taught we are all children of Adam and Eve and therefore all brothers.

F., 3½. Used to hearing God spoken of as Jesus. One day her mother spoke of God. "God, who is God?" "Jesus is God." "Oh! is his name God and Jesus too?"

F., 3½. "Did Heavenly Father make your hair? Did Heavenly Father make that hair that you take off?"

F., 7. "Mamma, if I am naughty at night, God can't see me, can he?"

F., 7. "Did God make me? Did he make you? Did he make pigs? Well, then, why did n't he make you a pig?"

F., 9. "If God will keep us, why do we have to pray to him to keep us through the night?"

F., 12. Used to ask how Jonah could come out of a whale's body alive. How Jesus could walk on the sea, etc.

F., ? Asked what God did in Heaven and if he ever took a walk.

F., ? "Mamma, who made you?" "God made me." "Who made me?" "God made you." Sometime passed. "Mamma, where does God have his office? Where does he get so much stuff to make you and me? What did he make us for? How did I get down from Heaven?" Not getting satisfaction she sighed and said, "Does God have an office like other men?"

F., 7. "If God made everything and everything had a beginning when did God begin? Who made God and was there another world like this earth?" But could never see why God did not have a beginning once upon a time.

The crudity of some of these ideas is but a natural stage of development and outgrown at a later period, but some childish misconceptions lead to serious results later, and it is a ques-

tion whether unskillful, even if well meant Sunday School teaching is not responsible for a vast amount of scepticism in later years. The order in which religious truths should be taught, and the form in which they should be presented, is one of the great pedagogical questions which as yet remains unanswered. It is certain that the haphazard teaching which prevails in most Sunday Schools has, to say the best of it, very mixed results. Several attempts have been made with deaf and blind children to guard their early ideas from the misconceptions which beset most children in the course of this theological training, and to await the spontaneous awakening of interest in the great problems of life and death. These attempts have been frustrated as far as their scientific import was concerned, partly by the well meaning but mistaken endeavors of those who did not realize the danger of misconception that might do permanent injury. This happened both in the case of Laura Bridgeman and Helen Keller, though fortunately, especially in the latter case, little harm was done, as the form of attempted instruction was unsuited to her comprehension and made but little impression. But when Helen was eight years old, having then been under Miss Sullivan's care for two years, she asked spontaneously "Where did I come from and where shall I go when I die?" The explanations which she was able to understand at this time did not satisfy her, but two years later the questionings of her active intelligence reached a point where definite religious instruction was demanded and she was placed under the wise care of Phillips Brooks. At that time she was asking such questions as "Who made the real world?" and when it had been explained to her as far as possible, "Who made God? What did God make the new world out of? Where did he get the soil and the water and the first seeds and animals? Where is God? Did you ever see God?" Probably many of these questions would have come at an earlier age had she not been shut in a world of darkness and silence from the time of her illness, in 1881, till the spring of 1887, when Miss Sullivan opened for her the door of communication with the outer world. But to all children, sooner or later, these questionings come, and the questions themselves are the best guide for tracing the course of the child's thought and finding out its needs. The practical character of childish thinking comes out very plainly in the questions on death and Heaven; the question of eating coming up very frequently in this connection.

F., 6. "Mamma, do the angels have nothing but angel's food to eat? What shall we have to eat in Heaven?"

F., 6. "Mamma, where do you go when you die? Will you go with me? Will we both be put in the same box? What will we have to eat?"

Death. The attitude of most children between three and seven, toward death, seems to be chiefly one of curiosity.¹ Occasionally a sensitive child reflects the feeling of those about him, but usually the attitude is one of inquiry. The first experience of death often comes to children in the death of some pet animal, or perhaps from finding the bodies of dead birds or insects. The impression made is not usually a painful one, but curiosity is aroused and numerous questions are asked, and upon the character of the answers given the child's feeling is chiefly dependent.

M., 6. Had an interesting story read to him. In the story the man died. Went away by himself and said over and over to himself, "Why did he die? Why did he die?"

F., 4. Saw a man climb an electric wire pole and asked the lady with whom she was: "Addie, will you go to Heaven whole?"

F., 8. Used to wonder what she was, why she was living, whether life was real or only a dream. At one time half believed that she lived two lives, one by day and one by night. Never had courage to ask anybody about such things. In other matters was always asking Why? and What for?

F., ? Strong curiosity about death. Desired to be dead just to see how it felt.

F., 7. "Why do people die? Why do they put them in the ground? Do they always stay in the ground or do they go somewhere else?"

The child's interest in death is another great opportunity for moral, religious, and even scientific instruction, which has not only never been met but perhaps has never been adequately appreciated. Infant curiosity, as we have seen, often focuses on its physical phenomena, and it seems singular that so often there is, at first, no fear. In many cases the birth of terror can be seen in very young children when they first distinguish a corpse from that of a person in normal sleep. Rarely, indeed, would curiosity as to how it feels to die, prompt the youngest child to seek to experience death, but often in the history of the race, as in children, heaven is made so attractive as to lessen the love of life and even to counterbalance the fear of death. Perhaps the pains of hell have sometimes been necessary to offset the attractions of heaven in the young, when the latter was made too seductive, so that a little sense of danger, stimulated by awakening qualms of conscience, was needful. One thing is certain, and that is, that death, where taught, should first be presented as the natural and necessary end of a long life, so that the prevailing ideas of it in the young should not be derived from instances of premature, accidental, or tragic death. In this respect, and from this standpoint, the ostensive instance of Jesus, who was killed and did not die a

¹Colin A. Scott: Old Age and Death. *Am. Jr. of Psychology*, Vol. VIII, p. 93.

natural death, is often misleading. Death at the end of an ideal old age can be so taught as to make it not only natural, but beautiful and attractive, especially at the age of adolescence, when the first realization of it sometimes haunts the soul with great persistence. Youth is not complete without frankly envisaging the great fact that individual life is limited in time, and that the inevitable hour is for all alike. Death, at this age especially, is a muse of great inspiration and can evoke and sustain high ideals. It may be taught as an examination, test, or moral assay. Immortality is biological, and great stress must be laid upon the fact that the good we do will live after us; that one of the best ways to die is, as the Buddhists say, in thinking on our good deeds; and that the soul must be made so virtuous, and the mind so glorious with great ideas, that God, or the universe, cannot afford to have it perish. They should be taught that the sting of death is to die without leaving the world better. Youth can be appealed to powerfully by the thought of leaving a name, a record, a memory, that will be cherished by those who come after, and later the concept can be made of great practical power that life must be so led that children shall be well born and perpetuate the race in increasing numbers to the remotest generations. If all this is well done, the problem whether the individual consciousness survives in a transcendent world, will lose its difficulties and its dangers, both moral and intellectual, and can be met with frankness and left to the domain of hope and faith, where Jesus placed it, with due care to avoid premature theological subtleties.

Perhaps nothing gives a clearer view of the activity of a child's mind, and its various interests, than a list of miscellaneous questions selected on no other basis than that they show thought and observation. The kaleidoscopic picture thus presented is far more than a list of amusing questions at which we may smile and wonder how such ideas ever entered the child's mind, for it reveals the actual workings of the mind in a way not otherwise obtainable. Some times, all unconsciously, these questions reveal certain facts of the child's environment in an unmistakable way. A list of all the questions asked by a child during a week or a month would probably furnish material for a very fair guess at the child's interests and surroundings.

F., 2½. Asked if black people were made of black dust.

M., 3. "Will the trees all have the same leaves again?"

F., 3½. "Seeds are brown, are n't they, mamma?" "Yes." "But the flowers are n't brown, why are n't they?"

M., 4. "Where does the stocking go when a hole comes in it?"

M., 4. On being shown his baby brother: "What is he good for anyway? Can he play ball?"

F., 4½. "How do the chickens crow?"

F., 5. Wondered why a chair was called a chair and she was called a girl.

- F., 6. "Are there any fairies now? Did you ever see one?"
- F., 6. Wanted to know why the minister flung his arms about so much.
- F., 6. Asked if she was wound up; wanted to know if she would run down?
- M., 5. "Papa, why don't your eyesights get mixed when they cross each other?"
- M., 6. Wanted to know what was inside us to make us laugh.
- M., 5. Playing with the cat: "Why can't Titty Tay talk?"
- M., 5. "Why does my goblet sweat?"
- M., 5. "Shall I be a mamma when I grow up?"
- M., 6. Looked closely at a sweater and asked "Where is the buttons on that coat?"
- M., 7. On being told that George Washington never told a lie asked: "What ailed him? Could n't he talk?"
- M., 6. "Why does n't God read the weather reports and have the weather right?"
- F., 5. "Does a hen ever get nervous? Who was the mother of the first horse that ever lived?"
- F., 6½. "Why do the angels never fall down to earth when there is no floor to heaven?"
- M., 7. "Where is to-morrow?" "What is the highest number you can possibly count?"
- M., 7. "Why does a square piece of wood look round when the lathe is working?"
- F., 7. "Is the tick of the clock round or square?"
- "Why did grandpa wind the big clock? How could his winding it up make it go all the week? Did the Lord make it go?"
- F., 7. "What makes my eyes open and close?"
- M., 8. "What makes the old rooster walk different from the old hen?"
- F., 8. Was eager to know what sleep was and declared she had never been asleep.
- F., 8. "Do dogs ever have the headache?"
- F., 9. Asked a great many questions when her mother was making cake. Next day made some herself successfully.
- F., 12. "Say pa when you sneeze, where does the sneeze go to?"
- M., 12. "How can far off things look near?"
- M. "Why do some people have red hair and some black?"
- F. "What are debts? do we have debts?"

Mere aimless curiosity or inquisitiveness plays but a small part in the incessant questionings of childhood. Every normal child is curious but their reiterated questions, which often seem tiresome to a busy and tired mother, are prompted by a real desire for information; and the child's point of view was well expressed by the little fellow who, when told he must n't ask so many questions, sighed, "But there's so many things I want to know." Of the more than twelve hundred cases of manifestations of curiosity, only 5.62 per cent. came under the classification of mere inquisitiveness, either in the form of questions or illegitimate pecking and prying shown by actions. Under this heading were classified all cases of aimless prying into what could have no objective interest and all attempts to find out, by illegitimate pecking and prying, things intention-

ally concealed or forbidden. In this sense inquisitiveness is not a characteristic of children under five years, and their incessant questioning and investigating is distinctly utilitarian and a developmental process, while inquisitiveness in the specific meaning given above is a perversion of a natural impulse toward a useful end, to what is useless and frequently involves an element of deceit. It is closely connected with defective power of attention, for children whose interests are strong and whose attention is absorbed by these interests are rarely inquisitive in this derogatory meaning of the word. It differs from legitimate curiosity, not in its nature but in its application. The mere fact that anything is concealed or not intended for inspection, appears to act as a strong stimulus to some natures, whether or not the object is in itself interesting. Probably the primitive impulse to investigate whatever is concealed, is the fundamental element here, and the abnormal development is due chiefly to a lack of inhibition and restraint. In both children and adults it is most frequently associated with neurotic tendencies and frequently with a more or less defective physical development. Manifestations of inquisitiveness are too well known to need illustration. Peeking and prying into parcels, closets, trunks; peeking and listening at keyholes, behind doors or other places of concealment; desire to know what every one is talking about; efforts to overhear things not intended for them, questions about private affairs of others are well known characteristics of the Paul Pry order of person, and as this morbid form of curiosity, apparently grows by what it feeds upon, its existence in a child as a marked characteristic should be considered reason for an inquiry into the child's nervous condition. Though occasional exhibitions of this perverted form of curiosity are common enough among normal children, especially before Christmas, when desire to find out what their presents are to be, frequently overcomes the scruples which usually inhibit such manifestations, these occasional lapses, especially where there is a strong temptation from personal interest, are not at all to be considered as symptoms of neuropathic conditions, as in the case of the characteristically inquisitive child.

Echolalia or the constant repetition of the same question, which becomes so wearisome to the one answering, seems also to have a close connection with nervous fatigue. The questions are asked, not for information, but because, under certain conditions of fatigue, it seems as if certain nervous paths of discharge were established and the repetition became almost¹ automatic. Many of these cases of echolalia are reported as occur-

¹ Clouston: *Neuroses of Development*. London, 1891.

ring toward the close of the day, or on long railway journeys, or when the child is "not quite well" and has been kept in the house for that reason.

Random questions, which are sometimes poured out in an incessant stream, without pausing for answer, are also frequently due to fatigue and are often a characteristic of feeble minded children. One child who had sufficient intelligence to act as guide through quite a complicated route of short streets, asked disconnected questions constantly during the walk of about twenty minutes. Sometimes an answer was waited for, but in many cases, the attention wandered to new subject before an answer could be given and the former question was apparently forgotten. The mental condition appeared similar to that of a normal child too fatigued to remember his own questions, but in the one case there is defective development of the nerve cells and in the other the fatigued nerve cells are capable of recuperation. One child of five yrs. after a long railway journey, during which she had become very tired and fretful, responded to the effort to amuse her with the frost on the car window, by asking the same question in regard to it twenty-two times in half an hour, and every one who has tried the experiment knows the difficulty of holding the attention of a tired child for more than a few minutes at a time. The tendency to echolalia is observable in some forms of delirium, where the same question or sentence is repeated over and over, and the cause, as with the tired child, is to be sought in the fatigued cells of the cortex. Children, undoubtedly, sometimes ask questions merely for the sake of talking and not because of any particular desire for information, and should, of course, be checked under such circumstances; yet the boy of six, when asked: "What does makes you so tiresome, to-day?" replied far more aptly than he knew, when he answered. "I'm not tiresome; I'm tired."

Destructiveness as a phase of curiosity, is too frequently misunderstood, and the child's point of view left out of account. The *motive* is overlooked, and, considered only on the side of results, the case is certainly rather bad for the child. Out of the 1,227 cases which furnished the basis for the present study, 332 or 27.08 per cent. involved destruction of property: for the most part toys, or the child's own belongings, but in some cases objects of considerable value. The age at which this overwhelming desire to find out the construction of things reaches its height, is between four and eight. There appears to be little difference between boys and girls in this impulse to investigation, though the objects destroyed differ somewhat. The distribution of cases according to objects destroyed is as follows:

	M.	F.
Musical instruments,	44	+ 22
Clocks and watches,	57	+ 25
Dolls,	12	+ 66
Mechanical toys, etc.,	20	+ 22
Miscellaneous objects, to see what was inside,	21	+ 31
Thermometers,	2	+ 2
Miscellaneous,	12	+ 16
	<hr/>	
	168 + 164 = 332	

As considerable pains has been taken by the observers who answered the syllabus to find out the child's real motive, and cases in which this precaution was wanting have been rejected, the evidence is conclusive that in the 332 cases of which use has been made, wanton destructiveness or carelessness played a very small part. Curiosity as to the cause of sound and motion, and desire to see the inside of things, were the chief motives which influenced the youthful investigators. They wanted to find out "what made the noise," "why dolly opened and shut her eyes," what made the "cow moo," and what was inside tops, marbles, and thermometers, and grief at the loss of some valued toy was aggravated by a keen disappointment at non-success in finding the noise of the drum or the tick of the watch. Cherished dolls were sacrificed to the overwhelming desire to find out what made the eyes move or why pressing the body caused a cry. One child cried bitterly after she had spoiled her doll by poking in its eyes, not because the doll was ruined, but because, as she tearfully explained, "Now I can't ever find out what makes dolly shut her eyes. Won't you buy me another one so I can find out?" Numerically, at the head of the list of objects destroyed, stand clocks and watches, many of them toys, though the list is by no means restricted to these. In the younger children, desire "to find the tick" is the ruling motive, but this develops into the larger interest in motion and the desire to find out what makes the watch go. The injury done is frequently an unexpected result to the child. So keen and widespread is this interest in clocks and watches, even when not exhibited in the destructive form, that the gift of a cheap clock with permission to take it to pieces, affords more pleasure to many children than any number of costly toys whose mechanism cannot be investigated.

Several instances were given in the returns, in which an old clock has proved a source of interest and amusement, and boys of nine to twelve years, after numerous trials, succeeded in putting them together after taking them apart, a feat which certainly has sufficient educational value to compensate for some failures at readjustment. Mechanical toys, more than

any others, seem to have the shortest existence in the hands of bright, active, children, a fact which suggests that toys so constructed as to show principles of motion and elementary physical laws, without involving their own destruction, are an educational need yet to be supplied. Some such, indeed, already exist, but they are far too few and too little known. This destructive form of curiosity, due to normal development of mentally active children, needing guidance, and to be furnished with a proper outlet, but not repressed, is not to be confused with the careless destruction of toys, due to lack of interest, which is unfortunately common in children whose interest and powers of appreciation have been weakened and dissipated by overloading them with toys and diversions until it has bred in them an ennui which has sapped their power of attention, and left them incapable of self entertainment. Healthy children, if allowed to develop under normal conditions, find interests and amusements for themselves, and the child who has been so reared that he wants to be constantly amused, and has no keen desires because they have been too frequently anticipated, has been deprived of one of the rights of childhood. The child who suffers from too many toys is, perhaps, on the whole, more to be pitied than the child who has too few. Destructiveness, when the impelling motive is curiosity, is closely allied to constructiveness, and some of the appended examples mention the transformation which has appeared at a later stage of development.

EXAMPLES OF DESTRUCTIVE CURIOSITY.

- M., 3. Broke his toy gun to find out what made the noise.
 M., 3 yrs. 7 mos. Broke a toy cow "to find the moo." Broke a mechanical toy to find out what made it go.
 M., 4. Pulled a clock to pieces to find out what made it strike. When twelve years old could put a clock together.
 M., 4. Cut open a doll to see if blood would come.
 M., 5. Took a toy watch apart to find out what made the hands move.
 F., 5. Cut her doll's body open "to see what kind of blood it had." Said it was something like sugar.
 F., 6. Broke her doll to see what made it shut its eyes.
 F., 6. Took off the back of the doll's head to see what made its eyes move.
 F., 8. Had a doll, and one day knocked its eye in. Broke the head to find out what had become of the eye and then cried as if her heart would break.
 M., 8. Destroyed a clock, trying to find out what made it go.
 M., 8. Took a clock apart and put it together again, though it never struck properly afterwards. Took a wringer apart and put it together again correctly.
 M., 4. Broke a humming top to see what made the noise.
 M., 12. Took a mechanical toy to pieces to see what made it go. After several attempts succeeded in putting it together again.

M., 6. Disappointed in the result of questions asked about a watch; opened it to see how it was made. Opened fire crackers to see what was inside.

M., 8. Broke a tape measure to find out how the tape was drawn in.

M., 4. Had a toy rooster which crowed; broke it to see what made it crow.

F., 8. Had heard that tortoise shell will not burn but that celluloid will. Collected all the side combs in the house and tested them to find out whether they were tortoise shell.

M., 4. Cut the hair of his sister's doll to see if it would grow again.

M., 8. Dropped a toy engine from third story window so that it would break and he could find out what was inside it.

F., 6, M., 7. Each received a large Easter egg. There was a glass at the end to look through. Both broke their eggs to see what was inside.

M., 6. Took a toy steamboat to pieces to find out what made it go. Tried to put it together again but failed.

M., 7, F., 8. Broke the thermometer by putting it on the stove to see how high the mercury would rise.

M., 5½. Pulled a toy engine apart "to see where the 'choo choo' was."

M., 6. Had a mechanical coach. Tried to open it with a knife and hammer to find out what made it go.

F., 7. Broke marbles to see what the colors were made of.

M., 6. Broke open a toy violin to see where the noise came from.

M., 5. Broke his drum to find the noise.

M., 4½. Had a gong on wheels; made a great effort to see what was inside it. It was iron, and he did not succeed. At last he put it in the road and let a cart go over it.

M., 7. Had a small rubber ball with shot in it. After vainly trying to see what made the noise, took a hatchet and cut it open.

F., 9. Took a music box to pieces; found she could not get it together again.

F., 8. Destroyed a cuckoo clock trying to make the bird come out.

M., 8. Destroyed a toy piano trying to find out how it was made.

F., 5. Had a bank in the form of a frog; took it apart to see what became of the pennies that went into its mouth.

M., 5. Took a mouth organ apart to see what made the noise; broke a toy horn for the same reason.

M., 6 and F., 7. Smashed a large colored glass marble to see what was inside.

M., 7. Smashed a glass paper weight to find out how the little pieces of glass were put inside.

Desire to Travel. The desire for travel seems well nigh universal in the American adolescent, only three in the entire number of those answering this question (482) stating that they had never had this desire. There are but few cases in which this desire developed before the age of ten. The initiative of this desire is found either in stories told by friends who have travelled or in books. Among juvenile books the "Swiss Family Robinson" has the largest number of mentions by both boys and girls, and "Robinson Crusoe" has the largest number of mentions by boys. When this desire for travel is aroused in those who have the migratory instinct strongly developed, there are a few cases of starting out in search of runaway adventure.

These, however, were chiefly children under ten, and nightfall proved a corrective to the spirit of adventure.¹ One case of running away from home at the age of fifteen, was stated to have been inspired by this desire for travel, but, on the whole, the influence seems to have been beneficial. In 40 per cent. of the cases, desire to travel led to interest in reading books of travel and in many cases this led to a love of history and kindred subjects. The influence of a book on the South Sea Islands in determining the career of an imaginative and home-loving child, has been vividly described by Peirre Loti in his "Roman de L'Enfant." But while this desire for knowledge of new people, places, and things is so wide spread, very few of the cases described in detail show indications of an interest sufficiently absorbing to prove a disturbing influence in the ordinary routine of life. Americans, as a nation, are accused of a restless desire for change which is detrimental to the best interests of home life, but the interest in travel, which is one of the phases of curiosity, and most active during the adolescent years, seems to have no necessary connection with the later development of nervous restlessness. It appears, rather, to be an intellectual development belonging to the age when the desire for new experiences of all kinds is characteristic.

In comparative psychology, though statements that certain *animals are curious* abound, no attempt has been made to trace the development of curiosity in either the ontogenetic or phylogenetic series, except, perhaps, by Romanes who essayed to group animals at different levels, according to their psychic development, and to correlate these with the different stages of human development. Romanes places insects and spiders on his third level, and it is in this group that he places the first appearance of curiosity, but he gives as an example of insect curiosity the tendency to fly toward any bright light or shining surface. But there seems to be no sufficient reason for attributing this tendency to any psychic impulse, since it is explainable on a purely physiological basis. Even in the human infant we do not attribute the first turning of the eyes toward light to any psychic impulse, but interpret it as a physiological reflex. On the next higher level, Romanes places fishes; and here, perhaps, we have some ground for attributing a psychological impulse, though Prof. Sanford² considers even this somewhat doubtful. "They may, perhaps, possess the beginnings of Curiosity, if the luring by light is not a physio-

¹ Cf. Truancy as Related to the Migratory Instinct. L. W. Kline, *Ped. Sem.*, Vol. V, p. 381.

² *Psychic Life of Fishes.* E. C. Sanford. *International Quarterly*, Vol. VII, No. 2, 1903.

logical phenomena." Groos quotes Eimer as authority for the statement that some species of lizards are so curious that they may be captured by dangling a noose in front of them. A step higher, and the psychic development becomes unquestionable. We have abundant evidence of curiosity displayed by crows, canaries and parrots, and nightingales.¹ A parrot with which some personal experiments were made, never failed to show curiosity in regard to the ticking of a clock. When placed on the mantel he invariably walked around it, examined it on all sides, stretched his neck to see the top of it, tried to look behind, and showed great excitement whenever he happened to get into a position where the tick was most plainly audible. Lloyd Morgan gives instances of curiosity in chicks, but considers their mental attitude as reducible to a simple "what," rather than "why," which involves more complex psychic factors. Cats, dogs, raccoons, goats, horses, cows and deer, all show curiosity in marked degree, and advantage of this fact is taken in hunting the latter by the method of luring by light. Scheitler calls the dog the most curious of animals, and calls attention to the fact that this trait greatly enhances his value as a watchdog, but most students of animals give the monkey precedence over all others in the development of this trait. Thorndike found that the attention of monkeys was very easily distracted, and considers the attention of animals as working always for immediate, practical associations, and below the grade of the passive attention in human beings, which in its development is closely connected with the acquisition of a stock of free ideas. Groos considers curiosity the only purely intellectual form of playfulness in the animal world, and says, "It is apparently a special form of experimentation, and its psychologic accompaniment is attention, which is indeed a requisite to the exercise of the most important instincts."

In curiosity, attention loses the purely utilitarian function which it has in connection with the cravings of hunger, desire, and the necessity of avoiding danger, and becomes play. Groos ascribes the primary reason for this sort of playfulness to a necessity for mental exercise. But since the new object may always prove advantageous, it also aids in the preservation of the species. In the higher animals, manifestations of curiosity closely resemble those of the child. One of the monkeys, a macacus rhesus, formerly used by M. Kinnaman² in his experiments, showed his curiosity in an unmistakable way when a closed box painted black on the inside, was placed in his cage.

¹Scheitler; Thiersulenkunde, Vol. II, p. 342.

²A. J. Kinnaman: Mental Life of Two Macacus Rhesus Monkeys in Captivity. *Am. Jour. of Psy.* Vol. XIII.

He immediately came to the end of the cage where it was placed, examined it closely, touched it cautiously, and finally picked it up and tried to open it. It came open rather suddenly and he dropped it and started back. His curiosity soon overcame his timidity, however, and he picked it up again, smelled it, bit it, put his hand, and finally his head, into it. In all this the monkey was closely paralleling the stages of curiosity shown by children, though his attention was less concentrated and he was more easily startled than is the case with children.

The larger aspect of interest and curiosity is almost coextensive with the range of educability, but it is believed that this paper marks a decidedly important advanced step toward a larger synthesis that has so long beckoned students of childhood, namely, the determination of intellectual nascent stages. Curiosity is the apparent, now partial, now dominant, motive in many fields where its importance has never been adequately estimated. For instance, Kline¹, and Arnett² have shown that the truancy and runaway motives are, in part, due to curiosity to see the world. Partridge³ has shown that many take their first drink, or, perhaps, even acquire their first experience of intoxication, to see how it tastes or how it feels, respectively. Curiosity is very manifest in the infant stages of acquaintance with its own body.⁴ Dawson⁵ has given us suggestions for the order of development of interest in the personages and events and sentiments of the Bible. Many studies on the development of language and children, show stages of curiosity concerning the form, meaning, or even origin of words. Interesting illustrations of this theme, too, especially as related to association, and causal and other types of reasoning, are shown in the data presented by H. W. Brown.⁶ Studies of suggestibility and the quest of certainty; like those by M. H. Small,⁷ show many outcrops of the same motive. How essentially attention is dominated by interest or curiosity, all the laboratory and other studies of it show. How dangerous is the neglect of natural interest is elsewhere pointed out in the single field of physics.⁸

Important as we deem the results of this study, it is thus

¹ Migratory Impulse, *Am. Jour. of Psy.*, Vol. X, p. 1.

² Origin and Development of Home and The Love of Home, *Ped. Sem.*, Vol. IX, p. 324.

³ The Psychology of Alcohol, *Am. Jour. of Psy.*, Vol. XI, p. 320.

⁴ The Early Sense of Self, G. S. Hall, *Am. Jour. of Psy.*, Vol. IX, p.

351.
⁵ Children's Interest in the Bible, *Ped. Sem.*, Vol. VII, p. 151.

⁶ Thoughts and Reasonings of Children, *Ped. Sem.*, Vol. II, p. 358.

⁷ *Ped. Sem.*, Vol. IV, p. 176, and *Ped. Sem.*, Vol. V, p. 313.

⁸ High School Physics, *Ped. Sem.*, Vol. IX, p. 193.

really only preliminary to a larger presentation of the characteristic outcrops of interest or the desire to know, which, when determined for successive ages and stages, will be the best and surest norm for ascertaining when all such matter can be taught with greatest economy and with most effectiveness, and will also shed great light upon methods of instruction. All this again shows very clearly how far we already are beyond the arid and abstract formulæ of Herbart. It may be that we shall sometime come to reflect that forcing knowledge upon unwilling minds, that are unripe for it, is immoral.

A question uttered, or unexpressed, is a prayer for knowledge. The moment when it arises in the soul should be sacred; almost like that of the hour of visitation of the Holy Ghost to the religious teacher. Not to feed every normal curiosity, the good teacher will consider recreancy to his duty.

Many questions, no doubt, arise, in the average mind but once in an entire lifetime, and if the opportunity which they make is not promptly and effectively utilized, the bud of promise is forever blasted. Perhaps, in the future, education will realize the idea of being guided solely by these chief expressions of psychic need or want. For most of us, there comes for a time, most commonly in very early adolescence, an all-sided, disinterested curiosity, which is the basis of liberal education, but which vanishes later and is succeeded by a second growth of interests which are more and more tinged with utility, professional success, or individual advancement. When such studies as these shall be carried more fully into the later teens, this change from what we may call pure curiosity to that with an alloy of gain or advancement in it, will be more clearly seen. Indeed, few people in any community illustrate up to full maturity what man as man most centrally wants to know. One great purpose of education is to so place and to so environ a few individuals that they shall thus illustrate the deeper tendencies of race advancement, so that their interests shall point as truly as the needle to the goal of human destiny. This, we grant, is a very difficult problem, only partially attainable. Even the child's theological interests, as here illustrated, are more or less factitious, and very different in unknown and non-Christian lands and ages, and due to precocious doctrinal inculcation. They thus rest on a very different foundation, and have a very different culture value from the purely spontaneous interests in the varying phenomena and objects of nature, or even from that in things hidden, or in the mechanical secrets of toys, etc.

I. In summarizing the results of this study it appears that curiosity develops by gradual stages and is a fundamental factor in the development of attention.

II. Four stages of development may be recognized.

1. Passive staring, considered as a reflex with psychic accompaniment; manifested in infants as early as the second week of life.

2. Surprise, usually noted in the second month.

3. Wonder, which is observable about the end of the second month, the time when the accommodation of eye takes place.

4. Interrogation or curiosity proper, which begins to be manifested about the fifth month.

These last three stages are those recognized by Ribot:

III. The chief stimuli of curiosity during the first half year are those of sight. The order in which interest in other sensations develop is hearing, touch and muscle sensations, smell and taste. These do not successively predominate but overlap and sight, the first in order is not subordinated as other interests develop.

IV. Curiosity is manifested by: 1, observation, passive and active; 2, experiments; 3, questions; 4, destructiveness; 5, desire to travel.

V. Aimless curiosity or inquisitiveness is, in normal children, usually a sign of fatigue, and this is also true of echolalia. When chronic, both these manifestations indicate neurotic tendencies associated with defective power of attention and lack of inhibitory control.

VI. Curiosity is the active factor in the development of attention, and lack of it shows either mental deficiency or bad pedagogy.

VII. Animals show the various stages in the development of curiosity and manifest it, by observation as do human beings, experiment and destructiveness, though it is probable, that, except in the higher animals, the full stage of interrogation is never reached.

VIII. This work is provisional and a larger synthesis, with curves for each nascent psychic stage impends.

IX. A few practical suggestions concerning the pedagogical utilization of curiosity concerning death and the origin of life are appended.

BIBLIOGRAPHY.

- COMPAYRÉ, GABRIEL. Intellectual and Moral Development of the Child. Translated by Mary E. Wilson. New York, 1896.
- DARWIN, CHAS. Biographical Sketch of an Infant Mind, Vol. II, p. 286., 1887.
- ——. Expression of Emotion in Man and Animals. New York, 1873.
- ——. Descent of Man. New York, 1878.

- GROOS, KARL. *The Play of Animals*. New York, 1898. Translated by Elizabeth L. Baldwin.
- HOGAN, LOUISE. *A Study of a Child*. New York, 1898.
- HALL, MRS. WINFIELD. *The First Five Hundred Days of a Child's Life*. *Child Study Monthly*, Vol. II.
- JAMES, WILLIAM. *Principles of Psychology*, Vol. II, Chap. XXIV.
- KELLER, HELEN. *The Story of My Life*. New York, 1903.
- MOORE, MRS. KATHLEEN C. *The Mental Development of a Child*. London, 1900.
- MORGAN, C. LLOYD. *Introduction to Comparative Psychology*. London, 1900.
- PREYER, W. *The Senses and Will*. New York, 1888. Translated by H. W. Brown.
- ——. *The Development of the Intellect*. New York, 1895.
- PÉREZ-SULLY. *The First Three Years of Childhood*. Syracuse and London, 1899.
- ROMANES, G. J. *Mental Evolution in Animals*. London, 1878.
- ——. *Mental Evolution in Man*. New York, 1879.
- RIBOT TH. *Diseases of the Will*. Chicago, 1896.
- ——. *Psychology of Attention*. Chicago, 1890.
- ——. *Psychology of the Emotions*. London, 1897.
- SHINN, MILICENT W. *Biography of a Baby*. Boston and New York, 1900.
- ——. *Notes on the Development of a Child*. Berkley, 1893-'99.
- SULLY, JAMES. *The Human Mind*. Vol. II, Chap. XVI. New York, 1891.
- ——. *Children's Ways*. London, 1897.
- STOUT, G. F. *Manual of Psychology*. Chap. II. New York, 1899.
- THORNDIKE, EDWARD L. *Mental Life of Monkeys*. *Monograph of Sup. of Psy. Rev.*, May, 1901.
- ——. *Animal Intelligence*. New York, 1898.
- ——. *Intelligence of Monkeys*. *Pop. Sci. M.* Vol. LXIX.
- WUNDT, WILHELM. *Lectures on Human and Animal Psychology*. Translated by Creighton and Titchener. London and New York, 1897.

CHILDREN'S INTERESTS IN WORDS, SLANG, STORIES, ETC.¹

By EDWARD CONRADI, Fellow in Clark University.

This paper embodies the results of the following syllabus, sent out by President Hall in the fall of 1901. The returns were written mostly by normal school students, a few being sent in by students of high school age. They are nearly all female.

The facts are presented first; the conclusions are given at the end of the paper.

SYLLABUS.

Will the teacher who receives this syllabus kindly co-operate by writing down (on one side of the paper only) any facts, experiences, or convictions which these questions may suggest; and will those who can do so try to gather information from their classes or by simple tests?

1. In what *new words* have you seen children take delight in knowing or using, whether these words are genuine or artificial?

2. Have you known young people to make spontaneous efforts to extend their vocabulary, noting lists of words with their meanings, and seeking to incorporate them because they were new and seemed superior?

3. What words have you known children to like because they were pretty in look or especially in form or sound, or because they were very peculiar, like murmur, zig-zag, *quid-nunc*?

4. What about the passion for affecting foreign words in conversation or writing, *e. g.*, French or Latin, when English words would do as well?

5. Describe cases of superfine elegance, or affected primness, or precision, in the use of language.

6. At what age are the young most prone to slang? Give a brief vocabulary of slang phrases that have been favorites (a) with girls and (b) with boys. What can be said in its favor, and what against it?

7. Give cases of the "long sentence" habit, where style has lost all symmetry and rambles on with incoherence and lack of form. What is the cause and cure of this? Can you classify its forms, beginning, perhaps, with the simplest, where the conjugation *and* connects a string of clauses?

8. Have you ever known a spontaneous story teller; if so, describe the case; when and how did it begin; what was the influence of, and effect upon, the hearers; what kind of stories were preferred and what kind of characters; were they short, long, or continued?

¹We are indebted for returns to Miss Lillie A. Williams, of the Normal School at Trenton, New Jersey; Prof. H. T. Lukens, of the Normal School at California, Pa.; Dr. Margaret K. Smith, of the Normal School at New Paltz, N. Y.; Miss Harriet A. Marsh, of the Hancock School, Detroit, Mich.

9. Have you known cases of a strong tendency to quote pretty phrases, perhaps especially in girls; the album kind of poetry, and give a few samples to indicate the kind of taste, the gratification of which is most commonly sought thus? Do conditional clauses often abound in a characteristic and excessive way? Examples, cause, and now explained.

10. Is there an adjectivism, nounism, adverbism, one or all of these, with examples and explanation?

11. Have you known cases of a reading passion or craze, where the soul seemed to take flight in books, and how was this reading done and from what motive? Was it for the pleasure of having the sentiments largely stirred, as in romance reading, or a real desire for information, or to show a long list of books read, or what?

12. Cases of aping the style of characteristic authors—Carlyle, Addison, newspaperism, sermonesque style, flowery, exuberant, or emotional style of novels. Have you known cases where style changed or came under other influences? What do you deem the value of this dominance for a time by the style of an author?

13. Cases of spontaneous poetry. Can you give examples? In what field lines, age, etc.?

14. What is the best basis of English composition, (a) incidents or events of interest in the life or observation of the writer; (b) paraphrases of great epics, stories, speeches, essays, etc.; (c) papers based on special and diverse reading on a topic; or (d) the results of long efforts to grapple with an author, Dante or Tennyson, far too large to be fully comprehended as a whole, etc.; and what is the advantage and disadvantage of each of these?

15. Can you name (a) pieces, (b) stories, and (c) authors, which your experience convinces you are calculated to do special good for individuals at a certain age?

16. What have been the best influences, literary and linguistic, in the pedagogy of your own department?

17. Can you suggest any literature on the subject of teaching English language, or literature that you think especially helpful?

Kindly send your replies to

G. STANLEY HALL.

CLARK UNIVERSITY,

Worcester, Mass., Dec. 9, 1901.

There were no returns to questions No. 16 and No. 17. They were probably too difficult for the students who wrote these returns.

To the question, "In what *new words* have you seen children take delight in knowing or using, whether these words are genuine or artificial," there were 273 returns. 92% of these were affirmative and 8% negative. 60% of them gave one or more specific words which the child liked. About 20% were observations and the others personal experiences and reminiscences. Six stated that they liked big words, and two that they liked words with z in them. Here follows an alphabetical list of the words given; figures indicate number of times given.

I.

accelerate
acknowledge 4

accomplish
accumulate

accurately
adage

- | | | |
|-----------------|------------------|-----------------|
| admire | circumstantial 3 | either |
| advantageous | clamor | electricity |
| aggravation | clever | elegant |
| ail | clock | embracing |
| Aix-la-Chapelle | coboodie | encyclopedia 2 |
| algebra | cohere | England |
| allow | collusion | enormous 3 |
| almost | combustible | entertainment |
| ambitions | combustion | equilibrium |
| amuse | come-bubler | especially |
| animosity | comfortable 2 | esquimo 2 |
| antipathy | compaction | Ethiopian 2 |
| apologize | compliment | evaporating |
| appreciate | compunction | evolution 2 |
| appropos | condescend | exaggerate 3 |
| architect | conductor | examinations |
| artificial | congratulate | exactly |
| ascetic | consequence | excruciating |
| assist | consequent | exuberance |
| atrocious 2 | consequently 2 | exit |
| audacious | conservatory | exquisite 3 |
| autocratic | consign 2 | extra |
| automobile | conspicuous 2 | extraordinary 3 |
| avoirdupuis | Constantinople 7 | extravagant 3 |
| awful 3 | contemptible 3 | |
| axiom | contemptuous 2 | fascinating |
| | contrary | fatigue |
| baby 2 | convent | faulty |
| basement | crazy | favorite |
| Basil the Great | crochet | festival |
| beautiful 10 | cute 2 | fetich 2 |
| beauty | | fine 2 |
| beer | dare | fingerology |
| benevolent | darling | financier |
| boa constrictor | dear | flagrant 2 |
| booboo | deceitful 2 | flowing |
| boomerang | decided | fluently |
| bravo | delicious 3 | fond |
| breakfast | delightful 4 | forest |
| bric-a-brac | despicable | r räulein |
| bright | diaphoretic | frost |
| bring 2 | dictionary | funny |
| buggy | diligence | |
| buzz | dinny | garrulous 3 |
| | dinner | gaseous |
| calculate | directly | gaudy |
| calender | disagreeable | gay 2 |
| calour | discourse | gee |
| catastrophe | disgrace | genius |
| catechuman | dispatch 2 | geography 2 |
| catsup | ditto | German-carp |
| chalk | dodo | getup |
| championship | domestic | glass |
| chemise | dub | glorious |
| chow chow | dumbcat | goody-goody |
| chrysalis | | gorgeous |
| chrysaston | education | grand |
| circumstances | Egyptian | grease |

greenhorn	mamma	picture
grinnie-minnie	mammy	picturesque
gunnysack	mania 2	pilgrim 2
guten Morgen	manicured	pinkie-eye
gute Nacht	map	pike
handsome	Martindale	pitiful
happy	maxim	Plymouth
hateful	Mayflower	placid
haste 2	melody	pneumonia
heinous 2	Minnehaha 2	polygon
henrycooked	minute	pompous
Hiawatha	mirror	Popocatepetl
hippopotamus	minister	poverty
hiss	Mississippi 3	power
Holland	mondamin	precarious 2
Holy Ghost	monkey	prepossessed
honey	monotonous	pressure 2
how-do-you-do	moped	pretty 4
housekeeper	moving-van	principal
humbug	murmur	priory
humdrum	Nansicaa	probably
humpty dumpty	naughty	promontory
hurry 2	necessary	promulgating
hush	necessity	pronounce
ill	nervous-prostration	property
illustration	nevertheless	prosecute
immense	nice 2	provoked
immediate	nit 3	provoking
immediately	nomenclature	psychology
important	none	pussy
inane	notebook	quaint
indigence 2	numerous	quiet
indolent	obligerated	racket
industry	occur	rambling
infinitesimal	opportunity	ramborgeous
influence	opulent	realize
isolate	ornithorhyncus	recluse
insultation	paddy	rectangle
intoxication	paltry	recognize
intrust 2	papa 3	recollection
jaws-of-destruction	participate	refer
jealous	particular 3	relinquish
kidnapped	particularly	remarkably 2
knickerbocker	passionately	renounce
launched	peculiar 2	representative
lawn	penknife	rheumatism
literature	perambulate	robes
lieutenant	perfectly 2	romance
lobster	performance	Rox
loquacious 3	perhaps	royal
magnificent 5	permit	rude
magog	perpendicular	sad
	pet	Sacramento
	photographer	San Salvador
	phthisis	satins

satisfaction	sufficient	tootiefulala
satisfied	surreptitious	
satisfick	superfine	unhappily
schedule 2	supper	unusual 2
scrumptious	suspend	
scruschy	suspicious	Waddie
sedate	sweet	wake
shackins	sweet meats	water
shoot 2	synonyms 5	whippoorwill
silly		whiz
sister	table	wigwam
Socrates	taciturn	wonderfully
sodie	talent 2	
solace	talkative	yep-(yes)
speed 2	tea	yersm
spinster	tedious	yesum
splendid 2	temporary	
stupendous	theatre	zara
stylish	through'	zebra 2
sublime	Thule	zig zag
succor	tictalerue	

When about 7 delighted in new words, not so much in using them as in saying them over to myself.

When 9 I repeated the word *knickerbocker* over and over again to myself. When alone repeated it aloud.

Between 8 and 10 I delighted in long words. I often put words together.

When a child I liked the sound of Constantinople.

When about 8 we heard the word *transmagnificandanciability*. We were delighted with it and changed the ending *ly* to *tious*.

When about 6 my twin sister and I took delight in adding new words to a language of our own.

The third inquiry, "What words have you known children to like because they were pretty in look or especially in form or sound, or because they were very peculiar—like murmur, zig-zag, *quid nunc*," was similar to the first and also elicited valuable replies.¹ There were 271 returns, 87% of which were positive, 8% negative and 5% did not answer this question. 38% liked words because they sounded pretty, 13.5% because they sounded queer and 7% did not state whether the sound that appealed to them was pretty or queer. 12.5% liked words because they looked pretty, 9% because they looked queer, and 5% did not specify whether the looks that appealed to them were pretty or queer. Thus, 58.5% liked words on account of sound and 26.5% on account of looks. 6.5% of all replies were observations and the others personal experiences and reminiscences. Furthermore 25% stated that they liked certain words but did not give reasons why. The per cents. in this case do not balance since some returns gave a liking for both sound and form.

¹Per cents. in this paper are all based on the entire number of returns, unless otherwise stated.

A classified list of the words given follows here.

II.

WORDS THAT SOUNDED PRETTY.

accusation	Ernestine	Margarette
acquiesce	euphony	martyr
Ætna	exaggerate	Massachusetts
Alexander	extemporaneous	may
ambrosial		melancholy
anguish	fairy	meadow
antedeluvian	favor	Mesopotamia
asbestos	fern	Milwaukee
assized	firmament	Minnehaha 2
aurora-borealis	five	Mississippi
ax	fizz	mistress
	flop	murmur 7
	four	murmuring 3
babbling		
Baton Rouge	garb	Naomi
barouche	garrulous	Nazareth
beautiful 6	globe	necessary
bell	grace	Nellie
bombastic	gracious	neighbor
Boston		"nichts-komm-heraus"
breakfast 3	happiness	nine
brook	haunt	
bye-bye	hearth	oblivion
	herbivorous	one
Carthaginian	heterogeneous	opportunity
carmine	hodado	ornithorhynchus
charming	hollyhock	
chrysalis		
cherubim		
circle	I. Pomroy & Co.	paper
cock	incarnadine	paraphernalia
column		picnic
Connecticut	Jeremiah	pig
Constantinople 2	jingle	plagiary
corn crib	Junto	plash
corroborate		precipice
crazy	Kathleen	pretty 5
crisp	Kelly	promiscuous
crotch	Kito	
culver		quazy-wazy
curfew	lilac	quick 2
curious	lisp	quintessence
	little 2	
dash	locomotive	rascallion
day-day	locomotive	ring
delicious	long	ripple
difference	Los Angeles	rhododendron
digit	Lorraine	rose
Dorothy	Louise	Ruth
	loyalty	
	lullaby	sanguine
electricity 2		satiated
engine	magnificent	scat
envelope	mamma	scissors
environment		

seraph	sweetly	Wannamaker
seraphim		wasp
sharp	ten	willow
short	terrace	whirl
sing 2	thermometer	whisper
silvery	tick tock	
skedaddle	tinkle	Xantipede
slap	Trumbull	Xerxes 2
slippery	true	
solemn	truth	Yangtsekiang
sparrow 2		
squeeze	un-zoo-wee	zephyr
sublime	Ulysses	Zerubbabel
succasuma	utilize	zizzag 4
superfluous		zone
sur	Virginia	

WORDS THAT SOUNDED QUEER.

audacity	heliotrope	ricket
	higgle-de-piggledy	
babble 2	hurly-burly	salamander
blitzen	hyacinth	schists
bonanza		scrabble
bubble 2	idiotic	scrumptious
bugaboo	ignite	seesaw
buzz		skedaddle 2
	katydid	superfluous
caterpillar	knicknack	sycamore
chimney		zygy
church	lizard	
click	lackadaisical	topsyturvy
comet		
cubit	moon	whirr 2
curfew	murmur	whoa
		wobbled
Deuteronomy	Ohio	
donder	oriole	Xerxes
ecclesiastical	Paderewski	Yangtsekiang
ecstasy	perambulate	
	polliwog	zigs
fizzle	Popocatepetl	zizzag 9
goblin	razzle-dazzle 2	

Words liked on account of sound without specification as to *pretty* or *queer*:

aurora-borealis	encyclopedia	precipitate
Brahmapootra	"for instance"	presumptious
bumblebee	helterskelter	scallawag
buzz	Hiawatha	society
cataract	idiot	tictac
circumnavigate	Jack	twinkling
concoct	John	unique
crochet	Joseph	Wannamaker
croquet	murmur	zebra
damnation	Niagara	zizzag 3
elephant	orangoutang	

WORDS THAT LOOKED PRETTY.

Africa	Jerusalem	purity
Atri	jumping	pygmy
ball 2	latitude	quizzing
beautiful 2	Laura	ripple
book	little 2	revolution
Boston	Lizzie	running 2
brook	locomotive	silent
buzz	lovely	sneezing
committee	mamma 2	Succasuma
cute	mason	sweet
Cincinnati	Mayflower	Tennessee
circle	May McCann	Trumbull 2
cozy	Mississippi 3	umbrella
curly-wurly	Missouri	Ursula
dash	murmur	Washington
difference	nest	whizzing
Egypt 2	occasion	Xerxes
extremely	piggy-wiggy	yankee
favorite 2	Philadelphia 2	zigzag 2
immense	plash	Zimmerman
Isaac	poor	
James	preposterous	

WORDS THAT LOOKED QUEER.

Artaxerxes	Isabelle	skedaddle
bazaar	Kalamazoo	syzygy
beaux	lignum-vitæ	tableaux
bicycle	misshapen	topsyturvy
bouquet	Mississippi 2	typhoid
braggadocio	mosquito	Xenophon 2
business	Ohio	Xerxes 4
buzz	picturesque	zebra
Don Quixote	Pompeii	zephyr
ecstasy	quibble	zigzag 7
Egypt	saucer	zouave
Euphrates	sauerkraut	
Hawaii	seesaw	
helterskelter	silly	

Words liked as to looks without specification as to pretty or queer.

Brahmapootra	Lizzie	Mississippi
Cincinnati	mamma	murmuring
Emma		

Words liked without any specification as to sound or looks.

abrupt	babbling	buzz 4
adorning	beautiful 3	buzzing 2
Anna	beautifully 2	
anxious	bird	café
argue	blizzard 2	caoutchouc
arithmetical	boomerang	catarrh
aristocrat	borrow	certainly
audacity	bubbling	cheerful
awful	bumblebee	chicks
	bureau	clinging
babble	butterbowl	cocoon

Constantinople 4	magnificent 3	razor
constellation	mauma 2	repining
commencement	Maurice	rhyme
cringing	Maurice Miller	ridiculous
crochet	melodious	ripples 2
croquet	melody	ringing
	melancholy	Rose Reed
dazzle	Minneapolis	rough
decorate	Minnehaha	
delightful 2	minuet	sally
disagreeable	mirror	scrape
doll	Mississippi 12	screech
drum	moon	sedate
	moose	"sentimental non-
Egypt	murder 2	sense"
elaborate	murmur 4	shamokin
electricity	murmuring 2	Shoshone
evermore	myrtle	singsong
examination		sneeze
excavate	Nebuchadnezzar	society
excellent	Neshameny	soon
excelsior	nun	stingy
excruciating		superlabgabsious
extraordinary	onomatopoetic	Susie Smith
	opposing	surly
facsimile	owl	sweetly
fudgy	ox	zygygy
gazette	Pacific	tenacity
glorious	pamphlet	Tennessee
gracious	pantomime	Thermopylæ
	papa	thwart
hazard	papoose	tick-tock
highflower	parallelopipedon	to-and-fro
horrid	pepper	toward
humdrum	Perely 2	twilight 2
humming 3	perspire	
hyperbole	Philadelphia	ujji
	picturesque	very
icicle	pleasing	voice
idiotic	polite	
immediately	poor	whirligig
	Popocatepetl 2	wiggle-waggle
Janette 2	powerful	wigwam
jewel	precipitate	Wissahickon
jink	pretty 4	wonderful
	progressive	wriggle 2
Lafayette	promiscuously	
lancers	pshaw	Xenophon
Laughing-water	pussy	Xerxes 2
literature 2		
lovely	quaker	zebra 3
lullaby		zinc
	ragged	zigzag 9

As a child liked to use "argue." Made me use my tongue in a peculiar way.

As a child made up "superlabgabsious;" to me it meant something lovely or fine.

At 12 named my cousin Amy Ruth; liked sound of Amy and looks of Ruth.

Used to like to write words with the letters m, n, a, e, o.

Was whipped once for saying a word over and over.

Always liked "ecstasy" on account of queer looks. Even now, 18, I think it ought to mean crazy on account of its queer looks.

Liked to write committee. Liked to double letters.

To the second question, "Have you known young people to make spontaneous efforts to extend their vocabulary, noting lists of words with their meanings, and seeking to incorporate them because they were new and seemed superior," there were 263 returns, of which 60% gave affirmative replies, 30% negative, and 10% left the question unanswered. 13.5% had by spells studied the dictionary and 14% had made lists either of words heard, of words found in their reading, or both, 4% had tried to learn one or more words each day. Three stated that they did not use the new words they would have liked to for fear of being laughed at.

Of those who had studied the dictionary and gave their age 4 were 8, one was 9, 7 were 10, 2 were 11, 6 were 12, one was 13, 2 were 14, 2 were 15. Several had more than one spell. Of those who had made lists and gave their age 2 were 8, one was 9, one was 10, one was 11, 4 were 12, 2 were 13, 3 were 14, 3 were 15, 3 were 16, one was 17, 2 were 18, one was 19.

Studied dictionary, but did not get beyond a's, 2.

Took dictionary to find new words to astonish my companions.

Studied dictionary for big words; used them to dolls.

Studied dictionary, soon got tired. Had read life of Shakespeare and learned range of his vocabulary.

Used large words to talk to myself.

Kept list. Read three books that way.

"What about the passion for affecting foreign words in conversation or writing, *e. g.*, French or Latin, when English words would do as well" brought 233 returns. 23% of them had no desire to use foreign phrases, 7% were blank, and 70% replied in the affirmative, most of them being reminiscences and personal experiences. The age varies from 12-18, most being from 14-16. The languages given are Latin, French, and German, probably according to the one studied in the high school.

Writing to his mother filled half the letter with foreign phrases.

Learned foreign words from spelling book and tried to use them.

Would have liked to, but afraid of being laughed at.

Two girls used sodium chlorate and H₂O at home.

Studied some in the dictionary.

Used German words; liked to show my knowledge.

Used to pretend to talk in foreign language by using queer sounds and unheard of words.

"Describe cases of superfine elegance or affected primness

or precision in the use of language," elicited 233 returns. 14% left the question unanswered, 30% knew of no cases, and 56% reported one or more cases, mostly personal experiences and reminiscences. 75 cases gave their age as is shown in the curve on page 370.

Read about Franklin's way of acquiring good style. Then wrote a composition than which I never wrote one better—age 14.

I always prepared before speaking to any one till father corrected me—age 12-14.

Get spells that last several days at a time.

Several stated that they longed to be elegant but were afraid of being laughed at.

My roommate and I often take certain lengths of time in which we try to be elegant—age 17.

Often got short spells.

Now; study unabridged dictionary for that purpose—age 17.

Could not find words to express my feelings. I had grand and airy thoughts but could not express them—age 14-15.

Memorized expressions that seemed elegant, modified them and then used them—age 10.

Yes, at the age 13-16; since then became careless.

Girl, 18, has so changed her voice as to make one feel as if talking to an unreal person. She used to be an easy companion. Her tone is never twice alike.

"I used to mount a barrel in the barn and imagined myself some great speaker with thousands and thousands of the most cultured people, not only from the United States but crowned heads from Europe, come to listen to me speak. I would also think myself in some grand cathedral on a magnificent stage"—girl, age 11.

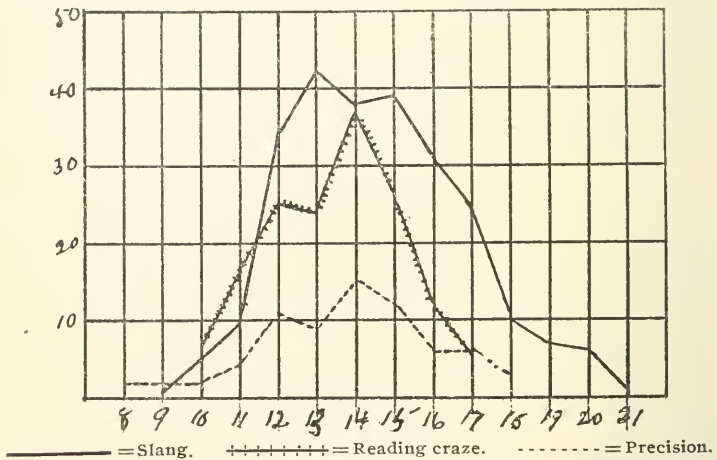
Girl, 10, has often been seen standing before a mirror, nodding her head, smiling, and talking to herself. When she tries on a new dress, she invariably goes to the piano and drums on it.

To the question, "At what age are the young most prone to slang? Give a brief vocabulary of slang phrases that have been favorites (a) with girls and (b) with boys. What can be said in its favor and what against it?" there were 295 returns—the greatest number we had to any one question. There were no negative returns and only 6 failed to answer this question. 254, or 86%, gave the age at which the young are most prone to slang as shown in the curve on page 370. Two had three spells, 9-10, 12-14, 16-17, and 9-11, 13-14, 16-17 respectively. Two had two spells, at 10 and at 19, and at 10 and 16-18 respectively. Two said they had used it always and one gave the age from 8 till death.

60 thought slang more emphatic; 36, more exact; 18, more concise; 15, more convenient; 3, that it sounded pretty; 3, that it relieved formality; 3, that it is all right; 2, that it is natural; 1, that it is manly; 1, that it is appropriate; 1, that it is enthusiastic; 2, that it leads to forming new words; and 4 said they simply imitated. 90 considered slang vulgar; 13 said it narrows one's vocabulary of good English; 11, that it leads to

swearing; 2, that it is a substitute for swearing; 2, that it shows weakness; and 1, that it destroys exactness. 53 considered boy's slang rougher than girl's; 19, that it resembled swearing more than girl's; 9, that they used more of it; 8, that they had more phrases; 2, that it had a broader meaning than girls'.

The following is a list of slang expressions classified roughly according to use. This classification is not intended to be vigorously scientific, nor is it supposed to be exhaustive, but rather to be helpful in bringing out more clearly the purpose that slang serves for the youth. Under each rubric there are 3 lists, (1) "Girls," (2) "Boys," and (3) "Sex not specified." But to avoid duplication the following scheme of figures was used. In "Girls" list the first figure or number indicates number of times given as used by girls, the second figure, number of times as used by boys, and the third figure number of times given without specifying sex. Second and third figures, when zero, are often omitted. In "Boys" list the figures are used in a similar manner, referring to "Boys" and "Sex not specified" respectively. Thus the common expressions of lists one and two and of one and three are tabulated into "Girls" list, and of two and three into "Boys" list.



A slang curve by Miss Lillie A. Williams reaches its highest point at 14. It is based on 61 returns that gave age. Cf. *Ped. Sem.*, Sept., 1902. Vol. IX, p. 289.

REBUKE TO PRIDE.

GIRLS.

Go way back and sit down 37-17-6.
 You are not the only pebble on the beach 20-9-1.
 You are not so many 8-5-3.
 There are others 10-3.

You're only one 4-6-1.
 You are not the only tin can on the dump 3-5.
 Don't get too gay 4-4.
 Don't get canary 3-3.
 You are not the only one 4-2.
 Gave me a call down 6-0-1.
 Come off 3-2-1.
 You make me tired 4.
 Ring off 3-1-1.
 Hold your horses 3.
 You're not the ocean because there is a wave in your hair 3.
 You talk like a man up a tree 1-2.
 Come down a peg 1-1.
 He's stuck on himself 2.
 Go way back and take a front seat 1-1.
 Dry up 1-1-2.
 Go to grass 2.
 You'll get sat on 2-0-1.
 You're not so much 2.
 You're not so warm.
 One on you.
 Chase yourself around the corner.
 Dry up and hist.
 Not the only oyster in the can.
 She has a crush on her.
 You'll get your headlights smashed in.
 Don't get up on your ear.
 Come off the band wagon.
 You make me weary.
 Oh, go (or get) along with yourself.
 Go way back.
 Shut up.
 You're not the only lump of butter in the churn.
 Go back to the tall grass.
 I guess that'll hold you.
 You're not the only can in the rubbish.
 They're off their trolley.
 Take a day off.
 Give us a rest.
 You big *it*.
 Dry up and bust.
 You're not the whole push.
 He has the big head.
 You're not the only cat on the fence.
 You're not the whole shooting match.
 Enough of your jib.
 Did you ever get left?
 Down in front.
 You think you're smart.
 He does more with his mouth than anything else.
 Fade away.
 Don't get new.
 You're getting too flip altogether.
 You're too smart.

Boys.

Cut it out-7-1.
 Come off your perch-5.
 Get off the earth 4.

You've got a swelled head 1-1.
 You're not so swell 2.
 You're not in it 2.
 Don't think you're smart 2.
 Choke it off 1-1.
 He's way up in G.
 Don't get gay.
 Go away.
 You're not the only thing.
 Don't blow your horn too soon.
 What do you take me for?
 You're not game.
 Hold on.
 Mind your own business.
 He's too smart.
 Come off your roost.
 Close your face.
 Cut it short.
 Just come down from the city.
 You're nobody's grandmother.
 Go way back in the corn.
 Take off your hat and show your corners.
 Grease your lip and give your tongue a sleighride.
 Swell head.
 Get away from the lunch.

SEX NOT SPECIFIED.

Shining on your own side.
 Close your face.
 Hold your jaw.
 Shut your trap.
 Chop it off.
 He thinks he's the whole thing.
 He thinks he's the whole show.
 He's a yap.
 He is a big head.
 He gives me a pain.
 Biggest toad in the puddle.
 Big bug.
 Cheap guy.
 Chop it out.
 He has the big head.
 You're not so warm.

NEGATIVES.

GIRLS.

Nit 35-14-7.
 O, I don't know 10.
 Not on your life 5-2.
 Never (or not) on your tintype 3-4.
 Over the left 4-3.
 In the neck 4-1.
 Rats 3-2.
 Guess again 4.
 Like sixty 2-1.
 Well, I should smile 2-1-2.
 I guess aber nit 3.
 I don't think 2.

Not by a jug full 1-1.
 Like fun.
 Git out.
 Quit.
 Is that so?
 I have a large size photograph of your doing that.
 You've got another think.
 Like sand.
 Ah, go on.
 Nixy.
 Phew.
 Don't you believe it.
 Not much.

BOYS.

Sour grapes 2-1.
 I guess nit 1-1.
 Last year?
 Like blazes.
 Yes, on your tombstone.
 I don't think.
 You will, will you.
 Never in your sweet life.
 I wish I thought so.
 Well, I guess you wont.
 Give it a worm.

OFF.

GIRLS.

Talking through your hat 4-1.
 He is off his base 2-2-1.
 She is twisted 2-2-1.
 Go sit on a tack 1-2.
 That's off me 1-1.
 Got a screw loose 1-0-1.
 You crazy kioodle.
 She is a little off.
 It's all bosh.
 They are off their trolley.
 You crazy thing.
 You're talking through your
 noggle.
 (He) You're off.
 Crack your gourd.
 Go home and tell your mother.

BOYS.

Go soak your head 1-1.
 Phs.
 You're on the back seat.
 Go shake yourself.
 You're talking up your sleeve.
 Go west.
 Chase yourself around the block.
 Take a run up the pike.
 Go west and eat hay.
 Climb up a tack.
 Back to the mines.

Back to the tall timbers.
 Back to the breadbox, you're
 crumby.
 You're no good.
 Take a dose of castor oil.
 Go chase yourself.
 Mix it.

SEX NOT SPECIFIED.

Go chase yourself.
 Rooms to let.
 Off the handle.
 Go sell your papers.
 You crazy.
 Got the wrong pig by the tail.
 To wake the wrong passenger.
 Off his eggs.
 Rotten.

SHOCK.

GIRLS.

Would n't that jar you 21-9-3.
 Would n't that bump you 2-2.
 Would n't that wrinkle your
 raglan 3.
 Would n't that freeze you 2-0-1
 Would n't that jiggle your slats 1-1.
 That was a stunner 1-1.
 Would n't it make you laugh.
 Would n't that get you.
 Shiver my timbers.
 Would n't that juggle you.
 Would n't that rattle the cherries
 on your mother's bonnet.
 Would n't that smother you.
 Would n't that fry eggs.

BOYS.

Would n't that split your slats 2.
 Would n't that scorch you.
 Would n't that jar your mother's
 preserves 1-1.
 Would n't that crack your slats.
 Don't that jar your diaphragm.
 Would n't that cook you.

SEX NOT SPECIFIED.

Would n't that fade the stripes on
your grand dad's socks.
Would n't that start you.
Would n't that shake the cherries
on your aunt Carrie's bonnet.
Would n't that tarnish that gold
watch.
Would n't that make you yell.
Would n't that rattle your slats.
Would n't that make you stand
without hitching.
Would n't that choke you.

EXAGGERATIONS.

GIRLS.

(She) You're a peach 7-5-3.
That's fierce 11-1-2.
Wouldn't that kill you 7-2.
You're a dandy 3-4-4.
(He) You're a bird 5-2-3.
Bully 2-4.
To beat the band 4-2-3.
You bet your neck 4-1-1.
(He) You're a brick 2-3-1.
You're a lobster 3-2.
Isn't she a beauty 2-3.
I don't give a continental 5
Swell 4.
You bet your life 2-2.
O what a whopper 1-2.
I was scared stiff 3-0-1.
I thought I'd die 3-0-1.
He's a corker 1-2.
You're a dream 1-1.
I'm dead broke 1-1.
Swell elegant 2.
Out of sight 2.
That is hot stuff 2.
He is a duck 1-0-1.
Split my sides laughing 1-0-1.
You're a jewel 2.
Perfectly slick 2.
It was great 2-1.
That is just swell 1-1-1.
That's a corker.
He is a trump.
Perfectly lovely.
Simply scrumptious.
Grand.
More fun than a cat fight.
Howl (laugh).
It's too funny for words.
You missed half your life.
She wants the earth.
Enough to give one ten fits.
It was a squelcher.
That's a daisy.

You horrid thing.
Slow as an ice cat.
A green eyed lobster.
It is simply fierce.
Swell time.
You're a diamond.
It's too killing.
I'll get killed.
I'm spoiling for a fine dance.
To beat the cars.
To beat the engine.
That's rank.
Is n't that gorgeous?
O, you grandmother.
Is n't that rank.
Higher than a kite.
Out of sight.
That's a darling
Dark as Egypt.
He's a holy terror.
Flunked dead.
Beat all holler.

BOYS.

Jim dandy 1-1.
She's a daisy.
A smile 2 by 6.
A perfect cough drop.
That's a hot one.
A smile 4 by 10.
That's a swell hat.
Great balls of sour dough.
That's a scorcher.
Great balls of applebutter.
Mighty nice.
You bet your sweet life (or soul).
Slang to peddle.
Bet your bottom dollar.
Bet your socks.
Bet your boots.

SEX NOT SPECIFIED.

Had a swell time.
Aint worth a continental 2.
That is a dead cinch.
I'll eat my hat.
I thought I'd bust.
He's a goose.
He is a dumbelick.
To make one shriek.

EXCLAMATIONS.

GIRLS.

Gee whizz 37-29-8.
Gee 33-11.
Heavens 15-1.
Oh sugar 11-1-1.
You bet your boots 4-9.

You bet 7-5-2.
 Oh pshaw 10.
 For goodness sake 10.
 Glory 8.
 Goodness 8-0-1.
 Mercy 8.
 Gracious 8.
 For the lands sakes 6.
 Oh dear 5.
 O, my goodness 4-1.
 For heavens sake 4-1.
 Fiddle sticks 5.
 For pity's sake 5.
 Oh, mother 4.
 O joy 3-1.
 O mercy 3-0-1.
 Oh love 3.
 Oh my 3-0-1.
 Good gracious 2-1.
 Goodness me 1-0-1.
 Goodness gracious 1-0-1.
 Mercy goodness 1-1.
 Laws 2.
 Gee Whitaker 1-1.
 Sweet mother 1-0-1.
 Gracious Peter 2.
 Sakes alive 2.
 My lands.
 Mercy sakes.
 That beats the Dutch.
 Good land.
 O lands.
 Gracious sakes alive.
 G gee guy.
 O sands.
 Great goodness.
 O cricky.
 Oh chestnuts.
 Great grief.
 Low zee.
 Good lands or lands.
 Goody goodness.
 Goody gracious.
 Merciful powers.
 Gee wow.
 Laws o' mercy.
 Glory hallelujah.
 Merciful fathers.
 Good George.
 Mercy me.
 O George.
 Cæsarina.
 O fiddle.
 O fid.
 Zounds.
 Geewizaker.
 Mamma.
 Good Grief.

Hallelujah.
 For charity's sake.
 Bless us.
 Gracious me.
 Mercy sakes alive.
 Heavens and earth.
 My sakes.
 Gee Whilligers.
 O fudge.

SEX NOT SPECIFIED.

Pshaw.
 Pity sakes.

MILD OATHS.

GIRLS.

Darn it 32-10-3.
 Gosh 25-8-3.
 Great Scott 17-4-2.
 Golly 14-5.
 The dickens 15-3-2.
 Dog on it 7-6.
 Great Cæsar 11-1.
 Jimini 9-2.
 Hully gee 4-6.
 Jinks 8-1.
 The deuce 5-3.
 Hang it 5-3-1.
 Holy smokes 4-4.
 Jerusalem 4-4-1.
 Thunder 5-2.
 Confound it 4-3.
 By gum 4-3-3.
 Blame it 5-2-1.
 By gosh 2-5.
 Go to Halifax 2-5.
 Great Cæsar's ghost 5-1.
 Oh, shoot it 4-2.
 By George 4-2.
 By Jove 2-3-1.
 Holy Moses 1-4-2.
 Great guns 3-1-1.
 By jingo 3.
 Jimini crackers 2-1.
 Jimini crickets 2-1.
 Holy cats 3.
 Ginger 2-1.
 Oh, murder 3.
 Where in the Sam Hill is it 2-1.
 Plague take it 2-1.
 By golly 1-0-1.
 Darn 1-1.
 Jimini jinkins 2.
 I'll be darned 1-1.
 Shoot the luck 2.
 Guy hang it 2.
 Halifax 1-1.
 Consarn it 2.

Murder 2.
 Plague it 2.
 By jimini 1-1.
 Oh Peter.
 Gosh Peter.
 Dame it.
 By Job.
 Darn it all.
 By jabbers.
 By juniper.
 Go to heaven.
 Ding it.
 Jimini crimps.
 Zing.
 By gosh, says Josh.
 Thunder and Isaacs.
 By gum.
 Deucest.
 O gore.
 Drat it.
 Consarn the business.
 Darn fool.
 I'll be gol durned.
 Plague on it.
 Great king.

Boys.

Golly ned 3.
 Dang it 2.
 Go to hello 2.
 Gosh hang it 2.
 Gee for socks 2.
 Go to the dickens.
 The devil 2.
 Thunder and lightning 2.
 Darn the luck 2.
 Holy terror.
 Jimini gee wags.
 You're darn shoutin.
 Golly nedders.
 By Joe.
 Blast it.
 Dod burn it.
 Darn your pictures.
 Where in the dickens.
 I'll be blamed.
 Gosh all hemlock.
 By gosh.
 By Jupiter.
 I don't give a darn.
 Heavenly smoke.
 O Lord.
 The deal.
 By darn.
 Jingo.
 Gol darn it.
 By ginger.
 imini Christmas.

Golly busters.
 Gosh darn.
 Gosh hang it.
 O slash.
 Gosh all Friday.
 Moses.

SEX NOT SPECIFIED.

Holy gee 2.
 Glory be to Peter.
 Bless my heart and soul.
 Oh Peter.
 By jinks.
 Great governor.

UNCLASSIFIED.

GIRLS.

Rubber 50-12-8.
 Flunked 10-1-4.
 Sure 8-1.
 Any old time 4-2-1.
 That is all right 1-5-1.
 Guy 4-1.
 Well, I guess 5.
 Forget it 4-1.
 I'll be jiggered 5-0-1.
 Sure Mike 4.
 Rubber neck 1-0-3.
 Squelch 4-0-1.
 I see my finish 4.
 Any old thing 3-1-1.
 She's all right 1-2-1.
 Fan me with a brick 2-1-1.
 Bum 2-1.
 O mose 3.
 Chewing the rag 2-1-1.
 Kid 2-1-1.
 McGinty 1-1.
 Make scatterment 1-1.
 On the bum 1-0-1.
 Never mind 2.
 O, the kid 2.
 On your life 1-1.
 On his ear 1-1.
 Bust 1-0-1.
 Bamboozle 1-0-1.
 Cinch 3-0-2.
 Chestnuts 2-1.
 Just for devilment.
 Land o' Goshen 2.
 Little snip 2.
 Fudge 2.
 Get a move on 1-0-1.
 Go to grass 2-0-1.
 Hevings Maud 2.
 Honest John 2-1.
 Harry 1-0-1.
 I'll be hanged 2.

- I like your style 1—1.
 I don't know 2.
 Guinea pig 1—0—1.
 Something doing 2.
 Get a wizzle on 1—1.
 See 1—1.
 That 's what 1—1.
 The main guy 1—1.
 Aint it so.
 A piece of work.
 A whole pill.
 Blowing up.
 Bill.
 Boodle.
 Biff.
 Bite me.
 Big coward.
 Christmas mighty.
 Cracky.
 Chickenfeed.
 Christopher.
 Crush.
 Come to life.
 Crack your gourd.
 Daft.
 Dinky.
 Ditto.
 Don't you care.
 Did you ever get left.
 Drive the cow down (pass milk).
 Don't you know.
 Exams.
 For Pete's sake.
 Fresh Christmas.
 For fair.
 Forever and three days.
 Fork up the cash.
 Freeze out.
 For the love of green roses.
 Fish.
 For the love of hot soup.
 For the love of heaven.
 Got 'em in stitches.
 Good scissors.
 Good Harry.
 Go on.
 Good and proper.
 Good morning, glory.
 Gingerbread.
 Great Peter.
 Gum eye.
 Good Glory.
 Glory ned.
 Grease-pot (butter-dish).
 Grandy's nightcap.
 Gracious Peter.
 He got smeared.
 How about it.
 Honor bright.
 Hooks.
 Hello, Pete.
 How 's the weather up there.
 Hello, Sally.
 Helloa.
 He has scads.
 Honey.
 Hail Columbia.
 How can you tell.
 How sad.
 Heavens Katie.
 I guess.
 It 's up to me.
 It comes in pat.
 I 'm a goner.
 I wonder why.
 I 'll jump down your neck.
 I felt like six nickles.
 It 's on the blink.
 It.
 I 'll be blessed.
 In the soup.
 I bet a cooky.
 In your mind.
 In the swim.
 I be jiggled.
 I don't think.
 I squelched him.
 Indeed.
 Jolly (verb).
 John Rogers.
 Jim Crow.
 Keep your change.
 Little fool.
 Lung.
 Like the mischief.
 Like a through vestibule train.
 Lit on.
 Lambaste.
 Lay out.
 Look it up in the dream book.
 Lean on your own supper.
 Land o' ganders.
 Laurel hill.
 Latest fad.
 Mow.
 Maggie.
 My top knot.
 Now will you be good.
 Nobby.
 Noggle.
 Oh, you will get it.
 O, you it.
 O, bother.
 Old shackens.
 O, beans.
 O, Louise.

Put my foot in it.
 Pills (people).
 Quit your kidding.
 Rock.
 Sorry I don't suit.
 She's nutty.
 Sore eye.
 Sit on.
 She has a snap.
 She spouts an awful lot.
 Sat upon.
 Shucks.
 Slick.
 Splindingles.
 She 's it.
 She sprung a test on us.
 Stars.
 Shoot me guinea.
 Stunt.
 Sugar and molasses.
 She thinks she *it*.
 Swim through (lessons).
 She 's flip.
 Search me.
 Scressie dig.
 Smart Aleck.
 That's slick.
 Tarnal.
 Thump.
 Thing-a-bob.
 The mischief.
 That takes the cake.
 That 's no dream.
 Tin.
 There are other ways to choke a
 dog without choking him on
 butter.
 That 's all.
 That 's the stuffy.
 Thinks she is mike.
 What 's doin.
 Walk all over.
 Well, I 'll be.
 Well, I 'll be—go to Sunday school.
 Why, the very idea.
 What under the canopy.
 Well, I swan.
 Well, I 'll take my dinner.
 Where did you get on at.
 Waltz.
 What 's the diffs.
 What 's it to you.
 You dirty thing.
 You nasty boy.
 You sassy thing.
 You see me getting up.
 You 're another.
 You 're fine.

You 're a Rheuben.
 You 're a kiddy.
 You 're right.
 You don't know, do you.
 You old sucker.
 You don't say so.
 You 're not in it.

Boys.

Cheese it 2—2.
 Let her go Gallagher 2.
 Down in the mouth 2.
 Ho Bill 2.
 Rumbunctious 1—1.
 Hot air 2.
 No flies on me 2.
 Sure thing 1—1.
 That cuts no ice 2.
 That 's the latest 2.
 I don't care a fig 2.
 Squeal on 2.
 No flies on that (him) 1—1.
 You 're a bughouse. 2.
 Old man 2—1.
 Again so soon.
 A lovely grin.
 Break your face.
 Bang up.
 Cuff you.
 Catch on.
 Chase a toy balloon.
 Chubbing.
 Crib and eat cobs.
 Carp face.
 Dopy.
 Don't rush, the weather is cool.
 Don't cry over spilt milk.
 Give me a bid.
 Good morning Carrie.
 Granny.
 Get a hnstle on.
 Google eyes.
 Got no strings on me.
 Go tell the ice man.
 German carp.
 Greenhorn.
 Gump through this.
 How would you like to be the ice-
 man.
 Hot cat.
 He hooked.
 He pinched.
 Heraus mit ihm.
 He looks like two cents half spent.
 How 's that for high.
 Hikey, Pikey, Dominikey.
 How does that strike you.
 Hot time.

- Hot tomato.
 Have you the chinks.
 He's no slouch.
 I dont care a rap.
 It's all my fault.
 Is n't that bummy.
 In the hole.
 I won't go to your house.
 Keep your shirt on.
 Keep your head on.
 Keep your hair on.
 Level head.
 Let her rip.
 Mushroom.
 Now you're talking.
 Now you have your foot in it.
 O you gezaho.
 Paint her red.
 Pony.
 Right sudden.
 Swipe.
 Son.
 Smoke up.
 Schneides heraus.
 Sloppy weather.
 Scrumptious.
 Suckers bite.
 She.
 Taffy.
 Tantrum.
 The one.
 That's no lie.
 That's twice.
 The governor.
 The gent.
 We whitewashed you.
 Well heeled.
 Warm baby.
 When the cows come home.
 Who was your dog.
 You chump.
 You're only fooling.
 You're a cutor.
 You're a tacky.
 You're a bum.
 You're gummy.
 You're daffy.
 You're the shucks.
 You're a loghouse.
 Young heifer.
- Won't take anything off him.
 Knocked out.
 A mistake in the print.
 To knuckle under.
 Dooley—go—go.
 A chip of the old block.
 To strike favorably.
 To do or bust.
 Dead one.
 Ringer.
 To spunk up.
 Work a bluff.
 Work a gag.
 Pull one's leg.
 Hang out a shingle.
 To be full.
 Shot in the neck.
 Shot.
 Peeps, lights, sights (eyes).
 Star.
 Rooter.
 Bleacher.
 Fair.
 The mug.
 Gib.
 Slumps.
 Pegs.
 Flappers.
 Hot warm.
 Dago.
 Pat.
 To hit in the kisser.
 Slap on the block.
 Let her went.
 Put her there.
 To weep a few.
 To meet one's Jesus.
 Looney.
 It's up to you.
 Hoofed (walked).
 Get there all the same.
 She is fly.
 Great.
 The whole shooting match.
 A little let off.
 Goodbye Mamie.
 Day of doom.
 You bet I did?
 Search me.
 Ninny.
 Peninsula.
 It is all to the good.
 Name it and you can have it.
 Humbug.
 I feel like hello my lady.
 I feel like helping somebody.
 Snitz, or Snitz and gnepp.
 Bite their heads off.

SEX NOT SPECIFIED.

- Slug him 3.
 Peachy 2.
 Bloomin 2.
 Hunk 2.
 Hog or die.
 To do one.

Snow water.	To tell on.
Hustle up.	To paste.
So long.	To chug.
I'm busted.	To biff.
There he goes.	To land.
Speel off.	Turn tail.
He has a case on Miss —.	Show the white feather.
Hot soup.	Arkansas toothpick (bowie knife).
Let the old cat die.	Slob.
I 'lowed to do something.	Hunk 2.
Aint you going.	Goner.
Powerful work.	To kid.
Nick of time.	Kick up a row.
Buy a pig in a poke.	Kick the bucket.
Streak of good luck.	Hand in your checks.
Almighty Dollar.	Pass in your chips.
To hoodwink.	Lummux.
To pull wool over one's eyes.	Shindy row.
A cop.	Mooney.
A cove.	To fork over.
Old woman.	To eat hay.
A stiff.	To go up the spout.
Cork it up.	Anxious seat.
He's soft.	Chip in.
He's a little potato.	To cotton to.
He's a warm potato.	To pony.
He's a bean.	To pole.
He's a hot skeeter.	To cram.
Now you're shouting.	To eat dirt.
All right but won't do.	To eat one's words.
Scrappy.	To funk out.
Game.	To run up against it.
Blowhard.	To bluff.
Goldbug out and out.	To keep a stiff upper lip.
Rip snorter.	To make one's self scarce.
Willy boy.	Root.
Make tracks.	Push.
Skedaddle.	Gang.
To pan out.	Set.

“Give cases of the long sentence habit where style has lost all symmetry and rambles on with incoherence and lack of form. What is the cause and cure of this? Can you classify its forms, beginning perhaps with the simplest, where the conjunction *and* connects a string of clauses,” gave 209 returns. 6% of these were blank and 30.5% knew of no cases. Of the 133 positive replies 38 were observations and 95 reminiscences. 104 returns, or 50%, gave their age as follows: 2 at 5, 2 at 6, 8 at 7, 14 at 8, 9 at 9, 15 at 10, 7 at 11, 7 at 12, 10 at 13, 3 at 14, 2 at 15, 2 at 16, 2 at 17, 4 at 18, 3 at 19, 6 had the habit always, and 6 as a child. Of the 23 who gave a cause, 8 said their thoughts came too fast, 10 did not know sentence structure, 2 thought they seemed large, 2 said it was due to lack of vocabulary, and 1 tried to imitate authors. Of those who gave a remedy, 12 simply said they were corrected, 6 had to repeat

the sentence or rewrite the composition, 4 had their composition read before the class, 3 by having their composition ridiculed before the class, and 2 by being stopped in the middle of the sentence.

Concrete illustrations gathered incidentally might add much to the returns to this inquiry, especially those gathered from adolescents.

To the question, "Have you ever known a spontaneous story teller; if so, describe the case; when and how did it begin; what was the influence of, and effect upon, the hearers; and what kind of stories were preferred and what kind of characters; were they short, long, or continued?" there were 221 returns. 53% reported cases, 42% could not, and 5% left the question unanswered. 30% were personal experiences and reminiscences and 23% observations. 81 cases gave their age as follows: 3 at 5, 4 at 6, 6 at 7, 7 at 8, 7 at 9, 8 at 10, 4 at 11, 11 at 12, 10 at 13, 3 at 14, 2 at 15, 2 at 16, 1 at 17, 2 always, and 11 said as little children. 15.5% told short stories, 10% continued and 4% long stories.

11% told fairy stories, 4% ghost and witch stories, 4% stories about children, 3.5% about animals, 3% heroic stories, 1.5% funny stories, 2% stories of adventure, 1% wonderful stories, 1% impossible stories. Three cases reported stories with dreadful characters, one case noble characters, two, sentimental characters, one had as characters princes, kings and queens. 11 cases reported that they told their stories by night or in the dark, though this point was not asked for.

7-8 told stories to imaginary companions.

At 10 told short stories to playmates in a dark room. They asked me to, but afterwards were afraid to go home.

At 14 told stories of desperate characters, continued.

19, brother 11, told stories. Brother wrote plays and we dramatized them. He always had a villain in them.

Sister, 8, told witch stories. I liked them, filled me with awe.

The next question was "Have you known cases of a strong tendency to quote pretty phrases, perhaps especially in girls; the album kind of poetry, and give a few samples to indicate the kind of taste, the gratification of which is most commonly sought thus? Do conditional clauses abound in a characteristic and excessive way? Examples, cause, and how explained?" Only the first part of this question was answered. There were 211 returns, 4% of which were blank, 42% negative, and 54% positive. 35% gave one or more quotations. The age was given as follows: 2 at 9, 6 at 10, 7 at 11, 15 at 12, 5 at 13, 10 at 14, 10 at 15, 12 at 16, 2 at 17, 3 at 18, 2 at 19.

At twilight I often thought of a quotation from Longfellow:

"The day is done and the darkness
Falls from the wings of night,

As a feather is wafted downward
From an eagle in its flight."

"White, cold, heavy-plunging foam," haunted me for days after reading "A Dream of Fair Women." Also certain stanzas of "The Ancient Mariner" keep saying themselves over and over in my head.

The quotations are arranged into general classes according to thought as follows, figures indicating number of times given :

WISE SAYINGS.

- "A stitch in time saves nine," 4.
 "Never miss the water till the well runs dry."
 "Whistling girls and crowing hens always come to some bad end."
 "The tongue is the root of all evil."
 "All 's well that ends well" 2.
 "Remember your Creator in the days of your youth" 2.
 "Where ignorance is bliss it is folly to be wise" 2.
 "Though the mills of God grind slowly,
 Yet they grind exceeding small."
 "Live and learn, and learn to live."
 "If you your lips would keep from slips,
 Five things observe with care :
 To whom you speak, of whom you speak,
 And how, and when, and where."
 "Birds of a feather flock together."
 "Blessings brighten as they take their flight."
 "A rolling stone gathers no moss."
 "To speak is silver, silence is gold."
 "Rain before seven, clear before eleven," (seemed wise to me).
 "Evening red and morning gray, set the traveller on his way,
 Evening gray and morning red, bring down rain upon his head."
 (Seemed wise to me.)

SADNESS, DESPONDENCE.

- "Of all sad words of tongue or pen,
 The saddest are these, 'It might have been.'" 5
 "Into each life some rain must fall."
 "All is not gold that glitters" 3.
 "The melancholy days are come."
 "The curfew tells the knell of parting day."
 "Such is life!"
 "It's an ill wind that blows nobody good."
 "The mill will never grind again with the water that is past."
 "To be or not to be? that's the question."
 "The day is done and the darkness falls from the wings of night,
 As a feather is wafted downward from an eagle in its flight."
 "If we knew the woe and the heartache waiting for us down the road,
 If our lips could taste the wormwood, if our back could feel the load,
 Would we waste the day in wishing for a time that ne'er can be?"
 "We cannot buy with gold the old associations."
 "Life is a sheet of paper white
 Whereon each one of us may write
 A line or two, and then comes night."
 "The snow had begun in the gloaming!"

OPTIMISM.

"Every cloud has a silver lining."

"Truth, crushed to earth, shall rise again."

"Tell me not in mournful numbers," etc.

"Life is real, life is earnest,
And the grave is not its goal,
Dust thou art, to dust returneth,
Was not spoken of the soul."

"Tell me not in mournful numbers
Life is but an empty dream
And the soul is dead that slumbers
And things are not what they seem."

"It is never too late to mend" 2.

"It's a long lane that has no turn."

"A light heart lives long."

"Never trouble trouble till trouble troubles you" 2.

"Though the way aint sunny, don't you fret,
Cheer up, honey, you'll get there yet."

ALTRUISM.

"Do unto others as you would have them do unto you" 6.

"If you gain new friends, don't forget the old ones."

"How far that little candle throws its beams,
So shines a good deed in a naughty world" 2.

"Be good and you'll always be happy" 5.

"Politeness is to do and say
The kindest thing in the kindest way" 2.

"I live for those who love me
Whose hearts are kind and true;
For the heaven that smiles above me
And awaits my spirit too;
For the human ties that bind me;
For the task by God assigned me;
For the bright hopes left behind me;
And the good that I can do."

"To err is human, to forgive divine" 2.

"It is well to think well, it is divine to act well."

"Handsome is that handsome does" 3.

"Remember well and bear in mind,
A constant friend is hard to find;
And when you find one that is true,
Change not the old one for the new" 3.

"Be noble in every thought and in every deed."

"Be noble, and the nobleness that lies in other men, sleeping but
never dead, will rise in majesty to meet thine own."

"Be ashamed to die till you have gained some victory for humanity."

"Better to weave in the web of life, a bright and golden filling
And to do God's will with a ready hand, and feet that are swift and
willing,

Than to snap the tender beautiful threads of our curious life asunder
And then blame Heaven for tangled ends and sit and weep and wonder."

"T is better to give than to receive."

"Honesty is the best policy."

"The quality of mercy is not strained. It droppeth like the gentle
rain from heaven upon the place beneath" 2.

"This world is filled with beauty, as other worlds above,
And if we did our duty, 'T would be a world of love."

"Love your enemies, even though they hate you."

"Love one another."

"Hope endureth all things."

"True happiness if understood,
Consists alone in doing good."

"However trifling what we do
If a good purpose be in view,
Although we should not have success,
Our purpose God will see and bless."

"The inner side of every cloud is bright and shining,
I therefore turn my clouds about
And always wear them wrong side out
To show the lining."

"Many a word at random spoken,
May soothe or wound a heart that's broken."

SELF-AFFIRMATION.

"Fame grows not upon mortal soil."

"The fountains of our life are all within us."

"Nothing ventured nothing had" 2.

"Sink or swim, live or die."

"So nigh is grandeur to the earth, so near is God to man,
When duty whispers low thou must, the youth replies I can."

"If at first you don't succeed, try, try, again" 2.

"Count that day lost whose low descending sun
Views from thy hand no worthy action done."

"Faint heart ne'er won fair lady."

"Borrowed words do not shine."

"Actions speak louder than words."

"God helps him that helps himself."

"Every day is a fresh beginning."

"Let us now be up and doing with a heart for any fate,
Still achieving, still pursuing, learn to labor and to wait."

"Try, try, again."

"So live that when thy summons come to join that innumerable
caravan," etc.

"It is better to wear out than to rust out."

"A good name is rather to be chosen than great riches."

"No life can be pure in its purpose and strong in its strife and all
life not be purer and stronger thereby."

"An ounce of pluck is worth more than a pound of luck."

LOVE.

"When she had passed it seemed like the ceasing of exquisite
music."

"In the golden chain of friendship, regard me as a link."

"Silently one by one in the infinite meadows of heaven
Blossom the lovely stars, the forget-me-nots of the angels" 6.

"The course of true love never did run smooth."

"To be near thee—to be near thee, alone is peace for me."

"Nothing to give but love."

"How can I bear to leave thee, how can I from thee part?"

"I cannot tell you why I love you, but I do."

"Should old acquaintance be forgot and never brought to mind?"
 "It's better to have loved and lost, than never to have loved at all" 2.

"You may break, you may shatter the vase if you will,
 But the scent of the roses will cling around it still."

"Dost thou love me sister Ruth?"

"Where'er I roam whatever realms I see,
 My heart untravelled fondly turns to thee."

"Like the ripples follow the waves to sea,
 So may God's blessing follow thee."

"Talk not of wasted affection, affection never was wasted."

"When the evening sun is setting
 And from care your heart is free,
 When of distant friends you're thinking
 Will you sometimes think of me?"

"Roses are red, violets blue,
 Sugar is sweet and so are you" 6.

"Though rocks and hills divide and you no more I see,
 Remember it was——, who wrote these liues to thee" 3.

"If you love me as I love you
 No knife can cut our love in two" 2.

"Tell me pretty maiden are there any more at home like you."

"Love may come and love may go and flit like a bird from tree to tree."

"May your path be strewn with roses
 And all your children have pug noses."

"Happy, loving, kind and true
 This is the wish I have for you."

"My pen is poor, my ink is pale,
 My love for you shall never fail" 2.

"May in thy life forever be
 A little corner left for me."

"In the chain of friendship,
 Consider me a link."

"My love for you will never fail
 As long as pussy has a tail."

"When you are old and cannot see
 Put on your specs and think of me" 2.

"Remember the miss
 Who scribbled this."

"In the storms of life when
 You need an umbrella
 May you have to uphold it
 A handsome young fellow."

"The rose is red
 The violet blue
 The lilies look happy
 And so do you"—also this ending:
 . . . "Pickles are sour
 And so are you."

MISCELLANEOUS.

"There is a method in my madness."

"The Lord is my shepherd," etc.

"Variety is the spice of life."

"All is fair in love and war" 2.

"The starry firmament doth shine."

"It is better to be born rich than good looking."

"Men may come and men may go, but I go on forever."

"The wee small hours."

"Patience is a virtue, possess it if you can,
Seldom found in woman, never found in man."

"In single blessedness she lived, and in the same she died."

"The vine that bears too many flowers will trail upon the ground."

"(Longfellow's Rainy Day, and well known proverbs.)"

"How beautiful is night!

In full orb'd glory yonder moon

Rolls through the dark blue depths."

"As idle as a painted boat upon a painted ocean."

"Silvery stream of crystal water" (brook).

"I'm your boss, yes—that's nice."

"Divinely tall and most divinely fair."


"Certainly" (with peculiar intonation).

"'T was a great pity, so 't was."

"Light, more light."

"Seven Times One" (because it spoke so beautifully of the moon).

"You ask me to write in your album,
Pray tell me how to begin,
For there's nothing original in me,
Excepting original sin."

"Here is for me a little spot
To upset the ink and make a  ."

"Age before beauty, so goes the proverb,
So if you go last, do not be disturbed."

"Is there an adjectivism, nounism, adverbism, one or all of these, with examples and explanation?"

Of the 205 returns to this question 18% were blank, 40% negative, and 42% reported cases of extreme like for adjectives and adverbs. The age was given as follows: 1 was 9, 4 were 10, 1 was 11, 13 were 12, 8 were 13, 10 were 14, 9 were 15, 7 were 16, 7 were 17, 2 were 18, 2 were 19.

When 12 it seemed to me the more adjectives I used the more expressive my speech would be.

When 12 I placed all the adjectives before a noun I could.

The following are favorite words and expressions that were given, the figure following indicating number of times given.

A great, large, beautiful dog; perfectly delightful; glorious, good time; a beautiful, magnificent, ordacious piece of work; a great, big, deep, long hole; the dirtiest, meanest, outlandish thing; a beautiful, bright, sunshiny day; a glorious, clear, bright morning; a handsome, good-looking, attractive young man; the dearest, cutest, little thing (a hat); awfully pretty; terribly handsome; perfectly lovely 2; perfectly hideous; just beautiful; simply awful; extremely elegant; surpassingly beautiful; large, round, red and yellow apple; perfectly ele-

gant ; charmingly beautiful ; exquisitely beautiful ; the dearest, prettiest, little thing ; hideously ugly ; perfectly charming ; sweetly, divinely fair ; simply great ; magnificently delicious ; simply grand ; perfectly beautiful ; a most splendid, elegant, delightful time ; awfully nice ; a perfectly splendid time ; an immense, great, big house ; a great, big, beautiful doll, given by my dear, sweet mother ; the sweetest, prettiest, and loveliest hat ; a lovely, beautiful bright day ; a perfectly, swell, elegant hat ; real sweet time ; a perfect dear ; a horrid shame ; simply elegant.

atrocious	excruciatingly	marvellous
awful 3	exquisite	perfect 2
awfully 4	exquisitely	perfectly 5
beautiful 4	fearfully 2	pretty
beautifully 2	fierce	ramskiverous
convincing	forlorn	simply
cute 3	forsaken	splendidly
dandy	glorious 2	spontaneous
dear 3	gracious	superb 2
delicious	grand	sweet 2
delicately	handsome 2	swell
disreputable	horrid	terrible 4
divine	horribly	terrifically
divinely	incomprehensible	terrific
dreadful	incongruous	thrilling
dreadfully	lovely 2	tremendous
elegant 2	magnificent 3	
elegantly	magnificently	

To the question "Have you known cases of a reading passion or craze, where the soul seemed to take flight in books, and how was this reading done and from what motive? Was it for the pleasure of having the sentiments largely stirred, as in romance reading, or a real desire for information or to show a long list of books read, or what?" There were 227 returns, 90% of these were affirmative, 6% said no, and 4% left the question unanswered. The ages were given as shown in the curve on page 370. Not all of the returns gave a motive for their reading. 32% read to have the feelings stirred ; 12% for pleasure ; 7% to gain knowledge ; 4% to be able to say they had read many books ; 3% to rouse the imagination ; 2.5% to be considered a person of information ; 2.5% because they had a love for reading ;—one case said to pass time and one to gain a vocabulary. 17% read romances ; 7% stories of adventure ; 4.5% everything ; 2.5% Sunday school books and papers ; 3% fairy tales ; 1% history ; and 1% nature.

11-12 read novels, the more exciting the better ; read in bed, on the stairs, everywhere ; neglected everything else.

12-14, read always, even while setting the table.

12-16, read mostly boy's books, though a girl.

At 12 became perfectly wild over Duchess and Laura Jean Libby's books.

11-14, read everything—detective stories, dime novels, Sunday school books, standard authors, religious papers, newspapers, magazines; and enjoyed all equally well. Sat up in bed till after midnight.

13-18, read everything. I laughed and cried with my characters.

11-12 read Sunday school books; thought some parts ought to be different.

At 13 I read 9 novels in one week.

14-15 read till crowing of cocks scared me to bed.

12-14 sometimes read 4 books a week.

At 14 read hour after hour curled up in a chair.

At 11 read everything, especially books for grown people.

At 17 had read only two books, and they had been assigned by the school.

Those who were forbidden to read, read by stealth. Many neglected their work and their studies to read. Some kept their novels under their desks open and read when the teacher thought they were studying; others took books along to their work and read when their parents thought they were working. Some sat up till after midnight, and some took their books along to bed, either to read while their parents thought they were in bed asleep, or to read early in the morning before their parents expected them to be up.

To the question, "Cases of aping the style of characteristic authors—Carlyle, Addison, newspaperism, sermonesque style, flowery, exuberant, or emotional style of novels. Have you known cases where style changed or came under other influences? What do you deem the value of this dominance for a time by the style of an author," the majority of returns were negative. Of the 208 returns 61% never aped the style of an author, 11% failed to answer, and 28% were positive but referred only to the first part of the inquiry. The authors mentioned were as follows, figures indicating number of times mentioned: L. M. Alcott 5, Macaulay 4, Irving 3, Longfellow 3, Geo. Eliot 3, Tennyson 2, Scott 2, Milton 2, Shakespeare 2, Stephenson 2, Whittier 2, Thoreau, Lowell, Crane, Stockton, Henty, Burroughs, Dickens, Virgil, Read, Bertha Clay, Mrs. Southworth, Bulwer, Phœbe Carey, Victor Hugo, James Lane Allen, Laura Richards, Dumas, Mark Twain, Emerson, Cooper, Samantha Allen, Harriet Holly, H. B. Stowe, Carlyle, newspapers.

Liked to be like Lady Macbeth and like Portia. Would imitate them before a mirror, using old muff box for crown.

Had a desire to know forms of polite letter writing.

Read "Little Women" and thought I wish I had written that before Miss Alcott.

At 10 read Victor Hugo's story of a man caught in quicksand. I read and re-read it, though it made me cry. I tried to imitate his style, short forcible sentences.

The low percentage of affirmative replies here is in harmony with the question on composition in so far as many do not like to write compositions.

"Cases of spontaneous poetry? Can you give examples? In what field lines, age, etc." To this inquiry there were 202 returns; 50% had not and 43% had written poetry. 7% failed to answer. 15% were observations and 28% personal experiences and reminiscences. The ages were given as follows: 1 at 9, 4 at 10, 1 at 11, 8 at 12, 9 at 13, 9 at 14, 15 at 15, 7 at 16, 2 at 17, 6 at 18, 1 at 20.

7% of the entire number sent a specimen of their poetry, and 16% specified the title more or less definitely without giving a specimen. The following are the titles given, figures indicating number of times given:

Love of classmate for boy in upper class 2; Jokes on girl friends 2; Classmates 2; Friend and the fun we had; Class of 1901; Teacher; Skating Party; Love (about people I knew); Sailor who had left his children; Trolley; Events of the week; Spring; Our Flag; Winter; Skating; May; Storm; Autumn Leaves; Lilies; March; Flowers; Birds; Subjects from Nature; Our work in life; Religious subjects; Angels. One said her subjects were sentimental, and two said theirs were humorous.

It will be seen that these titles fall mostly into two general classes, namely, Living Persons and Nature.

The following are specimens of poetry, the titles of which are not included in the above list, no attempt whatever has been made at correction.

I.

F. Alleluia! Sing the angels
As they gather far and near
See, the Christ child we bring to you
Will you not receive him here?

II.

Oh how base and still how wretched,
Are the mortals of this earth,
God doth pity, he doth bless you,
He doth give the Christ child birth.

III.

Like a Shepherd he shall lead you
Coming for his bleeding flock
Haste ye therefore to receive him
He will help you bear your lot.

F., 14. Written about a person I liked very much.

If ever you visit the High School
When you've nothing else to do
Just step into Miss B — room,
Where everything is new.
If you chance to look at the pupils
Just glance down one of the aisles,
And you'll see the sweetest little girl
That ever smiled a smile.
In front of her sits a boy
Behind her is a girl,
And I can safely say between
These two is a pearl.

At 17 wrote poem of 26 stanzas. First stanza was as follows :

The class of Naughty Ones are we
But only so in name;
There's many a one among us
Who'll soon be known to fame.

F., 16. One of the boys in the class wrote some poetry about me and so I wrote the following stanza about him :

Harry is naturally a good boy,
But when he's mad, he's fierce,
And when he is reading his Cæsar,
You had better make yourself skerce.

F., 11.

O'er every other flower that grows
I dearly love the sweet brier rose
Its perfume is more rich, more rare,
Than I have met with anywhere.

IN MARCH.

The howling wind is sneezing a sneeze
The snow is piled up like Polar seas;
And the little birds in the bare trees say,
"Give us our overcoats, or we'll freeze.

F., 6.

When I was nine
I saw a stein
And it was fine.

F., 15.

Life has lost its gayest pleasures,
Day has dawned, and morning passed,
And dimly in the distance gloaming
Comes the evening, and uncared guest.
Who has asked this solemn stranger?
Or, does he herald the darkening night?
Has he come to forewarn danger?
Or has he come a *foe* in might?
Let us not fear so my darlings,
But be brave and firm and true,
Trusting God to help His children
As it is His wont to do.

And if he sees fit to answer
Prayers of ours in His own way
Let us bow and softly murmur,
"Thy will, not mine, O God, be done."

F., 9.

One night as we sailed on the dark blue ocean
A northwind rose,
And louder and louder blew the fierce north wind,
And whistled around our cabin door.

ROBINS.

16.

The robin is a native
Of our own chosen land
But the little English sparrow
Has taken him in hand.
The sparrow came from Europe
To help us (so folks said)
Get rid of all the insects,
And so the robin fled.
The robin thought the sparrow
Had crowded him quite out

It surely must have been so
 Without a single doubt.
 For where are all the robins
 That used to be around?
 They must have gone to Europe
 For very few are found.
 But early in the summer
 And early in the spring,
 At the very dawn of morning
 We hear some robins sing.
 So let us coax them back again
 And tell them they may stay,
 For in this land of liberty
 More than one can have his way.

- F., 14. Our teachers ever we'll kindly regard
 And forget the times we thought them "so hard."
 Our schoolmates too we'll never forget,
 And for each, through life, we'll have some love left.

F., 13. Girls in Grammar School wrote poetry. Themes—love of a classmate for a boy in upper class. One girl wrote:

Linger, longer, Lucy
 Do not go away,
 I cannot live without you
 One little, little day.

Another wrote:

As Rue was walking down the street
 A pretty maid he chanced to meet.

- F., 15. Happy hearts are we
 It matters not where we be
 Whether to work or church we go
 Over the hills or fields below
 Our hearts were ever gay
 And bright as the sunny days in May.

M., 15. "Susan and Howard to Elma did go,
 To buy them some feathers and buy them a stove."

- F., 12. Dear little Charlie, asleep in his cot,
 Never knew that Santa Claus almost forgot
 To fill up his stockings as full as he could
 For dear little Charlie, so kind and so good.

F., 11. In a shanty in the far south,
 In the bright and happy Southlands,
 Lived a negro and his Dinah,
 Lived his merry pickaninnies
 With their hair so black and wooly.
 Oldest of all these was Moses—
 Moses so tall and silent
 In the cotton, in the cabin
 Always silent, never talking,
 Only thinking, thinking, thinking,
 Wishing that he might be given
 Freedom such as had his master.
 Never dreaming of the hero
 Who would free him from the working,
 Free him from the toil and working.

F. 11. "Listen, my schoolmates, and you shall hear
 How Sandy Brownson got drunk on beer;—
 He went to Lawson's, that's where they sell steers,
 And bought one for a dollar to ride to Keer's.
 When he got there he bought a pint of old beer,
 Gave most to himself and the rest to his steer.
 The steer was half wild and as full as his master,
 He went to Killbones instead of Keyaster.
 Sandy was hollering like the very old nick,
 His head was whirling and he felt very sick.
 And now, Oh! my schoolmates, beware of old beer,
 And never, Oh never, give it to your steer!"

Age 7. "Our Cow."
 "When I think how
 We loved our cow," were two lines.

F., 9. "The Fire Engine."
 "Down the street there comes the engine
 Darng! Darng! Darng!
 See the horses dashing swiftly,
 Clack! Clack! Clack!"

F., 18.

THE TRAVELLERS.

There was no room in the wayside inn
 For the travellers weary and worn,
 So they housed that night in the cattle shed
 Where Christ the Lord was born.

II.

When low! appeared a vision,
 Three travellers from afar
 Came riding slowly into the night,
 Led by the guiding star.

III.

And still they travelled onward,
 And rode without fear or dread,
 For the star that had led them all the way
 Stood over the cattle shed.

IV.

Down from their camels white and strong,
 Each stepped and prayed alone;
 And still the star that led them on
 In radiant beauty shone.

V.

"This is the place," the foremost said,
 "We shall find the Saviour here."
 Then they gathered their frankincense and myrrh,
 And entered the stable drear.

VI.

They beheld a wondrous picture,
 (Would that you and I might see!)
 Of the mild and patient Mary
 With the Christ child on her knee.

VII.

E'en the cattle found their voices,
 Looked upon the holy sight,

While the stars sang out together,
Christ the Saviour's born to-night.

Age 16.

THE MINER.

When far down in the dark mine,
He heard the warning sound,
He knew it meant destruction,
If he did not reach the ground.
Like lightning he flew to the main shaft,
And into the basket was leaping,
When suddenly he spied his neighbor,
Who for his children was weeping.
Out he sprang, like a gallant knight,
For the basket would only hold one.
His thankful neighbor sprang in quite sprite,
And safely reached his home.
Sadly that night he told the story,
Of the lad who had saved his life,
He, indeed, has won his glory,
"God bless him," was the prayer of the wife.

F., 9.

THE TROJAN WAR.

When the years had numbered four,
The Grecians to the vally bore
Their treasures and as there fathers oft had done
They played there games and races run.
We see Cleon, an Athenian boy,
Fresh from school and full of joy
But one of those Spartan's he was afraid
Wood beat him in the games they played.
In the war the Trojans fell,
For the great Achilles did so well.
He was a Grecian brav and strong
And he fought the Trojans right along.
The secret of his power they did affix
His mother diped him in the river styx
But his left heal under did not go,
So the Trojans arrow laid him low.

ALPHABET OF OUR LATE WAR.

Age not given.

A's for America's heroes who 'll gain
All treasured islands belonging to Spain.
B's for the battles although they were few
Informed the Spaniards we knew what to do.
C's for Cervera the Commander so fair
We caught in the harbor and bottled up there.
D's for Dewey who went to the fore
And planted Old Glory on Philipine shore.
E's for El Cauey where brave Capron did fall,
Just as they gave them his last well spent ball.
F's for our flag which floats wide and free
Now on Old Morro close down by the sea.
G's for Garcia the Cuban so bold,
Of his campaigning there's more to be told.
H is Havana where our heroes lie,
Angels are keeping their vigils near by.

I is Iloilo surrendered last week
 Knowing our power our friendship to seek.
 J is for justice accorded to all
 Ne'er is unheeded humanities call.
 K is the kindness the Red Cross did show
 To our brave boys who were lying so low.
 L is for Lee who so bravely watched over
 American rights on the island of Cuba.
 M's for Manilla caught napping at last
 When morning dawned she was tight in our grasp.
 N is our navy which shattered the fleet
 That Spain always boasted no country could beat.
 O's for the Oregon staunch, brave and tight,
 She came round the Horn just in time for the fight.
 P's Porto Rico blockaded in June
 'T was Spanish opinion we came there too soon.
 Q is the question we asked then of Spain
 Was it your dastards who blew up our Maine.
 R's for Roosevelt of Rough Rider fame
 Hurrah for our Teddy, world-wide is his name.
 S stands for ships that our enemy lost
 Too numerous to mention, not counting the cost.
 T is the Texas, whose captain was crying
 "Stop cheering boys, Great God they are dying."
 U for the Union, long, long may she stand,
 The brightest example in all this broad land.
 V Volunteers who offered no quarter
 To Spanish soldiers most bent upon slaughter,
 W is Weyler the butcher, so base,
 Even Satan would scorn to look at his face.
 X is for Xyster the surgeons did ply,
 On the soldiers the Spaniards lured to die.
 Y's yellow fever that carried of scores
 Of brave men who fought in Freedom's cause.
 Z is the Zephyr that wafted us peace
 The islands once ours we trust war will cease.

'M., 13.

A CHILD'S APPEAL TO A STAR.

Little star, shining so clear and so bright,
 An Angel's lamp for the cold, black night,
 How I think and would love to know,
 What you are, what you do, why twinkle so?
 Do you ever grow sleepy like I,
 Up above in the big dark sky,
 Does the sand-man ever nod your head,
 And have you a mamma to tuck you in bed?
 Little star, come sometime and talk to me,
 And you and my dolls will have four o'clock tea,
 And when you are tired and say good-bye
 I'll ask papa to drive you to your home in the sky.
 Good night little star, for I must go,
 And you will stay and burn all night,
 To light the path of the angels bright.

Oh, do not forget, when I come above,
To light my steps to the home of love.

(Boy was troubled about the 5 lines in last stanza.)

To the inquiry, "What is the best basis of English composition, (a) incidents or events of interest in the life or observation of the writer; (b) paraphrases of great epics, stories, speeches, essays, etc.; (c) papers based on special and diverse reading on a topic; or, (d) the results of long efforts to grapple with an author, Dante or Tennyson, far too large to be fully comprehended as a whole, etc.; and what is the advantage and disadvantage of each of these?" there were 205 returns. 7% failed to answer, and 93% gave replies as follows: 38% preferred incidents or events of interest in their own life or observation; 28% preferred to read up for information; 5% preferred paraphrasing; and 2% preferred to grapple with an author. Furthermore, 8.5% preferred to write on imaginary topics; 1.5% liked expositions best; 4.5% gave different preferences for different ages; and 3% simply stated that they never liked composition work of any kind. Some gave a second choice as follows; 9% reading up, 2.5% personal experiences and observations, and 3.5% imaginary subjects.

In many returns the statement was made that the writer did not like composition work. In such cases the preference for a subject was given on the supposition that she *had to* write. This statement was generally given incidentally, since this point was not asked for in the inquiry.

The inquiry, "Can you name (a) pieces, (b) stories, and (c) authors, which your experience convinces you are calculated to do special good for individuals at a certain age?" brought 201 returns. 11.5% did not answer, 20% could give no selections nor authors, 68.5% gave an affirmative reply, and 65.5% gave some author or selection. The books and authors I have grouped under the following headings: Childhood up to 9; Early Adolescence 9-14; Later Adolescence 15—; General, those where no age is given. Figures indicate number of times given.

CHILDHOOD.

Mother Goose Rhymes and Jingles.

Cinderella.

Puss in the Boots.

Alice in Wonderland.

Seven Little Sisters.

Dotty Dimple Books.

The Story of a Bad Boy.

EARLY ADOLESCENCE.

Alcott, Louisa M. 15.

Elsie Books 5.

Black Beauty 4.

Silas Marner.

Martha and Mary Washington.

The Lamplighter.

- | | |
|------------------------------|---------------------------|
| Pilgrim's Progress 4. | Hiawatha. |
| Roe, E. P. 3. | Seven. |
| Pansy Books 3. | Little Red Riding Hood. |
| Henty Books 3. | Robinson Crusoe. |
| Ingelow, Jean 3. | Tanglewood Tales. |
| Alice in Wonderland 2. | Water Babies. |
| Beautiful Joe 2. | Little Men. |
| Five Little Peppers 2. | Arabian Nights. |
| Little Women 2. | Seven Little Sisters. |
| Vanity Fair 2. | History stories. |
| Uncle Tom's Cabin 2. | Leonhard and Gertrude. |
| Carey, Rose 2. | Ben Hur. |
| Evangeline 2. | Fair Maid of Perth. |
| Bryant. | Battle Lost and Won. |
| Dodge, Mary M. | The Bessie Books. |
| Eliot, Geo. | George's mother. |
| Finley, Martha. | The English Orphans. |
| Hawthorne. | I, Thou, and the Other. |
| Irving. | Bible Stories. |
| Longfellow. | Thanatopsis. |
| Read, Charles. | Naomi. |
| Tennyson. | The Orphan's Inheritance. |
| Wiggins, Kate. | The Blackberry Girl. |
| Wilkins, Miss. | Fabiola. |
| Truman, Grace. | What Would Jesus Do. |
| Greek Myths. | Ivanhoe. |
| Bessie Lane's Mistake. | Legend of Sleepy Hollow. |
| Crossing the Bar. | Rip Van Winkle. |
| Sir Roger de Coverly Papers. | Thaddeus of Warsaw. |

LATER ADOLESCENCE.

- | | |
|--------------------------|--------------------------------|
| Longfellow 2. | The Right of Way. |
| Shakespeare 2. | Idylls of the King. |
| Dickens 2. | Rainy Day. |
| Churchill 2. | Wreck of the Hesperus. |
| Meridith, Janice 2. | Les Miserables. |
| Evangeline 2. | Great Orations |
| Snow Bound 2. | Tale of Two Cities. |
| Vision of Sir Launfal 2. | Leather Stocking Tales. |
| Silas Marner. | John Halifax. |
| Addison. | Richard Carvel. |
| Byron. | The Crisis. |
| Emerson. | When Knighthood was in Flower. |
| Irving. | A Singular Life. |
| Phelps, Mrs. E. S. | Barrabas. |
| Reid, Esther. | Thelma. |
| Scott. | Prince of the House of David. |
| Sheldon, Charles. | Golden Milestone. |
| Thackeray. | Hanging of the Crane. |
| Tennyson. | Building of the Ship. |
| Whittier. | Paradise Lost. |
| Whitney, A. D. T. | The Ugly Duckling. |
| Pansy Books. | Sketch Book. |
| Lady of the Lake. | Ramona. |
| The Brook (Tennyson). | Reign of Law. |
| Remember the Alamo. | Sesame and Lilies. |
| Don and I. | In His Steps. |

AGE NOT GIVEN.

Alcott, Louisa M. 13.	The Captain's Daughter.
Longfellow 10.	Heir of Redcliffe.
Tennyson 6.	Daisy Chain.
Vision of Sir Launfal 5.	Lorna Doone.
Dickens 5.	In His Steps.
Irving 4.	Ramona.
Scott 3.	Titus, a Comrade of the Cross.
Ben Hur 3.	Face Illumined.
Stowe, H. B. 3.	My Desire.
Life of Washington 3.	Oliver Optic's Books.
Silas Marner 3.	Conciliation (Burke).
Shakespeare 3.	Stories in Youth's Companion.
Evangeline 2.	Quo Vadis.
Milton 2.	Pearl's Sight.
Little Women.	Lucile.
Ruskin 2.	One Day's Weaving.
Emerson 2.	King's Treasures.
Thanatopsis 2.	John Halifax.
Macaulay 2.	French Fairy Tales.
The Elsie Books 2.	Roderigue Althohugui.
David Copperfield 2.	Last of the Mohicans.
Tale of Two Cities 2.	Elsie Dinsmore Books.
Hawthorne.	Mill on the Floss.
Eliot 2.	Pepper Books.
Ivanhoe 2.	Each and All.
Kenilworth 2.	Annabel Lee.
Great Orations 2.	Wreck of the Hesperus.
Burroughs.	The Wide, Wide, World.
Bryant.	Bell of Atri.
Cooper.	Hiawatha.
Carey, Rosa.	Lady of the Lake.
Evans, Mrs.	Pilgrim's Progress.
Ingelow, Jean.	Christmas Carol.
Macaulay.	Man Without a Country.
Meade.	Algiers.
Proctor, Adelaide.	Sunday School Books.
Roe, E. P.	Pansy Books.
Stephenson.	Bible.
Spencer.	Last Days of Pompeii.
Sheldon, Charles.	Scottish Chiefs.
Thoreau.	Vanity Fair.
Verne, Jules.	Burial of Moses.
Whittier.	Choir Invisible.
Wordsworth.	Romola.
Pillars of the House.	Macbeth.

CONCLUSIONS.

It is quite evident that the number of returns to this inquiry is not large enough to warrant any authoritative conclusions, yet the results are of sufficient importance to permit us to point out some inferences which they suggest.

In the study on word-interests it is probably difficult to separate the two lists of words. Many, if not all of the words in the first list, are undoubtedly liked on account of some quality

of sound or form. The length of the word may also play an important part since many of the words are of more than average length, and a few returns specified that they liked long words. The rhythm of a word is undoubtedly also an important factor. "Beautiful" is given by 10, and "pretty" by 4 in List I, and by 6 and 5 respectively in List II. This would indicate that the idea connected with the word is an influencing factor. But what the essential characteristic is that makes one word appeal more to the child than another is difficult to determine. It may be a letter or combination of letters; it may be the rhythm or the tonal effect of the whole word; it may be the form of the word; or it may be the idea with which the word is connected. In inquiry No. 3, however, the emphasis being placed on the sound and the form, the idea with which the word is connected is less prominent, though it may be impossible to rule it out altogether. It is very decidedly shown here that the ear plays a greater part than the eye. The per cent. of cases that like words on account of sound is more than twice the per cent. that like words on account of form; and the number of words given in the former case is more than three times the number given in the latter.

These results are of interest to the teacher of English. It is a recognized pedagogical principle that in teaching we should appeal to the different kinds of memory in order to attain the best results, the only question being which should have the greater prominence. From these results it would appear that oral work in English should have a very prominent place in our school curricula in order not to rob the child of the pleasure it finds in the music of the spoken language, and in order not to waste the impetus that this pleasure may give toward mastering the mother tongue. And since much writing for the child is unhygienic at best, it might well be reduced to a minimum, especially in the earlier school years when it is most hurtful.

Moreover, we need not force the mother tongue into a child. That is not the way the race has learned language. The reason that a child needs a slow grind and a dry cram to learn its own tongue is unnatural; it is, probably, because no advantage has been taken of the child's impulses and interests at the proper time. The word that the child learns spontaneously by the auditory method is still fresh in the mind when the formally assigned words have long been forgotten. The permanent interest of the child does not lie with words that it knows only as buried in books and in dictionaries. They are not the vehicles of its thought. It wants to have living words that come in at the ear and flow out at the tongue.

The efforts to increase the vocabulary by studying the dic-

tionary are manifestations of a desire for a greater variety of words and a larger means of expression. Of the 25 that studied the dictionary, 21 were less than 13 and 4 more than 13 years of age. In the returns to word interests no definite age was given but the replies referred mainly to childhood, though some retained their liking for certain pet words into later adolescence. It would seem, therefore, that the word interest of the child is before adolescence mainly. This, then, would be the time for the child to increase its vocabulary by hearing and using orally a variety of words. The adolescent is interested in larger wholes. If he has any liking it is not in isolated words but in pet sentences and paragraphs which contain a large idea. And these phrases are often repeated over and over again, again suggesting that those features of the mother tongue which can be developed only through oral expression appeal strongly to the youth.

The several curves rise rapidly in early adolescence and fall after fourteen. It has been well said that adolescence is the focal point of all psychology. It is the point where child psychology ends and adult psychology begins. It is a period of great psychic activity. It is the time of awakening of self consciousness. It is a period of emotional extremes; the youth oscillates between cheerfulness and despondency, laziness and ambitious zeal, sensitive primness and reckless carelessness. New ideas and new feelings press in upon the soul to such a degree that the youth is at a loss how to react to his impressions. He uses a superabundance of intensive quality words to express his feelings; it is not very, but perfectly, awfully, terribly, hideously; not beautiful, but surpassingly, charmingly, exquisitely beautiful; not pleasant, but perfectly delightful; not unpleasant, but perfectly hideous. He has a fondness for poetry to express his emotional life. He commits to memory pet phrases to which his feelings respond. He is stimulated by quotations of altruism and self-reliance, but finds solace in expressions of gloom and despondency when his feelings swing to the opposite extreme. Now he pleases himself with sententious expressions of wisdom, and now enjoys the most commonplace nonsense. Now he will use his slang profusely and with effect and again he will be dumb, yet in imagination lord it over the crowned heads of Europe. One day he will be reckless in speech and in attire, only to be committing poetry the next in order to be prim and elegant, and may even hesitate to sit down for fear of crumpling the dress.

The ordinary conventional modes of expression are not sufficient for the adolescent. He must either find a means of expression adapted to his needs or be silent. The genetic psychologist says if the youth is in need of a means of expression

which the rules of our English do not supply, let him supply that need if he can.

The teacher of English, on the other hand, objects to any expression that does violence to well established forms. But whether slang can thus summarily be condemned without a hearing may well be questioned. Walt Whitman¹ says, slang is "an attempt of common humanity to escape from bald literalism, and express itself illimitably, which in highest walks produces poets and poems." Again he says, "Daring as it is to say so, in the growth of language it is certain that the retrospect of slang from the start would be the recalling from their nebulous conditions of all that is poetical in the stores of human utterance." It may well be asked why the needs and tastes of people 100—yes 1,000 years ago should absolutely control our needs and tastes to-day, any more than that the laws and customs of that time should govern us now. Lowell² says: "There is death in the dictionary; and where language is too strictly limited by convention, the ground for expression to grow is limited also; and we get a potted literature, Chinese dwarfs instead of healthy trees."

During vigorous life of the animal organism old cells are breaking down and new cells are being formed constantly; if the latter process fails the body dies. So it is with our language; old expressions become obsolete and new expressions enter to serve new functions, and slang to a large degree supplies this want. It is the feeder of the vocabulary. It is the training ground for new expressions. It is idiom in the course of formation. Prof. Matthews quotes Lounsbury as follows: "Slang is an effort on the part of the users of language to say something more vividly, strongly, concisely, than the language existing permits it to be said. It is the source from which the decaying energies of speech are constantly refreshed." Here an authority on the history of English says exactly what so many of these returns say.

It is not the aim here to defend vicious expressions, neither would any of the authorities quoted do so. Such expressions cannot live. Their very weakness will cause them to be rejected long before they can do any serious harm to the language. And any expression that has the vitality to live, shows by its very survival that it fills a need. The people have the final decision in the matter as to what is good and what is bad and the youth can be taught to apply his discrimination as to good and bad to slang as well as to anything else, but to rob him entirely of his peculiar mode of expression just when he is

¹N. Am. Rev., Vol. CXXI, pp. 431.

²Introduction to Bigelow Papers, Second Series.

in greatest need of it, is wrong. Indeed, he will continue to use his slang in preference to conventional circumlocution, notwithstanding the objections of the teachers of formal grammar and rhetoric.

"Would n't that jar you;" "Down in front;" "Give us a rest;" "You are not the only pebble on the beach," and many others. What is there wrong with the English of these? If one should feel offended at them, the youth would call him a *lobster*. "Gee whizz" and "nit" may never become good English, but they are as laconic as "veni, vidi, vici." It is true, much of the slang in this list is unpolished, but it is out of such raw material that our English draws its beauty and its virility. Emerson says, slang is language in the making. He says it represents original force. And we might add that out of this original force develop some of our best and most expressive figures of speech.

We see, moreover, from the long list of expressions given, that the youth's slang, to a large degree, is self-corrective. "It is an effective school of moral sentiment." The list of words and expressions classed as mild oaths are better than swearing itself. They reduce the great mass of profanity. They are the safety valve for the escape of feeling, often, before the intensity requisite for an oath is reached. Again, a great many of the pet phrases simply show the youth's natural liking for superlatives, which is not bad in itself; but, above all, we should note the great number that so effectively rebuke excessive self-esteem and so keenly set off untruthfulness. Some of them are on a par with our most common proverbs. These expressions need not disturb us as to the effect on the character of the youth. They are sanifying; they are the youth's own invention to correct his own short-comings. We may safely let them encourage one another to "come down a peg," and to "take off their hats and show their corners," so it only be their own spontaneous activity. They will, of their own accord, finally "ring off," "come off their perch," "go back and sit down," realizing that they are not "the only pebble on the beach."

In order to attain a healthy and full-grown maturity, a child should live out completely each stage of its development. If the child seeks a larger means of expressing its increased emotional life, it should not be required to do so in too narrow conventional terms. The youth, as a rule, despises convention and etiquette. He expresses his feelings and ideas in a manner best adapted to his needs—and here he has such illustrious examples as Shakespeare and Goethe. The English language as it is may meet our adult needs, it may satisfy the

adolescent's adult needs later, but the shades of the prison house need not be forced upon the growing boy.

Interest in the story manifests itself very early in childhood. Beginning at 5 there is an almost constant increase till 12 and 13 in telling stories. There is a sudden drop at 14, which, compared with the reading craze curve, would indicate that the adolescent is more interested in receiving than in telling. The fact that children have strong auditory word interests, and that they like to tell stories, has great pedagogical significance. It suggests that the natural method for the child to learn language is by the short circuit from the ear to the tongue, as President Hall says; that the story is the great means not only to enrich the child's mind, but also to increase his vocabulary and to cultivate good expression. It is, undoubtedly, a far better method than the language book and language tablet method which has form but no interesting content. Samuel Thurber¹ well says he would have no language books in the school. He thinks all that is necessary is that the child have something to say and that the teacher help him say it. What more is there needed?

The kind of story children tell throws much light on the life of the child. We see that fairy stories lead by a considerable margin. The preferences for stories about children, about animals, about ghosts, and about heroism and adventure, are nearly equal. This is of pedagogic value for those who select stories for children. That among the subjects for spontaneous poetry *children and nature* are favorites is also suggestive, but the concrete examples are too few to draw inferences. Furthermore, eleven cases stated that they liked to tell stories in the dark or at night, though this point was not asked for. This may be a relic from the campfires of our ancestors. Every home should have an old-fashioned open fire-place, so that this story telling instinct can be lived out ideally and completely. The boy who, with his companions, has not sat around the glowing fire of the brush heap in the woods, in the warm evenings of spring, telling stories, has missed some of the most beautiful poetry of his young life.

The question often arises on what topics should high school children be asked to write compositions. Much of the composition work at the present time is based on books or chapters of books read, partly due, maybe, to the college entrance requirements in English. The returns indicate that pupils prefer to write about incidents and events of interest in their own life; this is all the more noteworthy when one considers that these replies were given contrary to the prevailing practice of

¹ Sch. Rev., March, 1903.

teaching composition. One of the returns hits the point in saying, "it makes one feel awkward to write about a thing about which one knows that the teacher already knows more than one does himself." In writing a composition the pupil wants to say something to somebody. If he writes about things that he has seen, or heard, or experienced, he gives information at first hand, and that is, undoubtedly, what makes that sort of composition work preferable to mere drill for the sake of good form. A considerable number preferred to read up on a subject before writing, but they all read for information. To write a critical essay does not appeal to the youth; neither is paraphrasing an interesting subject. 8% preferred to write imaginary stories; and composition work may well be made individual enough to allow this interest to develop properly.

Another point was suggested in this connection. As was stated before, many of the returns said, either directly or indirectly, that they did not like composition work. The large per cent of negative replies in question 12 is in harmony with this; one does not care to imitate an author if one hates composition work. The sudden falling off of the story-telling interest after 13 and the rise of the reading craze curve at 14 is also significant here. All these results suggest, as stated before, that the adolescent has his interests in impression and not in expression. An individual, in order to express himself well, must be familiar with his subject and have his knowledge well organized. The adolescent with a high school course that presents a mass of facts quite different from those he was accustomed to in the elementary grades; with a new realization of self; with a new awakening of his emotional life; with a larger world suddenly opening before him, is not anxious to express himself. He seems to need a few years of orientation before he is at home again in his new environment.

The list of books given as being calculated to do special good to individuals at a certain age is composed to a large extent of books not considered classic. This would indicate that the youth should have a liberal choice of books to select his reading from, and should not be limited to books which are found to be the best for adult minds. Many of these books, evidently, were never prescribed, and they were certainly not considered superior because they appealed to the critical faculty of man. They did good because they fed a soul that was starving and thirsting for nourishment. The objection may be raised that some of these books ought not to make such a deep impression upon the youth, but who would not hesitate to be the judge? By disregarding the likes and dislikes, and the needs of adolescence in our teaching, we are inviting failure. A narrowly

prescribed course in English reading should be rejected until we understand the spiritual needs of adolescence. The course should be adapted to the youth and not to a logical, literary formula laid down by the critic. For this reason studies in this direction should have great pedagogical value.

In conclusion, I wish to express my great indebtedness to President Hall for generously placing at my disposal the valuable material he had collected, and for helpful suggestions in preparing this paper.

THE QUESTIONNAIRE METHOD IN GENETIC PSYCHOLOGY.

By THEODATE L. SMITH.

Many criticisms have been brought against the questionnaire method by its opponents and some extravagant claims have been made for it by too enthusiastic supporters, but the best test of a method is in its results, and, after nine years of trial of the method as used at Clark University, some definite facts may be stated both in regard to its value as an instrument of research, and its educational influence upon those answering the syllabi. Some of the criticisms which have been brought against it are that the material gathered by the questionnaire is unreliable, that it is full of inaccuracies, and reflects the suggestions contained in the syllabus rather than furnishing a true expression of the writer's own thought. In a measure this is true, and much material has to be rejected on this account, but neither of these difficulties has proved an insuperable obstacle. That suggestions are always necessarily a source of danger has been disproven by the facts, since it has repeatedly happened in cases where the questionnaire was properly presented that the suggestions contained in it were almost completely negated, and answers quite different from those expected were given. The first criticism must be met, in part, by care in the construction of the syllabus, and the second, by intelligent co-operation on the part of those collecting and collating the data. Upon this, much depends. A syllabus submitted to either children or adolescents without direction, explanation of its purpose, or discussion of its topics, is not likely to result in the accumulation of valuable data. There may be a wealth of dormant associations, which, aroused by discussion, might prove fruitful of good results, but which is lost through lack of proper presentation of the subject. The first point to be impressed upon those answering the syllabi is the necessity for absolute truthfulness in thought and expression. Facts which can be definitely stated as facts, and the writer's own observations, should be sharply distinguished from vague reminiscences and hearsay evidence. These latter may, in some cases, have a value, but it depends upon their being recognized for what they really represent. The teacher, or whoever takes charge of collecting the data, should make sure

that the questions are thoroughly understood and the interest of the class aroused by discussion of them in all their aspects. The aim should be to encourage independent thinking and careful observation. Miss Williams, of the Trenton, New Jersey Normal School, who is an expert in collecting data,¹ and who has contributed valuable returns to the University from the beginning of the movement, lays great stress upon the value of the process of dictation in presenting the questionnaire, having found by practical experience that the impression thus made upon the minds of the pupils is much deeper than when the syllabus is simply copied or read by them.

Miss Williams states that she uses the Clark University syllabi in three ways: First, when they originally come to hand, by presenting them to the class as an exercise, and, whenever possible, in connection with the topic which they have been studying; for instance, syllabi relating to animals and plants are taken up in connection with the subject of natural interests as a basis for school work and, similarly, syllabi which demand introspection are taken up in connection with related topics. Secondly, old syllabi are used to stimulate thought in the class even when no direct use is made of the returns. Thirdly, Miss Williams finds the syllabi of great use in the preparation of special themes, frequently upon subjects which are not taken up in class but which "stimulate thought and open lines which, without them, would never have been thought of." She mentions that some which have proved very helpful in this way are *Hydropsychoses*, *Luck and Chance*, *Pity*, *Unselfishness*, *The Teaching Instinct*, *Fears*, *Anger*, *Social Organization*, *Interest in Reading* and *Interest in Language*. Another successful collector of data, Dr. Margaret K. Smith, of the New Paltz, New York Normal School, also ascribes a high educational value to the questionnaire method. In regard to the Clark University questionnaires she makes the following statement: "I have used many of the questionnaires which Dr. Hall has sent me from time to time as examination tests for my students in psychology and pedagogy. I have found them admirably adapted to this purpose. They brought out the original power of my pupils." Apart from the University syllabi, Dr. Smith uses questionnaires in two ways: First, as a means of outlining difficult chapters in psychology and pedagogy, the pupil taking the questionnaire home and reading the chapter in connection with it. A second set of questions, compiled from a different point of view is then used to stimulate discussion in class. A second method of

¹For fuller account of Miss Williams's methods see *Ped. Sem.*, June, 1896, Vol. III, pp. 419-423.

using the questionnaire is to prepare a set of questions logically connected so that the answers will develop the whole subject, and this has proved an efficient aid in training the pupils in logical thinking.

If teachers of wide and successful experience can thus write of the practical benefits and value of the questionnaire, something may certainly be claimed for it as an educational factor apart from its value as a method of scientific research. As a means of training for those who are to be teachers, the questionnaire method in genetic psychology offers an effective instrument in developing interest and a right attitude toward their chosen work. Metaphysical speculations concerning the development of the human mind have little value for average normal school pupils. They need, most of all, a knowledge of such facts as can be gathered through careful observation of children, and the reminiscent introspection, which invariably has a tendency to put them in a sympathetic attitude toward children; and practical tests have proved that for accomplishing these ends the questionnaire is admirably adapted.

Another criticism frequently made is that, even when the questionnaire has been properly presented and the data are fairly reliable, cross sections, as it were, from many minds cannot give an account of continuous mental processes and show the phases by which one stage develops into another; that statistical methods are of little value in psychology, because generalizations from an average based upon a thousand children cannot be applied to any particular child, since the individual range of development is too great, and a child of five and one of eight, may be at the same stage of development in some particular line. It is true that the questionnaire method does not possess the advantage of the individual biographies in tracing continuous mental processes, and must be supplemented by them, and that it is not possible to state from its generalizations that any individual child will, at a definite age, have reached a certain stage of development. But neither is that possible by any other method, and the questionnaire method has certainly never made any such claim. Because it does not possess all the advantages of other methods is no argument that it has not advantages peculiarly its own. It is a method to be carefully used, and its results interpreted by those whose scientific training has been wide enough to judge the material and make use of whatever in it has true psychological significance and connection. Sometimes this does not lie in the direct answers to the questions but in unconscious revelations made by the writers in discussing the topics of the syllabus. In many, perhaps most subjects, the chief value is qualitative, and not statistical. The particular ages at which several hundred

children may be interested in plants, animals, or mechanical problems, may have a practical pedagogical application, but of vastly greater importance is the child's mental attitude towards these things, and the stages by which his interest develops, which are quite independent of the actual age. And this the questionnaire method properly used, *i. e.*, restricted to its proper field and its data properly collected and collated, can and does give. It cannot solve detailed and individual problems; it makes no claim to be considered the sole method of genetic psychology and must be supplemented by laboratory and biographical studies and must call to its aid introspection and comparative psychology; but it does give a vast body of observations obtainable in no other way, much valuable qualitative material and some statistical results, especially in pedagogical problems, that have already demonstrated their value. By the host of problems which it suggests it has infused new life and given stimulus to the older methods. Before the advent of the questionnaire method, genetic psychology was restricted to a narrow field, and it is not, perhaps, claiming too much, to say that up to the present time it has made more valuable contributions to this than any other method.

It is a method which can be used in the comparatively new fields of ethnic and social psychology, more effectively, perhaps, than any other. It has already proved itself of the greatest service in the study of adolescence and of criminology, in many pedagogical problems, especially those in the department of hygiene, and in the psychology of religion.

It has been misused by those, who, with no scientific training have essayed to use it in complete ignorance of the rigorous and painstaking processes to which the data must be subjected, and it has required experiment to find its best applications and true value, but, though like other methods, it did not spring into existence as a well developed and perfected instrument of research, and has had to grope its way and learn by its errors, it has survived the torrent of criticism poured upon it and is steadily vindicating itself as a scientific method within its own sphere. Child study, the field in which it has proved most effective, has made psychology a living thing, brought it in vital relation with the practical problems of life, has taken it from the region of abstract thinking, and brought it into touch with moral, religious, and social problems. On the educational side it has proved its value as a mental stimulus to the student. The syllabi which call for direct observation of children awaken an interest and understanding which is a fundamental necessity for good teaching. They open up new lines of thought and bring out the originality of the pupil if he has any.

As an exercise in English the syllabi can be used with good

advantage, for the necessity of clear thinking and accurate expression of thought upon which the value of the answers depends furnishes an excellent means of training in English composition. Too often the ordinary theme is an elaborate effort to express trivial or second-hand ideas in which the writer has no interest, while the questionnaire demands, first of all, vigorous thinking and then its clear expression.

Frequently it clears up mental haziness on the part of students and gives a well defined conception of the subject in place of vague, general ideas. It gives to the student training in introspection, enables him to better understand his own mental processes, and, above all, makes him think for himself. No college or university student, who has ever conscientiously tried to answer a syllabus which demands introspection, will question its value as a means of psychological training, so that the questionnaire method may lay claim to recognition, not only as a method of scientific research, but as an effective aid in teaching psychology.

BOOK NOTES.

Laura Bridgman. Dr. Howe's Famous Pupil and What He Taught Her, by MAUDE HOWE and FLORENCE HALL. Little, Brown and Co., Boston, 1903. pp. 394.

In this volume is now presented to the general public for the first time a full and connected account of Dr. Howe's great achievement in the education of Laura Bridgman. The steps of the process by which the mind of a child, deaf, blind, and defective in the senses of both taste and smell was reached and brought into communication with her fellow beings are faithfully portrayed and the book will be appreciated not only by all who are interested in the problem of the education of the deaf and blind, but by the general reader. It is a memorial to Dr. Howe as well as a life of Laura Bridgman in so far as this relates to his public work which, though most widely known in connection with Laura Bridgman since in her case he demonstrated for the first time the possibility of educating those who had suffered the double deprivation of sight and hearing, embraced many other philanthropic movements. In Dr. Howe the afflicted and oppressed found always a ready champion, and the story of his life is one of devotion to humanitarian and philanthropic activity. To his efforts were due the establishment of the first American School for the blind, many appliances and improvements for teaching them, the introduction into the United States of printing in raised type for the blind, and it was through his exertions that the first experiments in the instruction of idiotic and feeble minded children were made in this country. The material for the book has been drawn from Dr. Howe's "Reports of the Perkins Institution for the Blind," the journals kept by her teachers, her own diaries and the personal reminiscences of the authors. An appendix contains an introductory note by President G. Stanley Hall and extracts from an interesting article by Professor E. C. Sanford, giving the psychological analysis of Laura's mental condition in so far as this could be made out from her literary compositions. There is a brief mention of Helen Keller, whose name is inseparably linked with that of Laura Bridgman. It adds to the interest of both books that the publication of "Laura Bridgman" should so closely follow that of Helen Keller's "Story of My Life," for though other deaf and blind children have been educated since Dr. Howe by his devoted pioneer work proved the possibility, these two stand together, the one a demonstration of Dr. Howe's hope that the human mind might be reached through one sense alone, the other a fulfillment far beyond Dr. Howe's highest expectations, even after the success of his experiment was demonstrated. Though, owing to Laura Bridgman's delicate health and other limitations Dr. Howe did not realize all that he hoped for in her case, it has been more than fulfilled in Helen Keller whose achievements, impossible without the foundation laid by Dr. Howe, have far exceeded his most enthusiastic dream of possibilities. Yet those who know Miss Keller and her teacher, Miss Sullivan, will hardly assent to the statement that "Helen Keller's early education was conducted on the same lines as Laura's. The means of communication were discovered by Dr. Howe and Miss Sullivan has builded upon his foundation, but her method of teaching language to her pupil is her own and differs fundamentally in principle from that used by Dr. Howe. Laura Bridgman was painstakingly taught

the meaning of each word as it was given to her, and Dr. Howe believed in the necessity of this. To the end of her life her English was a quaint, syncopated language, containing errors of both vocabulary and syntax. The essence of Miss Sullivan's method is best given in her own words, contained in personal letters written during the progress of her work. "I spell into her hand all day long although she has no idea as yet what the spelling means. I have decided not to have any regular lessons with Helen for the present. I am going to treat Helen exactly like a two year old child. It occurred to me the other day that it is absurd to require a child to come to a certain place at a certain time and recite lessons when he has not yet acquired a working vocabulary. I shall talk into her hand as we talk into the baby's ears. *I shall use complete sentences in talking to her* and fill out the meaning with gestures and descriptive signs when necessity requires it." At a later date, when the success of her method had been fully demonstrated, she writes: "It is not necessary that a child should understand every word of a book before he can read with pleasure. Helen drank in language which she at first could not understand, and it remained in her mind until needed, when it fitted itself naturally and easily into her conversation and compositions." Miss Keller's English, as a result of this method, differs from that of other educated people only in its unusual purity and correctness. That Miss Sullivan has had an unusually gifted pupil and many advantages which it was impossible to procure for Laura Bridgman is undoubtedly true but something must be granted to the method and genius of a teacher, which has enabled, for the first time in the history of the world, a child deprived of sight and hearing since she was eighteen months old, to take her place among other college girls, and at the age of twenty-three become a senior in the regular course at Radcliffe College. It is rare that in one season two books so full of human and psychological interest have been published, as "Laura Bridgman" and Helen Keller's "Story of My Life." The student will, of course, still refer to Dr. Howe's original reports, but even by those who are familiar with these, the present volume, which gives the story of Dr. Howe's achievement with Laura Bridgman in its relation to his other labors for humanity, will be read with more than ordinary interest.

THEODATE L. SMITH.

Beobachtungen über das Anschauungsvermögen der Kinder., von L. MAURER. (Zeits. f. Päd. Psychologie, Pathologie und Hygiene.)

In this interesting article the author showed eight pictures to a child of three and one-half years in July and again in October and December, and its utterances concerning these pictures were immediately written down. In July, these expressions contained thirty-two nouns; in October, fifty-eight; in December, seventy-five. These were subdivided into persons, parts of the body, dress, building, food, implements, animals and objects in nature. The utterances were also studied as expressions or rudimentary sentences, which also grew in number with age. Adjectives, number words, incomplete and finished sentences, nouns in the objective case, two successive and connected sentences, negative words, gestures which diminished with age, errors, pronouns, infinitives, and those indicating moral feeling are also made the themes of special paragraphs. The results of an analogous method are promised on children of school age from five to thirteen.

The Mental Traits of Sex, by HELEN BRADFORD THOMPSON. University of Chicago Press, Chicago, 1903. pp. 188.

This study is largely based on the author's own experimental determinations and treats in different chapters of the comparison of sexes

in motor ability, skin and muscle senses, taste and smell, hearing, vision, intellectual faculties, and affective processes.

The Paidologist. July, 1903. Cheltenham, England.

This is distinctly the best number published by the British Child Study Association. The leading paper is a lecture by Dr. Clouston on child study. This is followed by a valuable article on the preparation for it by Dr. C. W. Kimmins. Miss Louch has a very interesting practical paper on adolescence, and others are upon the mentally defective child, the origin of canon in music, the appreciation of number, real education, and ambidexterity. The book notices are less than usual. It is quite plain from the many branches of this association that, as Dr. Kimmins says, "we are quite justified in assuming that what is known as child study has taken firm root in England, and that for good or ill it has come to stay."

Fundamentals of Child Study. A discussion of instincts and other factors in human development with practical applications, by EDWIN A. KIRKPATRICK. The Macmillan Co., New York, 1903. pp. 384. \$1.25.

The author treats of the nature and scope of child study, then of physical and motor growth, of instincts of various kinds, of the development of intellect, heredity, individuality, abnormalities, etc. It is a helpful book, but it is greatly to be regretted that in so many cases the writer has not availed himself of material at hand and has generalized and philosophized rather than taken pains to present established facts and let them speak for themselves. Even the literature he cites, is in many cases entirely unused in the text. Indeed it never was more apparent that the child study movement has outgrown treatment as a whole by any one, and in its most vital departments has also outgrown treatment by any but experts.

Memoirs of a Child, by ANNIE STEGER WINSTON. Longmans, Green & Co., New York, 1903. pp. 169.

The unique feature of this book is the admirable sympathy and insight of the author, who has evidently succeeded in conserving in her own nature to a remarkable degree the freshness and intuitive naïveté of childhood. It seems to be based partly upon her own recollections and partly upon careful and sympathetic observation, the former element predominating. While few important new truths are brought out in any great prominence, the book has a very rare quality of suggestiveness and can be heartily commended to teachers and perhaps especially to mothers.

The Individual Child and His Education. Practical studies in education made in the Passaic public schools. Issued quarterly by F. A. Owen Publishing Co., Dansville, N. Y., 1903. pp. 59.

This new serial comprises practical studies in education made in the Passaic public schools. Practical methods and fruitful lines of observation are described and this first number might be called an incentive and general guide for observation of individual children.

Representative English Comedies, edited by Charles Mills Gayley. The Macmillan Co., New York, 1903. pp. 686. Price, \$1.50.

The topics especially treated, each by a different author, are: John Hayward, Nicholas Udall, William Stevenson, John Lyly, George Peele, Greene's place in comedy, Robert Greene, Henry Porter, Shakespeare as a comic dramatist, an historical review of the beginnings of English comedy. Very copious extracts and illustrations constitute a good part of the book.

The Story of the Greatest Nations from the Dawn of History to the Twentieth Century, by EDWARD S. ELLIS and CHARLES F. HORNE. Parts 57 to 73 inclusive. Price, 25 cents each. F. R. Niglutsch, New York.

These seventeen parts complete what has certainly been a very expensive universal history. It is based upon the idea that, especially for the young, history is most effectively taught by copious illustrations, including those by standard artists and those which illustrate the most important scenes and events and bring individualities clearly before the reader. Perhaps about one-half of this entire work consists of full page illustrations on heavy calendered paper. This of itself makes the work entirely unique, and when we consider that each of the seventy-three parts costs but twenty-five cents, it is really a model of cheapness. We have no hesitation in giving it our own most hearty commendation for both grammar and high school grades, and in expressing the opinion that a copy of it should be in every schoolroom.

Les Combattants Français de la Guerre Américaine 1778-1783. Paris, 1903. pp. 327.

This magnificent work consists of lists derived from authentic documents deposited in the national archives of the Minister of War in France, and is published under the direction of the Minister of Foreign Affairs. It has a number of full page illustrations and is certainly a monument of library skill, which will no doubt be of high value to the historian.

The Possibility of a Science of Education, by SAMUEL B. SINCLAIR. University of Chicago Press, Chicago, 1903. pp. 126.

After considering the empirical objection, the writer proceeds to the dynamic conception of science and of education, then discusses educational aims and means, the psychological factor of educational science, and the technique of educational science. We must say this work seems somewhat abstract and unpractical, although the author shows familiarity with much of the best recent literature.

Music Education. An Outline, by CALVIN BRAINERD CADY. (Second Book.) Clayton F. Summy Co., Chicago, 1903. pp. 145.

The material of all this book is the child's own work, most of which was developed in the schoolroom. First come original poems by children of from six years on, then original melodies from children of three and a half on. The author gives poetic motives. Then come melodic and song conceptions to develop both voice and hand. Songs without words follow, then melodies which are first learned, then written. Technical studies follow, and finally comes a bibliography. It is impossible in the space at our command to give any adequate conception of this fascinating and novel book.

The Corona Song Book. A choice collection of choruses designed for the use of high schools, grammar schools, academies and seminaries, by WILLIAM C. HOFF. Ginn & Co., Boston, 1903. pp. 362. \$1.00.

The author's good sense and taste, as well as his true musical quality, are well known and are a sufficient guarantee for the efficiency of this book.

School Music Monthly. The Supervisors' Magazine. Keokuk, Iowa.

The files of this journal, which is addressed largely to supervisors, present an excellent picture of the condition and recent progress of musical education in the public schools of this country.

The Geology of Worcester, by JOSEPH H. PERRY and BENJAMIN K. EMERSON. Worcester Natural History Society, Worcester, Mass., 1903. pp. 166.

This book supplies a long felt local need. It first treats Worcester phyllite and micaschist; the second chapter is devoted to quartzite; three, Millstone Hill; four, molten gneiss; five, Shrewsbury Dike; six, Ballard Field; seven, Paxton and Brimfield schists; with finally the general geology of Worcester.

Geographic Influences in American History, by ALBERT PERRY BRIGHAM. Ginn & Co., Boston, 1903. pp. 366. \$1.25.

This suggestive, interesting, and essentially new book with its seventy-two cuts treats of the Eastern Gateway of the United States, shore line and hill top in New England, the Appalachian barrier, Great Lakes and commerce, prairie country, cotton, rice and cane, Civil War, where little rain falls, mountain, mine and forest, from the Golden Gate to Puget Sound, geography and American destiny. History and geography belong together and this with its cuts and fifteen maps attempts to wed them.

Agriculture for Beginners, by CHARLES W. BURKETT, FRANK L. STEVENS and DANIEL H. HILL. Ginn and Co., Boston, 1903. pp. 267.

This little book has a chapter each upon the soil, its relations to plants, how to raise a fruit tree, the diseases of plants, orchard, garden and field insects, farm crops, domestic animals and farm dairying. There are many illustrations, and the book itself is admirable and right in the line of the best and newest educational tendencies.

The Jones First, Second, Third, Fourth and Fifth Reader, by L. H. JONES. Ginn and Co., Boston, 1903.

We here have a full set of readers from the first up to the eighth year in school. It is not intended to furnish all the reading matter needed in these grades. The first reader gives a prominent place to nature study and is adapted to each or all of the modern methods of teaching beginners. The material of the second reader is mainly drawn from fields of thought and action of interest to children of that age. The selections in the third reader have much reference to effective reading and delivery. The fourth reader begins to make the transition to literature and has special reference to bridging for the child the chasm of those forms of thought familiar to the child and those appropriate to youth. Many selections from larger works are made with the design of turning pupils' interest to these, and moral bearings of the content are given special prominence. In the fifth reader noble, daring, heroic action based upon high motives and ambitions is prominent. Many selections are taken from very recent authors. The type and form of page in all are admirable.

Interpretative Forms of Literature, by EMILY M. BISHOP. New York, 1903. pp. 203.

This treats of common errors in reading, the right approach to literature, classification, interpretative forms and their treatment, gestures, and reading in our public schools,—all with many interesting illustrations.

Provincial Types in American Fiction, by HORACE SPENCER FISKE. The Chautauqua Press, New York, 1903. pp. 264.

Provincial types in New England, in the South, in the Mississippi Valley and in the far West are the groups about which interesting digests of recent popular literature are made to fall.

Vocal and Literary Interpretation of the Bible, by S. S. CURRY. The Macmillan Co., New York, 1903. pp. 384.

In the first part the problem is stated; the second is the message or spirit; third, the technique; fourth, preparation and the service. This is an attempt, as Professor F. G. Peabody says in his introduction, to teach those entering the Christian ministry how to read the Bible.

Stories from the Hebrew, by JOSEPHINE W. HEERMANS. Silver, Burdett and Co., New York, 1903. pp. 178.

This book is designed for supplementary reading. It is based on experience and no attempt is made to explain the meanings. The biblical phraseology is observed as far as possible. There are fourteen full page illustrations and thirty stories, with a number of poetic versions interspersed.

Manual for Teachers on Old Testament Lessons, by FREDERICA BEARD. The Winona Publishing Co., Chicago, 1903. pp. 139.

Teachers' Notes on Wonder Stories from the Gospels, by FREDERICA BEARD. The Winona Publishing Co., Chicago, 1903. pp. 68.

Wonder Stories from the Gospels, arranged by FREDERICA BEARD. The Winona Publishing Co., Chicago, 1903. pp. 80.

These three booklets represent an attempt to reduce the Bible to the simple language and intelligence of young children. They contain interesting, new and suggestive features.

Moral Drill for the School Room, being a short treatise on Elementary Ethics, taking the Ten Commandments as the Fundamental Principles, by J. M. HARPER. E. L. Kellogg & Co., New York, 1903. pp. 120.

This is a unique and interesting work by an able and enthusiastic leader in education in Canada. Virtues and vices are schematized in a chart and reduced to a drill. All is based upon the Ten Commandments which are given a broad interpretation, and everything is made as objective as possible.

Elementary Rational Speller. A Speller for Primary and Lower Grammar Grades, by G. E. JOHNSON. Benj. H. Sanborn and Co., Boston, 1904. pp. 69.

One interesting feature of this book is that its word list was made after careful record of their most frequent occurrence in representative school books, vocabularies of twenty-two children from two to five, and school papers of children in primary and grammar grades.

John Adams and Daniel Webster as Schoolmasters, by ELIZABETH PORTER GOULD. Introduction by the Hon. Charles Francis Adams. The Palmer Company, Boston, 1903. pp. 94. \$1.00.

This attractive booklet describes with a number of illustrations the brief experiences of Webster and Adams in the schoolroom. The general result of these records suggests the great practical educational value of school teaching for those entering public life.

A New School Management, by LEVI SEELEY. Hinds & Noble, New York, 1903. pp. 329. \$1.25.

This book carefully avoids giving the reader any clue to whether it is a new or an old book. It treats of the teacher's personality, preparation, first day in school, government, punishment, morals, incentives, promotion, recitation, school exterior, interior, and many other topics.

A German International committee of forty Europeans have issued an interesting appeal for the establishment of international congresses

for school health. About one hundred Americans have been especially invited. Those interested can obtain information by addressing Professor Griesbach, Mülhausen (Elsass-Lothringen), Germany.

The city of New York has issued courses of study and syllabi for the elementary schools in nature study and elementary science and geography, geometry, drawing, constructive work, sewing and cooking, ethics, English, history and civics, kindergarten, music, physical training.

The Origin of American State Universities, by ELMER E. BROWN, University of California Publications. Education, April 10, 1903. Vol. 3, pp. 1-45. University Press, Berkeley. Price, 50 cents.

An English Grammar, by S. CLAUDE TICKELL. O. Newmann and Co., London, 1903. pp. 59.

Why do we Teach Gymnastics? By JACOB BOLIN. Gymnastic Papers, Series A, No. 2. New York, pp. 57. Price, 25 cents.

Drawing in High Schools, by HENRY T. BAILEY. Reprinted from the Sixty-sixth Report of the State Board of Education. Boston, 1903. pp. 16.

Paedagogický Vyznam Kreseb Detskych, napsal Frantisek Čáda. V. Praze, 1903. pp. 45.

Laboratory Physics. A student's manual for colleges and scientific schools, by Dayton Clarence Miller. Ginn & Co., Boston, 1903. pp. 404. \$2.00.

Lessons in Physics, by LOTHROP D. HIGGINS. Ginn & Co., Boston, 1903. pp. 379. 90 cts.

Mechanics, Molecular Physics and Heat. A twelve weeks' college course, by ROBERT ANDREWS MILLIKEN. Ginn & Co., Boston, 1903. pp. 242.

Lessons in Astronomy including Uranography. A brief introductory course without Mathematics, by CHARLES A. YOUNG. Ginn & Co., Boston, 1903. pp. 420. \$1.25.

The Odes and Epodes of Horace, by CLEMENT LAWRENCE SMITH. Ginn & Co., Boston, 1903. pp. 443.

Allen and Greenough's New Latin Grammar for Colleges and Schools, edited by J. B. Greenough, A. A. Howard, G. L. Kittredge, Benj. L. D'Ooge. Ginn & Co., Boston, 1903. pp. 490.

Marcus Tullius Cicero. Ten Orations with the Letters to his Wife. (Macmillan's Latin Series.) Edited by Richard Alexander von Minckwitz. The Macmillan Co., London, 1903. pp. 518. \$1.50.

M. Tulli Ciceronis Tusculanarum Disputationium, by FRANK ERNEST ROCKWOOD. Ginn & Co., Boston, 1903.

A Latin Grammar, by WILLIAM GARDNER HALE and CARL DARLING BUCK. Ginn & Co., Boston, 1903. pp. 388. \$1.00.

A French Reader. Arranged for beginners in preparatory schools and colleges, by FRED DAVIS ALDRICH and IRVING LYSANDER FOSTER. Ginn & Co., Boston, 1903. pp. 304. 50 cts.

COMMEMORATIVE NUMBER of *The American Journal of Psychology*, Vol. XIV, Nos. 3-4. July-October, 1903, pp. 1-430, [269-694]. Worcester, Mass., November, 1903.

This *Festschrift* in honor of the twenty-fifth anniversary of the attainment by G. Stanley Hall of the doctorate in Philosophy has neither the ponderosity nor the unevenness which detract from the interest and the value of many German works of the kind; it rises also above the glittering bulk without real depth of not a few French congratulatory tomes. An American scholar and man of science may well be proud of receiving from colleagues and former pupils the tribute of the 26 articles, covering all parts of the psychological field, here presented to the public.

The list of authors and their subjects may be taken to indicate an harmonious inclusiveness, which, however, has been achieved, by no deliberate correlation, but, apparently, by the movement of the spirit of the occasion.

Beaunis: La psychologie du rêve; Bentley: Fusion; Bergström: A new Ergograph; Bolton: Motor Development; Buchner: A Quarter Century of Psychology in America; Burnham: Retroactive Amnesia; Cattell: Statistics of American Psychologists; Chamberlain: Primitive Taste-Words; Dresslar: Are Chromæsthesias Variable? Edgell: Time Judgment; Ellis and Shipe: Fatigue Tests; Hyslop: Binocular Vision and the Problem of Knowledge; Jastrow: The Status of the Subconscious; Kirschmann: Deception and Reality; Kuelpe: Experimentelle Æsthetik; Leuba: The State of Death; Meyer (A.): An Attempt at an Analysis of the Neurotic Constitution; Meyer (M.): Experimental Studies in the Psychology of Music; Motora: Conductivity of the Nervous System; Patrick: The Psychology of Football; Pillsbury: Attention Waves as a Means of Measuring Fatigue; Sanford: On the Guessing of Numbers; Titchener: Class Experiments and Demonstration Apparatus; Washburn: The Genetic Function of Movement and Organic Sensations for Social Consciousness; Whipple: Studies in Pitch Discrimination; Wilson: Bibliography of the Published Writings of President G. Stanley Hall.

Dr. Beaunis holds that the dream has an important and as yet little studied influence upon the psychic phenomena of waking, both in the individual and in the race. In the dream, personality and the highest intellectual elements may appear. The biological evolution of the dream corresponds to the organic and psychological evolution of the individual. To the dream we owe the germ of beliefs in survival after death and the future life, with all their philosophic and religious consequences.

Prof. Kirschmann champions the declaration of Jesus that "the truth shall make you free," believing that "there is nothing unreal in this world except the products of human lying," and "the progress of human perfection depends on the degree to which we succeed in eliminating untruth." For this perfection "positive ideals of education are necessary, not the negative, prophylactic and preventative method."

Prof. Hyslop, in characteristic fashion, discusses the theory of the identity of knowing and being and the effect of the phenomena of binocular vision on the doctrines of Berkeley and Kant.

Prof. Bentley shows how "Herbart's system may fairly be said to express the spirit of modern psychology."

Prof. Washburn argues that "it is through the social action stimula-

ted by the behavior of others that conscious creatures have been led to social interpretation of that behavior." The movement and organic sensations produced by motor reactions of social utility, already on the field before social consciousness develops, are the genetic elements of which we are in search.

Professor Jastrow's interesting paper supports the theory that "from the neural as well as the psychological point of view, a subconscious impression is closely affiliated to, is kith and kin with, the conscious factors of experience." The secret of the unusual is found in the rationale of the common-place—"a common key will unlock the various compartments of the subconscious life."

Dr. Adolf Meyer's analysis of the neurotic constitution is a good, conservative treatment of a difficult topic, the key-note of which is in the statement that "the development of man is not a simultaneous evolution of all the traits of the complete adult, but one function after another comes to maturity, and, as a rule, there is an uneven development,—nobody is perfect in every respect."

Professor Patrick's discussion of the psychological and anthropological aspects of football should be read by every advocate and by every opponent of the strenuous game. For the onlookers, foot-ball is "sport pure and simple," whatever it may be for the players; it is a sort of Aristotelian catharsis, not a mere return to savagery.

Dr. Burnham presents a new theory of retroactive amnesia, based upon the fact that "the memory is lost because it was never fully organized,"—there must be time for nature to do her part.

Professor Leuba gives us a very readable discussion of "the state of death" of the Christian mystics,—the realization in an individual of an ideal in opposition to external influences and to the *primitive man* in himself. To the list of sources of variation must be added *inner adaptation*.

Dr. Chamberlain's study of Algonkian taste-words brings out the chief taste phenomena of primitive people,—there is scarcely any literature at all on this subject.

Miss Edgell's article on time-judgment comes from the laboratory of Prof. Waller at the University of London. The facts brought out by experimentation are that short durations are overestimated, longer durations underestimated; duration does not follow Weber's law. The author is also of opinion that "Ebbinghaus' system of measurement fails to have validity for any aspect of sensation."

Prof. Titchener makes some valuable suggestions about demonstration apparatus and lecture experiments suitable for a beginners' class in psychology, based on the fact that "now psychological instruction centers in the laboratory, rather than in the library."

Dr. Max Meyer treats of the æsthetic effects of final tones, the intonation of musical intervals, and quarter-tone music. The author questions the assumption that "the quarter-tone music of Oriental peoples is based on psychological laws fundamentally different from the laws of our common music."

Prof. Kuelpe, of Würzburg, catalogues the results of experimentation with 28 examples of classical art, unveiled for a few seconds before three subjects. The manifold character of reactions, the material and formal elements, the wealth of significance, etc., are noteworthy. The individual differences are also very suggestive.

In their investigation of the accuracy of fatigue tests Prof. Ellis and Miss Shipe conclude that the methods of testing fatigue now in vogue "are, as used at present, worthless as tests of fatigue, either in children or in adults." Analysis of "fatigue states" is needed to control

future experimentation. This article is a little lacking in seriousness, —at least, the reviewer thought so, when he first read it.

Prof. Bergström's description of the new ergograph perfected by him and his discussion of ergographic experimentation make up the longest article of the series, and his friends will be glad to see his results at last before the psychological public. It is a good piece of work well-described.

Prof. Pillsbury's investigation of attention-waves increases the evidence in hand that the attention waves have a daily rhythm in length analogous to the diurnal change in the rate of most physiological rhythms, such as the pulse and respiratory rhythms.

Dr. Whipple's studies in pitch discrimination deal with a case of "gift" in absolute pitch and a typical case of marked "unmusicalness," both young women. He reaches the conclusion that "it is still an open question, and one worthy of solution, as to whether musical incapacity, especially when discovered in early childhood, may not be remedied by proper training."

Prof. Cattell's article is part of a larger study of American men of science and contains data of real interest and value concerning the fame and possible future estimation of 200 psychologists, whose rank and position have been determined by the opinion of ten of their most prominent colleagues. The groups made up by the first fifty have been specially studied. These investigations seem to indicate that "psychologists are born, not made," a view from which the author was formerly inclined to dissent. The great influence of President Hall and his students at Johns Hopkins and Clark is very noticeable.

Prof. Motora's experimental study proposes a hydraulic principle in explanation of nervous conduction,—a sort of protoplasmic tube.

Prof. Bolton, from experimental tests, concludes that "movement may not be the sole source of mental representations, but representations of movements do enter into our mental constitutions, so that the higher our motor development has progressed, the more will our consciousness be built up from this source." In other words, "every new movement acquired adds a new piece of furniture to the mental household."

Prof. Dresslar, from the study of an individual case, the test records of which are given, finds that, for eight years at least, no appreciable changes in the color-feelings of the subject for the letters of the alphabet, or for the names used in the test, have taken place.

Prof. Sanford's article is based on the data of a guessing contest in the city of Worcester and shows that habits in the guessing of numbers are not fixed and constant, as is generally believed, but "vary characteristically with variations in the conditions under which the guessing is carried out."

Prof. Buchner's historical sketch, treating of men and books, emphasizes the growth of the "new psychology," with its experimental and comparative sides. To-day philosophy grows out of psychology, and not *vice versa*, as before.

The series of papers aptly closes with a fairly complete bibliography of President Hall's published writings by Mr. Louis N. Wilson, which will be welcome to his admirers and useful to students of psychology and child study.

A review can never do full justice to a volume like this, but from the subjects discussed and the manner of their treatment an idea of its general merit can be had. Psychologists and teachers will find it a work of reference, which, unlike some in that category, can be read with pleasure.

It is a representative volume also, containing contributions from

the Universities and Colleges following: Alabama, Bryn Mawr, California, Clark, Columbia, Cornell, Indiana, Iowa, London, Michigan, Missouri, Nebraska, Paris, Texas, Tokyo, Toronto, Vassar, Wisconsin, Würzburg, and the State Pathological Institute of New York. It is understood that a limited number of the volumes are for sale and may be obtained from Louis N. Wilson, publisher, Worcester, Mass., at the price of two dollars and a half. A. F. C.

Memoirs of a Child, by ANNIE STEGER WINSTON. Longmans, Green and Co., New York, 1903, pp. 169.

Miss Winston's charming little book makes no pretensions of being a psychological study, though it is an excellent one. It is merely a collection of childish reminiscences, disconnected, incomplete, seen through the haze of intervening years, here and there some scene or experience standing out with vivid distinctness, while again only fragmentary glimpses are recalled and the connecting links are lost. But so true are these glimpses into a half forgotten past that in reading them one is carried back into childhood days and recognizes in the child of the "Memoirs" many of his own childish thoughts, feelings and experiences. There is no attempt, for the sake of literary completeness, to fill the gaps or connect the scattered reminiscences; only the actual recollections are set down with no effort to supplement them, and in this fact lies the value of the book not only as a study of childhood but as a study of reminiscence.

THEODATE L. SMITH.

THE PEDAGOGICAL SEMINARY.

Founded and Edited by G. STANLEY HALL.

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EDITORIAL.

The first article, by Mr. Stein, was admitted with some hesitation. Its appearance here by no means involves editorial assent to the ideas set forth, some of which the editor believes mistaken. It discusses a great subject, and one of concern to teachers, and, as such, it is hoped it may have the quality of suggestiveness.

Dr. Margaret K. Smith's article presents a new answer to the problem, now so pressing and so often discussed of late, why our young people in high school and college have so poor a command of their mother tongue. The writer's suggestion that it is due in part to the preponderance of words presentative of objects of sense and action, so easily lost in aphasia because the sensory image is so adequate a substitute, over those words that name psychic processes alone, is a point so well taken that it should command the attention of every teacher of English.

Mr. Bucke has sought to sum up the educational value of the domesticated dogs. He has used the questionnaire method and gone over the literature of the subject so that his paper sheds suggestive side lights on the psychic traits of dogs and on the phylogeny of children's interest in them. Similar articles on the cat, horse, canary and other animals are in preparation, and the article on Oliver, the Tame Crow (*Ped. Sem.*, March, 1903.), belongs in this list.

Librarian Louis N. Wilson prints three hundred and forty-four titles on child psychology, as the bibliography on the subject for the year 1902.

As this number completes Volume X, the index, also by Mr. Wilson, is appended.

AN INTERNATIONAL PHONETIC CONFERENCE.

By ROBERT STEIN, United States Geological Survey, Washington, D. C.

Now that Mr. Carnegie has taken the spelling reform under his protection, we may soon find out whether money can make this mare go. The gait of this particular steed has never yet come up to the famous description,

"Quadrupedante putrem sonitu quatit ungula campum."

Most of the time, in fact, it seemed doubtful whether the poor quadruped was making any progress at all.

Two methods of reform have hitherto been tried: (1) the instantaneous, (2) the gradual. Neither of them has yet emerged from the heroic age.

Not even the subscribers read those journals of "orthografi," with spelling completely reformed, which have been published with such admirable persistence for thirty years or more.

The "friends" of the gradual method, headed by the public-spirited firm of Funk & Wagnalls Co., "hav" continued with equal devotion to write "thoro" and "thru," hoping that in time the public would get used to these "clipt" forms. In the main they have merely earned the reputation of being "a little peculiar."

Yet there can be no doubt that the Chinese wall which has hitherto shut out hungry millions from the delectable land of knowledge is tottering to its fall. All the air is loud with the crusade against illiteracy. All over the world, most of all in Germany, the home of education, the conviction is gaining ground that the schools are not doing a tithe of what they might do for the pupils. This simply means that better use should be made of the brief eight years of school time. "Time is money"—time is education. Now the English language contains about forty sounds and hence ought to have about forty letters. Place a child in a schoolroom with forty other children, and in a month it will know their names and faces. In a month, likewise, it will know the looks and use of forty letters, if they always represent the same sounds. This is not a mere supposition. Experiments have proved that, with a phonetic alphabet, children do learn to read and write in two or three months and need no further spelling lessons. When this fact be-

At the moment of going to press the author's attention was called to the Association Phonétique Internationale, numbering over 1,000 members. Secretary: Prof. Paul Passy, 20 rue de la Madeleine, Bourg-la-Reine, Seine, France. Its organ, "Le Maître Phonétique," uses an alphabet which, though susceptible of considerable improvement for purposes of popular use, would form an excellent basis for the discussions of the proposed conference.

comes generally known, will any teacher have the heart to waste two, three, four years of the pupils' time in forcing them to learn the absurdities of the present spelling? With a ready means at hand to render illiteracy impossible, will educators hesitate? It is inconceivable. "The way to resume is to resume" was the reply made to those who expatiated on the "insuperable difficulties" of the resumption of specie payments. And we resumed. When, through the demand for better education, the nuisance of our spelling anarchy has become sufficiently acute, we will conclude that "the way to reform is to reform."

The problem is to find the line of least resistance. Other things being equal, that method will be best which will least disturb the routine so dear to the average human being. Routine, after all, is but another word for nature; it means a tremendous economy, and hence will always prevail. Yet nature, though identical with routine, is perpetually introducing innovations. Let us watch how she does it, that haply we may learn her trick of undoing routine by routine.

One of the most successful, most marvellous, most envied of nature's creations is the wing of a bird. Now we know that, not so very many million years ago, there were no birds. The ancestors of the present birds were fishes, resembling the present mud fishes of South America, Africa and Australia. Whence came the wings? Did they sprout suddenly from a certain pair of fishes? That is not the way nature works. The organs which in the distant future were to be wings were already in existence on the fish's neck and performing a most useful function—that of swimming. They were a pair of fins. In the mud where the creature lived, these fins were occasionally used for crawling. The fish that did not crawl well enough were apt to be overtaken by death before they had a chance to propagate their kind. Their removal left the survivors with a higher average capacity for crawling. In this way the fin from generation to generation became more adapted to serve as a crawling organ. In like manner, when the fish took to the land in the form of a lizard, the crawling function changed to running; as the lizard climbed trees and the scales along the edges of its tail and along the ulnar edge of its forearm became frayed into parachutes of feathers to lengthen its leaps and to lessen the risk of falling, the outspread forelimbs served to increase the buoyancy; by moving these stretching-organs, the direction of the leaps could be altered, and thus the arts of flapping and soaring were acquired, and the original fin and subsequent foot finally became the perfect wing.

In other words, when nature wishes to create a new organ, she takes hold of an existing organ, already performing an im-

portant function, and she gives to this organ an opportunity to perform now and then a new function. As the occasions for so doing become more frequent, the organ becomes more and more adapted thereto, till finally the new function constitutes its main employment.

The parable is not perfect, but that matters not so long as it illustrates our case. Where can we find the fin from which we may evolve the bulkless, weightless wing of a perfect alphabet, the unhandicapped vehicle through the realms of knowledge? In other words, is there in use, in some branches of writing, a fairly phonetic alphabet, which may be adapted to general use, and can its present function be so extended that it may gradually penetrate into all the departments of writing, *side by side* with the present spelling, till it ousts the latter into "innocuous desuetude?"

Every adept knows the answer. Phonetic alphabets, more or less alike, are in use for three purposes:

- (1) In phonetics and linguistics;
- (2) In dictionaries, grammars, language manuals, primers and readers;
- (3) By spelling reformers.

That is a goodly array of functions, amply sufficient to give vitality to an alphabet and to insure its growth into greater and greater currency. Why have they not produced this result?

The answer is evident: there has been no agreement among the users of these alphabets. Even the most famous, the Lepsius alphabet, is hardly known outside of a very limited class. Yet a moment's reflection shows that the usefulness of dictionaries would be greatly increased if their makers were to agree on a uniform system of indicating pronunciation. By constant repetition, this system would become familiar to the public; being, as a matter of course, extremely simple, it would inevitably be taught in the schools and be mastered by every dictionary-user as a valuable aid in the use of his own and other languages. At present, if you wish to ascertain the pronunciation of a certain word, you have to consult the "key." And if you learn a key by heart, why should it not be a universal key, which will help you through any dictionary and which can also be used by phoneticians, as well as for ordinary writing?

On considering the chances of such an agreement, one fact becomes at once apparent: that we are not dealing with a vast indifferent or hostile public but with persons *interested in phonetic spelling*. The significance of this difference needs no emphasis. To work for an agreement among the general public or even among the limited classes of authors, publishers and educators, would be a labor of Sisyphus; to unify the efforts of

three classes of people already trying to spell phonetically ought to be an easy task. Along this line, therefore, there will be practically no resistance; the most inveterate enemy of the spelling reform will welcome a universal "key" to pronunciation.

The words "other languages," used a few lines back, must have at once suggested the conclusion that, in order to secure the desired advantages to their full extent, the agreement must include the phoneticians, lexicographers and spelling reformers of all the civilized countries. In fact it is difficult to imagine any other kind of agreement. And if a phonetic system is to have the best chance of coming into general use, it must of course at the outset be given the greatest possible number of functions and the widest possible currency, that is to say, it must be world-wide. To move the huge rock of apathy, the reformers cannot afford to neglect anything that promises additional power.

A brief survey of the facts will show that an international agreement on a universal spelling is on the one hand entirely feasible, and on the other will secure additional benefits.

The fact that there are people in other lands who think their spelling needs reform, may be pleasant news to some English-speaking people, on the principle that misery loves company. Let us for a moment enjoy the luxury of looking over other people's faults.

French is perhaps the nearest rival of English in this respect. In the word *chauffaient*, 11 letters are used to express four sounds. *Eaux* is pronounced o, or if x is sounded, it is changed to z.

"Pronounce the letters as in Italian," is a direction frequently given, as if Italian were a model of correctness. What, then, are we to think of the trick of inserting an h in the plural of *poco* and *luogo* (*pochi* and *luoghi*), to prevent the c and g from changing their sounds?

A French reformer writes (with reformed spelling): "*Bon gré mal gré, nous finirons par avoir une orthographe à peu près rationnelle, comme celle des Espagnols.*" No doubt the Spanish orthography is the best in Europe, but yet its reformers might as well have made a clean job of it and left it perfectly "*rationnelle.*" Had they had the consistency to write z wherever c was pronounced z (*voz*, plural *voces*), they would not have been obliged to change the c of *tocar* into *qu* in *toqué*.

Portuguese spelling may be judged by the fact that one sign, x, has four sounds, making it almost a rival to English a.

The interesting Rumanian nation, destined to form so important a member in the future Latin League, did a very sensible thing in discarding the Cyrillic for the Latin alphabet. However, they cannot be said to have fully improved the

magnificent opportunity of starting afresh with a perfect alphabet, else they would not have dreamt of writing \ddot{t} for ts or \ddot{s} for sh or sc for sht.

Germans are apt to assert that their language is pronounced as it is written, but that is simply because the defects of their spelling have become second nature to them. The present writer distinctly remembers the feeling of revolt that crept over his quadrennial soul on being told that *Leute* and *läute* were pronounced *loite*. For years he vainly tried to distinguish in the sound of *sch* the sounds of the three constituents, *s*, *c* and *h*, which, some of his teachers gravely told him, were to be heard in the combination. These are phonetic mortal sins.

Dutch is not much better off. The *e* in *vier* is just as useless as in German. To sound *eu* as in French may be elegant, but it is not phonetic.

Danish orthography is better, but it has its silent *d* in *bordet* and uses *aa* to express the simple sound resembling English *aw*.

Crossing the Sound into Sweden, we enter a realm of singular alphabetic perversity. On quoting to a Swedish friend the lines

"Känner du landet, det härliga, rika,
Badadt i Mälär och Östersjövåg?
Hemmet af skördar och minnen tillika,
Fredliga bragder och vikingatåg?"

the writer was thunderstruck to hear the reply: "That is very interesting, but you ought to say *chenner* and *Östershö* and *shördar* and *ok*."

Coming to the Slavic languages, we find that Bohemian had the good fortune to be endowed, 500 years ago, with the most consistent alphabet in Europe, by a man of genius, the reformer John Huss, who, being ahead of his age in divers other ways, was finally silenced by the cogent argument with which our forefathers were wont to bring other people over to their views. It is to be regretted, however, that, in his zeal for consistency and phonetic purity, Huss resorted to so many accents, hooks and circles, that a line of Bohemian often looks like a file of Hussite warriors with helmets, spears and halberds, gathered to defend their "jazyka dar" and other valuables. In this way one is often obliged, after finishing a word, to go over it again and furnish every letter with some sort of head-gear.

The same is true in some degree of Polish, which, however, is less phonetic, in that the simple Bohemian sounds \check{r} and \check{s} are in Polish expressed by the combinations *rz* and *sz*.

Russian commits some strange extravagances. *O* is sometimes pronounced like short German *a*, while *a* in turn is some-

times pronounced o; the g of the genitive is pronounced v, so that the word which looks like *durnago* is pronounced *durnova*. For f you have the choice of two letters, one being the Greek theta, which the Russians, unable to pronounce th, turned into f, like the colored brother who talks about his "mouf."

Last in this sinful catalogue is Magyar (Hungarian), which displays its chief inconsistencies in its very name, pronounced *modyor*.

But our joy on finding that we are not alone in our trouble is at once clouded by the discovery that our fellow delinquents have reformed, at least partially, while we have merely agitated. The greatest reform on record was that accomplished by the Spanish Academy about 1846. Most interesting, to English-speaking people, is the movement in France, which during the last ten years has shown vigorous growth and has at last culminated in governmental action. "*Le Réformiste*," edited by Jean S. Barés (18 rue du Mail, Paris), now in its "septième année," is probably the best journal of its kind in the world. Its wealthy editor distributes 50,000 francs a year to journals that aid his cause. That bespeaks a degree of earnestness which we have not yet reached in England or America. In fact, it would be altogether in keeping with precedent if the "logical nation," having once made up its mind, were the first to adopt a system of writing as perfect as the metric system which it gave to the world one hundred years ago.

In these efforts each nation proceeded without regard to its neighbors. Thus it is that Italian *che* and Spanish *que*, though identical in sound and meaning, are written differently; that the French write the preposition *à* with a grave, the Spaniards with an acute accent, *á*, the Italians without accent; that the Germans have adopted for *ss* a sign β , which to all the rest of the world looks like a B; that the British Admiralty and the United States Board on Geographic Names have established the rule: "j as in English; dj should never be used for this sound;" though in so doing they unnecessarily set a dangerous trap for foreigners, besides committing a serious offense against phonetic purity.

Hitherto, in fact, another procedure would hardly have been possible. The reforms would probably have died before birth if each nation had waited till the pleasure of others could be known.

But in this matter, as in many others, time has wrought a change, nay, a reversal. Interdependence among nations grows daily. Every nation now considers the world its market. The knowledge of foreign languages is becoming an ever-growing necessity. Astronomers have parcelled out the heavens

among the nations of the earth. Practically all the sciences are organized internationally. The other day we came near having one steamship company the world over. Soon, no doubt, we shall have an international postage stamp. The gold standard having become universal, we may soon behold Mr. Albert Herbert's international coin, which in its turn will bring other conveniences. Of course, since progress is made by learning from one another and by division of work, every such removal of international barriers is to be welcomed.

From this point of view it is difficult to imagine a fitter subject for international treatment than the spelling reform. If nations are to communicate more freely, they must have increased facilities for learning one another's languages, the very instruments of mutual instruction; and of course nothing could promote that object more effectually than an identical mode of writing.

This argument touches what is said to be a particularly responsive chord in Mr. Carnegie's mind. Believing that English is destined to be the world language, he would hasten the coming of this boon of a common speech. Now it is evident that, if the spelling reform were so managed that every foreigner trying to learn English should find our spelling (aside from a few special sounds) exactly the same as his own, the expansive power of the language would be raised to the highest degree.

Shall we then consult not our convenience but that of foreigners? That, of course, would be absurd. But we are not confronted with any such dilemma. It so happens that in this matter everybody's convenience will be best served by co-operation. On inquiry, we find the following facts:

(1) About 90 per cent. of the sounds of the other civilized languages are practically the same as in English.

(2) The letters used by the great majority of civilized people are the same and mostly represent the same or similar sounds.

(3) The points in which our alphabet is most defective are the very ones that call for reform in the other languages. The reason is that the Romans did not know the sounds of sh, ch, j and various vowels, and hence developed no signs for them. These, therefore, in post-Roman languages, had to be expressed by combinations, necessarily chosen haphazard.

In other words, the civilized languages are already, for the most part, spelt alike; and in making the improvements which will render their spelling phonetic, there is no reason why the same letters should not be used in all languages for the same sounds. The few special sounds of each language would, of course, be expressed by special signs.

In point of fact, the reformed alphabets that have been proposed for various languages show a decided mutual approach, for the reason that, in obedience to the necessities of the case, they all attempt a more or less complete return to the Roman alphabet. Were these reform movements to progress in mutual disregard, they would lose the immense advantage of a concerted movement toward a common goal, and establish needless barriers which would have to be removed later on. Why build up a system that will have to be undone again, when you can just as easily, more easily in fact, establish a permanent system all over the world? Knowing the agony of one spelling reform, who could have the cruelty to expose any nation to the risk of two reforms?

Take, for example, the sound expressed by English sh. This sound exists in French and Portuguese (ch), Italian (sc or sci), Rumanian (Ş), German (sch), Swedish (sj, sk or skj), Bohemian (š), Polish (sz), Russian (Ш), Hungarian (s), and in the second element of Spanish (or English) ch. For this simple sound, Murray's new Historical English Dictionary proposes the sign *Œ*. There is no reason why the other nations, in trying to render their spelling phonetic, should not adopt this very convenient sign, or, if a better sign be proposed, there is no reason why we should not conform to that; but there is every reason why a sign once adopted should stay adopted. This can only be secured by a common agreement beforehand.

Another consideration. The spelling of some languages, Spanish above all, but also Italian, Bohemian, Hungarian, is so nearly phonetic that the few changes needed to make it perfectly phonetic would cause but little disturbance. Again, Russia seems to be on the eve of a great educational movement. Nicholas II is said to be anxious to earn the title of "Tsar Educator." At the same time the Russians wish to make their rich, flexible, sonorous language a world language, on a par with English, French, and German. For both these purposes, nothing could be more serviceable than the adoption of the Roman alphabet, which would, moreover, constitute a powerful bond between the eastern and western Slavs. If now the Roman alphabet were presented to the Russians in a universal phonetic form, enabling any child to learn to read and write in two or three months, and thus rendering illiteracy impossible, even with the most meager school facilities, it is inconceivable that they would adopt any other system. Over 200,000,000 people might thus, with great advantage, adopt the universal spelling at once—a potent means to give it currency.

Let us see how far we have got in our argument.

The attempt to persuade *the general public* to consent either to the immediate adoption of a phonetic alphabet, or to the successive introduction of slight reforms, involves such appalling labor as to appear well nigh desperate.

On the contrary, the attempt to secure an agreement on a uniform system among *the people interested in phonetic spelling* is practically sure of success.

Such an agreement must be international, for ten reasons :

(1) The very object of any agreement is to secure currency for the system agreed on, and of course, the wider the agreement, the greater the currency. Momentum is directly proportional to mass.

(2) The science of phonetics, for whose sake, in part, the agreement is sought, deals with the sounds of all languages. A "national" agreement among phoneticians would be absurd.

(3) National agreements, national conferences have hitherto been sought almost exclusively as *side issues* to something else, for the reason, no doubt, that no other method was practicable. Now every one knows how much attention is bestowed on side issues. What happens? In order to secure a quorum, every one who shows the least interest in the subject is admitted. The natural desire to "do something" leads to the taking of a random vote after utterly insufficient discussion. The proper method is a conference composed of none but *experts*, who shall make the spelling reform the *sole issue*, shall consider it not hurriedly in a few hours snatched from "more important business," but leisurely, for weeks and months, if necessary—men to whom the ideal alphabet has been the subject of daily thought for years, who will instantly perceive the bearing of every new idea, and, above all, are willing to change their opinion at any moment for a better one. Only a few men of this stamp could be found in each nation, and fewer still would have the necessary leisure. Hence, in order to embody a sufficient number of eminent men to give weight to its decisions, the conference must be international.

(4) Dictionaries, grammars and language manuals, circulating in all lands, require a "key" to pronunciation which shall be familiar to readers everywhere.

(5) At least 90 per cent. of the sounds of civilized languages are practically identical, so that it would be absurd for the several nations to try to render their spelling phonetic and yet write those sounds differently.

(6) Designers of phonetic alphabets for one language only are constantly tempted to tolerate phonetic impurities sanctioned by long usage. Thus many English alphabets contain special signs for the compound sounds of *i* in *fine*, *u* in *use*, or

compound signs for the simple sounds of th, sh, ng. Germans and Italians might shrink from the superhuman effort of writing ts instead of z. An international conference would be the surest means to prevent such truckling to national sluggishness.

(7) Any phonetic system will require the highest authority to give it standing. Many persons who would have little respect for a national conference will bow before an International Conference, for the reason, among others, that the system adopted by it would become the key to foreign languages.

(8) Hitherto, phonetic alphabets have been *proposed alphabets*. Before making up his mind whether a proposed thing is cranky or sound, does the average man weigh its merits and demerits? Not at all. He waits until it is *accepted*. The alphabet of the International Conference will be the *accepted alphabet*—accepted by the highest authority. That is what the average man wants. Nothing succeeds like success.

(9) Several nations are likely to adopt the universal spelling at once and thus give it greater currency the world over.

(10) Perhaps the most serious obstacle to reform is the fact that the amended spellings look *odd*. In the whole list of desires which evolution has nursed into existence in the human breast, none is stronger than the desire to be *fashionable*. It is the old (and, of course, hitherto on the whole, beneficent) instinct, inbred through the experience of millions of ancestors: "So long as you are with the herd, you are safe." It is so uncomfortable to bethought "peculiar;" it is sweet, O so sweet! to know that the world thinks our behavior "good form." A breach of the commandments is nothing; a breach of etiquette makes your hair stand on end. People are ready to undertake the most inhuman labor in order to be "in the swim." Thus the prestige of so distinguished a body as an International Phonetic Conference, rendering the universal spelling fashionable, might be the very means to induce people to put forth the slight effort required to master it. And when Lulu begins to write to Leander in the universal spelling, because "it is quite the style, you know," it will indeed be time for spelling reformers to exclaim: "Now dost thou, O Lord, dismiss thy servants in peace!"

Having got so far, the reformers might rest on their arms, in the well-grounded confidence that the universal spelling would make its own way by the very force of its universality and simplicity. But of course they will never rest, so long as the snake is merely scotched, not killed. Before inquiring how the gradual spread of the new system may be accelerated, we must hasten to find out how it will look.

The first thing the conference will have to do will be to define the principles on which to proceed. Some of the schemes of reform heretofore proposed have been almost as complicated as the old spelling. In reality, two simple rules suffice:

- (1) Find out how many sounds there are in each language;
- (2) Provide an equal number of letters, no more, no less.

All else is corollary, and very simple, too.

(3) Express identical sounds by identical signs, similar sounds by similar signs.

- (4) Use no diacritic marks.

(5) None but the Roman alphabet can at present be made universal.

- (6) Break with existing usage as little as possible.

- (7) Small script is the only form needed.

While English contains only about forty sounds, every child is at present compelled to learn four forms for each letter (in German 8), making in all 104 letters (in German 210). Think of wearing a pair of shoes weighing eight pounds!

(8) So far as compatible with the above principles, let the letters express the relationships of the sounds.

To illustrate the working of these principles, a table of phonetic symbols is herewith presented. It is believed to contain a sign for every well-marked sound in English, French, German, Italian, Spanish, Portuguese, Rumanian, Dutch, Danish, Swedish, Bohemian, Polish, Russian and Hungarian. To avoid overloading, the examples are mostly confined to English, French and German, the letters to be illustrated being in each example marked by a dot or dots. Symbols in parentheses are for phoneticians only, though some of them might perhaps with advantage be included in the popular alphabet. Needless to say, this table does not claim to become the universal alphabet. The fewer "claims" are brought to the conference, the better will be the chance of agreement. Space will not allow a discussion of the table. Criticism of it will be highly welcome.

In the confident hope that the Spanish-speaking nations will not neglect the incomparable opportunity to become the leaders in a movement of such transcendent benefit, by adopting the universal spelling at once, the changes for their language have been minimized, } being used for English th and Spanish j being retained.

The pronunciations here implied do not pretend to be the standard. The conference is to agree on the symbols for definite (or approximately definite) sounds; what sounds are heard in this or that word, remains for experts in each language to settle.

Too many cooks might spoil the broth. One or two phonetic experts from each country will suffice. The man who wants

five different signs for the e in bee, feet, seal, cheery and fear, would be a marplot. For greater prestige, the conference ought to be held under government patronage.

It would be unwise to depend on one conference. After a thorough test of the system agreed on, a second conference, with new suggestions of graphic devices and more precise information regarding the best pronunciation, may be in position to adopt a definitive system.

The main object of the conference is *to create the universal alphabet*. In thus fixing a common goal, it will unify all advocates of reform into a solid phalanx with single aim.

Having accomplished this, its essential mission, the conference might as well go home, knowing that the task of *introducing* the new dispensation will have to be performed by each nation for itself. But of course the conference will not disperse without discussing this problem. Methods will differ with different languages. In Spanish, as before noted, the change would interfere with legibility so little that there would be no reason for making it gradual. If the Russians adopt the new spelling, they will naturally make it the ordinary vehicle of instruction at once in all the primary schools and progressively in the higher grades, the Cyrillic alphabet being continued for a while as a secondary subject. For English, French and German, an experiment made in St. Louis is suggestive.

In that city, an alphabet invented by Dr. Edwin Leigh was used in the lower grades. It consisted of some 75 characters, some quite complicated, so that, with the addition of the silent letters in hair-line type, it was far more difficult than a perfectly phonetic alphabet would be. Yet Dr. W. T. Harris, United States Commissioner of Education, reports on it as follows:

"This showed a saving of from one and a half to two years in learning to read. It was found, moreover, that these children not only learned to read rapidly, but that they learned to spell *the ordinary spelling* more correctly than other pupils."

Of course, the universal spelling would not print silent letters, but since it would depart from present usage as little as possible, there can be no doubt that children who had learned to read by the new system would also be enabled to read *the present spelling* more readily. It would scarcely be harder than it is to read Shakespeare in the spelling of 1623. After this fact had been established by actual trial, it would, of course, be unpardonable for any teacher to begin with any other than the universal spelling.

And now the line of least resistance lies tolerably clear before

us. The successive étapes of the campaign would appear to be as follows:

(1) The first conference recommends a provisional alphabet.

(2) This having been tested, a second conference adopts a definitive alphabet.

(3) This will supply a want long felt by phoneticians, dictionary makers, teachers of languages and spelling reformers throughout the world. Many other persons will find it advantageous to learn it. Some who scoff at the idea of a phonetic alphabet for English will hail it as the key to other languages and thus undermine the resistance to reform in their own minds.

(4) The universal spelling having, through familiarity, lost the appearance of oddity, and having become the standard indicator of *pronunciation*, is taught *for that purpose* in schools (perhaps in "back-hand" form).

(5) A few schools try the experiment of beginning with the universal spelling, passing over to the old spelling only in the second or third grade.

(6) When in this way children learn to read and write in two or three months, become incapable of spelling-mistakes (provided their pronunciation be correct), and master even *the old spelling* more easily, there will arise an irresistible demand to have the universal spelling used in all the schools, the old spelling receiving less and less attention.

(7) When a new public has been thus developed, newspapers and magazines will find it to their advantage to use the new spelling. The demand for the old style of publications will practically cease in about forty years.

Financial power may be exerted with decisive effect in supplying the new type to printers, in offering prizes to teachers and schools using the new system, in publishing text-books, standard authors, and juvenile literature, which, issued by one firm in millions of copies, could be sold at a nominal price.

Thus the humble fin of the Lepsius alphabet, devised in 1853, may in less than a century be developed, by what may be termed "assisted evolution," into the glorious wing of a perfect universal writing. Resistance need not be overcome at all; it may simply be evaded. The present public need not be asked to alter an inherited habit which has become second nature; a new public will simply be made to grow up with a better habit.

Various circumstances combine to render it desirable that the initiative be taken by France. The language of the conference must necessarily be French, the present universal language; the meeting-place, Paris. No other government could so readily secure the co-operation of the other Latin countries

and of Russia. Divining, with true instinct, that internationalism will some day dominate nationalism just as nationalism now dominates provincialism, France is wisely securing to herself the honor of the leadership toward the republic of humanity. Nowhere are the agencies for international fraternization so numerous; nowhere is the phrase "The United States of Europe" so current as in the land where it originated. A conference intended to improve the very means of international communication, the written language, could hardly be called into being by another nation without encroaching on the well-earned privilege of France.

Again, the one great desideratum for the universal spelling is that it shall become *fashionable*. Nothing could be more conducive to this end than the initiative of a nation whom the world recognizes as the leader of fashion, the arbiter of good taste.

One more reason. Our busy philistines have become used to the domestic clamor for reform; they have in their offhand way decided that it is a "fad" and "impracticable." An invitation from the nation whose orthography is supposed to be even more irrevocably fixed than ours will be the best means to startle them into reconsideration.

And the nation which one hundred years ago gave to a sleepy world the most salutary shaking-up it ever received, will not hesitate to lead humanity out of another and very dismal bondage.

NOTES ON THE TENTATIVE ALPHABET.

Before the alphabet of each language can be established (which is to be done *after* the adoption of a definite universal alphabet by the conference) two points will have to be settled:

(1) A standard pronunciation will have to be agreed on, showing how many sounds there are in the language.

(2) That *within one language* every sound should have its own sign is evident. Not so evident is it that one sign might not be used for slightly different sounds *in different languages*. It may well be debated whether English d, t, r, short u and i, and the a in far, differing as they do but slightly from the nearest sounds in continental languages, should be discriminated from them in writing; in other words, whether some of the signs here given in parenthesis, as for phoneticians only, might or might not be used also in the popular alphabet.

Assuming, for the sake of illustration, that this question were decided in the negative, the Washington pronunciation of English would require the following alphabet of 42 signs:

Classified Arrangement.

pʁk ɛdʒ ʃʒsʃ ʒʃh ɛmɔŋ wʁvɔ
 uuu oœ œ œ œœ œœ œœ œœ

Traditional Arrangement (approximate).

œœœœœfdeœœœfghukɛmɔŋ
 œœœœœœpʁsʃʃfuuuuwɔʒʒ

Three lines from Emerson may show how English looks when printed according to this system; the immortal epitaph may serve for French; four precious lines by Kopisch, for German.

hæst ʒaw neɪmd ɛl ʒə bɜrds wɜzawt a ʒən?
 læv ʒə wudrɔws ænd læft ɪt ən ɪts slɛm? . . .
 ʒɛn bɪ mɪ frɛnd ænd ɪtʃ mɪ tu bɪ ʒəɪn!

sɪ ʁɪ pʁɔŋ, ki nœ fu rɛɑn,
 pɑ mœm akɑdɛmɪsɪɑn.

dær neɑ sprɑʃ: əʃ lɪbær hæɪ!
 dæs vɑsær ʃmɛkt mɪ ʒær nɪʃt sær!
 dɪwɑɪl dærɪn ɔɜsɔɪfɛt sɪnt
 əl sɪntɦæft ʁɪ unɪ mɛnʃɛnkɪnt.

It is not to be expected that at this early stage the appearance of the letters would satisfy all the demands of the artist, printer, or penman. To attain an adequate degree of perfection in this respect, a type-designer and a phonetic expert should work together. This of course would involve considerable outlay.

THE PSYCHOLOGICAL AND PEDAGOGICAL ASPECT OF LANGUAGE.

By MARGARET KEIVER SMITH.

The term language refers especially to the system of articulate sounds made by the human voice primarily with a view to communication between human beings. While it is indispensable to the mental development of every human being, it is not the product of any one mind, but of minds laboring under the necessity of intercourse with one another.

With the purpose of intercourse in mind, we associate the idea of voluntary effort with human speech. Probably for this reason, notwithstanding its mechanical side, human speech is very generally regarded as a mental operation, skill in the exercise of which seems to indicate a considerable degree of mental development.

Through a comparison of persons who have a limited control with those who have an extended control of language, and especially through a comparison of the mental power of a deaf mute who has not achieved the use of language with the mental power of one who has learned to speak and write, we are justified in assuming that in the intellectual development of the human being, language performs a very important part. From such observations as have been made, we judge that the deaf mute, without the advantage of language, has a mental content of images and feelings alone, and that only through these states can an appeal reach him. His power of reflection is as limited as his power of abstraction. His physical desires are strong, and his power of self-control very weak, while his ethical sense remains entirely undeveloped. Romanes states that he has never been able to find a case where a deaf mute without education in language, and, indeed in word language, has been able to acquire any idea of supernaturalism. Even with the best aid of sign-making, *i. e.*, gestures, he has been unable to acquire any idea of a divine being.

The importance of language in connection with mental development may be perceived in the lower animals quite as readily as in the human being. The excess of intelligent attention and memory in the domestic animals as compared with the same qualities in wild animals may very well be attributed in great part to the language of human beings to which the

former in the course of ages have become accustomed. It is a noteworthy fact that in the training of domestic animals, much more dependence is placed upon the use of words than in the training of wild animals. The stories that we have of the dog and the horse, not to mention those of the elephant, or even of the bird family, lead us to infer that those animals not only understand words and sentences, but that they actually show signs of at least primitive judgments. The adaptability of domestic animals to new conditions, and even to modern inventions, may justify us in supposing that the language of ages has brought them into a close resemblance to the human animal, and that their generalizations differ in degree rather than in kind from those of man. As a rule we do not assume that even the most intelligent domestic animals surpass even the lowest of the human family, but we not infrequently hear the owner of a dog or horse proudly assert that the creature possesses more real knowledge than many a man of his acquaintance.

Through derived uses, the application of the term language has become so extended that it stands for any and all means of communication that are in any degree systematized.

Thus, in addition to the language of speech, we have gesture language, and tone language, the one indicating a system of regulated bodily movements, the other working out into a system of sounds developed from the tones of the primitive human voice.

Both gesture and tone language are designed for purposes of communication, and are adapted probably from the crude motions and harsh cries of primitive man (possibly even of the brutes) in his efforts to attract other creatures of his kind.

As a means of emotional expression, both gesture and tone serve much better than as a means of intellectual expression. Among gestures we have those that indicate states of feeling merely as pleasant or unpleasant, and gestures that indicate such emotions as fear, anger, love, pride, etc.

In the second stage we have modulated movements intended to express definite mental states, *e. g.*, the nod of affirmation, or approval, the shake of the head implying negation, or disapproval, the wave of the hand in invitation, and the wave of the hand in repulsion.

Among tones we have those that express emotional states, as the inarticulate murmur of affection, the growth of rage, the whine of fear, etc.

The second step in tone language is toward articulate speech, as the instinctive babble and chatter of the child as it imitates sounds. Something of the same tendency may be observed in the chatter of the parrot, mocking bird, etc. Possibly this step may not be regarded as a step in language, inasmuch as the

purpose of communication is not so much in evidence as in the first step. It seems more properly to be a mechanical preparation for articulate language which is to come later.

As in the case of gestures, in connection with articulate speech, tones are used in modulated and regulated forms for the purpose of enhancing the effect of words which, if used alone, would merely arouse intellectual states. The effectiveness of tone and gesture lies in their use as an outlet for the emotions, and as a means of arousing corresponding emotional states in those who are subjected to their influence.

The inadequacy of these so-called languages lies in the impossibility of their expressing many definite or complicated ideas and connected thoughts. They are both bound to sense-perception, and for the most part are very clumsy instruments in securing generalizations of any high degree of abstraction. As a matter of fact the elaboration of gesture and tone into any extended system of expression is mainly due to the use of words. No people without a well-developed system of articulate language has ever done much with the drama or with music. The highest use of gesture and tone can only be realized when they occupy a subordinate position, viz., that of supporting and emphasizing the spoken word. The skillful speaker realizes their value when he wishes to gain a hearer whom he cannot convince by reason.

The fundamental principle of all forms of spoken language is that of connecting an idea in the mind of one individual with some external sign which is intelligible to another individual. This sign becomes intelligible when it is attached to similar ideas in the minds of the two individuals. For purposes of general comprehension, this sign must be constant. With this sign as a basis, a system of expression may be arranged by means of which mental states are not only indicated, but by means of which thought is formed, defined, elaborated, and transformed into the force that moves the world.

Apart from the convenience of a means of communication, a system of expression is of the greatest importance to the individual, in that it is a means of bringing order, clearness, and purpose out of a chaos of mental content. Without a system of expression, the mind must remain confused, indeterminate, characterless, and ineffective. A writer has said that next to the hope of immortality, expression is the highest hope of the human spirit. Perhaps with equal truth we may say that without power of expression, the hope of immortality could never have been conceived.

While admitting tone and gesture to be legitimate and necessary means of expression in primitive stages of development, we must also admit that for the development of civilization, a

more highly specialized means of expression is necessary. This demand seems to be met by articulate language. As the sign of an idea, the spoken word is constant, while at the same time it admits of modification and elaboration sufficient to meet the needs of the highest intellectual development. Because it is the instrument best adapted to this use, the word has become the preferred means of communication. In every way, the use of the word is economical. Being the most conventional sign of expression, it is the least liable to be misunderstood, while at the same time it is purer and more definite, more condensed, and more effective than any other sign.

Romanes gives four divisions of articulate language. First, the meaningless imitation of sounds heard; second, the instinctive articulation of syllables; third, the understanding of articulate sounds or words; and fourth, the intentional use of words as signs or names of ideas, *i. e.*, the use of words with a meaning attached.¹

Corresponding to the articulate side of language he gives the intellectual aspect in five stages² viz., first, the indicative stage, in which there is an intentional sign though it may be expressed by gesture, tone, or word; second, the denotative stage in which intentional marks are indicated by names. The name in this stage is reproduced merely by mechanical or special association. Like the first this stage is peculiar to many of the lower animals as well as to human beings, and marks no great intellectual advance. The name is in this stage merely a mechanical convenience.

The third, or connotative stage is that in which a name is given to an object by reason of some quality or qualities which it possesses. The word contains a meaning, of which the application is extended to other objects possessing characteristics in common with the first, so that a grouping is made, and the word becomes the name of a class. This is the concept forming stage, or possibly the stage of classifying and naming perhaps without a full consciousness of the extension of the application of the word. This stage probably marks the dividing line between the human being and the lower animal, as the grouping of objects on the basis of common characteristics implies a higher intellectual power than we have as yet observed in brutes.

The fourth or denominational stage is an extension and elaboration of the third, the connotative word being now applied consciously and intentionally. The last stages is that of predication in which denominative concepts are combined into

¹Romanes: "Mental Evolution in Man," Chap. 7, p. 121. (New York, 1898.)

²*Ibid.*, pp. 157-162.

propositions in such a way that the content of one concept is affirmed to partake of the nature of the other to a greater or less degree.

The stages of denomination and predication so clearly indicate a higher intellectual development than appears possible to the brutes, that some psychologists and philologists, upon this ground alone, have assumed for man a special creation.

The power of articulate language as a means of mental development is shown when the word is used as a symbol or type which, while it is constant as a sign, yet is sufficiently movable to admit of such modifications of meaning as the intention or feeling of the individual may dictate. In this lies the real power of predicating, or of attributing varying qualities, or varying shades or degrees of the same quality to an object. It is the power to use one idea in such a way as to modify the application of another idea, and thus to form a new mental product the apprehension of which indicates a decided advance in intellectual development. When an individual can consciously use a word to indicate a class of objects possessing certain essential (as distinguished from accidental) characteristics in common, he has achieved the foundation for the highest mental operations.

The importance of articulate language lies in the fact that without the word, the concept, *i. e.*, the generalization, cannot be held before the attention in such a way as to form an element of thought. Without it no effective thinking can be done, and consequently no clear rule of action can be evolved. It is the agent that differentiates a definite idea, or concept from the confused mass which characterizes the content of the primitive mind. Without it, the mind must remain primitive and confused.

The need for adaptation to the conditions of a progressive civilization creates the necessity for classifying the mental content, *i. e.*, for evolving order and clearness from obscurity and confusion. The human mind in its incapability to grasp in detail the multitudes of objects that are daily and hourly forced upon the attention, is saved from fruitless and even dangerous effort by the word and the proposition which serve as a means of preserving intellectual unity.

In addition to the use of the word in controlling abstract thought upon concrete things, we find a higher use, by reason of the concept name itself becoming an object of thought, thus furnishing a new factor in the elaboration of propositions possessing a higher degree of abstraction than that brought about through generalization upon concrete objects.

To the ordinary individual who seldom rises to the region of higher abstractions, the influence of articulate language is also

of the utmost importance. Without it the attention does not rise above the primitive, curious attention of the brute, the savage or the child. Through the understanding which it carries with it, it rouses the liveliest sympathy among people. It stands as a support to memory, while it exercises a controlling, subduing, and directive power over the emotions.

The intelligent development of language implies a constant development of judgment and reason.

In the formation of the concept, we come to the dividing line between the perception of external, or concrete things (sense perception), and the apprehension of internal, or abstract relations (conception,—apperception).

Here the individual is first conscious of himself, and becomes free to do his own thinking. The extent to which he carries his generalizations (provided always that he classifies on the basis of common essential characteristics) determines the extent of his freedom and of his effectiveness.

Without the intelligent use of articulate language, probably no abstract judgments can be made; no consciousness of self, and consequently no ethical judgments can be evolved.

At this point we are met by a question regarding the pedagogical application of the theory of the dependence of all important forms of thought upon articulate language.

The function of pedagogy is to lay the foundation for developing later a broad minded thinking people whose activities may always be depended upon to work for the highest good of humanity.

In considering the relation between thought and language, we have regarded the beginning of real intelligence, the beginning of rational judgment, the beginning of generalization which lies at the foundation of reason and rational action as coincident with the use of the articulated word naming the concept which results from the free judgment of the individual. If this proposition be accepted, and if the alleged function of pedagogy be regarded as legitimate, then, in connection with the education of children, it follows that from the very beginning of school life, the development of intellectual language, *i. e.*, of the connotative, or denominative term, and the proposition, should receive special and careful attention.

In the United States, the teaching of language is difficult. If, among the tongues of Babel which surround it, the English language retains its characteristics, it must possess marvellous vitality. In the Northern and Western States, unless it be preserved in the schools, it can hardly survive. In not a few of the higher institutions of learning, strenuous efforts are being put forth in its behalf. Many professors whose time might be otherwise employed are obliged to devote no small portion of

their time and energy to the correction of the very imperfect language which the students bring to their work; a language so scanty at times, that instruction in other subjects can hardly be given until greater facility of expression in English is acquired. Yet with all that is done, we have reason to believe that the condition of our language in many parts of the country is but little encouraging.

A few years ago, a prize of some importance that for years had been given annually for a paper upon a literary subject was withdrawn from one of our oldest universities for the reason that among eleven hundred undergraduates, not one had presented a paper worthy of consideration.

Last year, an instructor in chemistry in a large American university wrote: "These students study chemistry! Why they can't talk. They can't spell. They can't read. They can't write."

In a recent number of one of our best magazines, a writer mentions the fact of a considerable prize being offered to undergraduates in a New England college for a paper upon a somewhat abstract subject. Only with the greatest difficulty was a production obtained that would justify publication, and when it appeared, it did not escape censure.

Within the last few weeks, an item has appeared in one of our best daily papers to the effect that eight young men, high school graduates from a Western locality, have successively failed in the examination for admission to West Point, and that in every case the failure was in common English subjects.

As a further indication of the discouragement, concerning our schools and their results, which seems to be felt, the writer has made a list of some of the charges which, from time to time during the last few years, have been preferred through magazine and newspaper articles against the students who enter the colleges and universities of this country. The charges collected read about as follows:

1. They (the students) cannot talk except in a jargon of their own composed of words that have no general application, and are therefore intelligible to only a limited number of people.

2. They cannot write in fairly good English. The words they use are largely the names of material things. Many young men and women of the high schools who present themselves for admission to normal schools and colleges are not capable of writing an ordinarily correct letter upon any subject whatever.

3. They cannot read. In attempting to read aloud, they display an amazing unfamiliarity with the printed page. They pronounce words very incorrectly, and give but little evidence that they understand their meanings. In attempting to read

silently, after perusing a paragraph, they cannot give a synopsis of the thought expressed. They not infrequently give evidence of knowing each word in a sentence, but are incapable of giving the thought expressed by those words when they are combined in the sentence.

They display a marked disinclination to use a dictionary. The unfamiliarity with this book is so great that one might be justified in supposing that in some of the institutions of learning in the United States, dictionaries have not yet been discovered.

4. They take little or no interest in literature, either prose or poetry.

5. They show little or no interest for intellectual pursuits; indeed, they awaken to genuine intellectual effort only with great difficulty. At present education seems to be crippled in its essential idea of intellectual life.

6. They take no special interest in public questions.

7. They know little and care less about social questions.

8. In the educational world, enthusiasms have become restricted, and are very difficult to arouse.

9. They have no special love of country. The fundamental principles of freedom do not appeal to young people; indeed they seem to be losing power with young and old.

10. Appeal to the ethical reason is made only with difficulty. There is a substitution of sensuous for spiritual apprehension, a taking of events at short range, instead of contemplating them in those wide relations in which they compose the universe. They cannot be said to realize moral responsibility in any adequate sense, and they show a lack of moral independence that promises unfavorably for the formation of character.

11. Such interest as they show is largely in connection with concrete things; for example, with the subjects of the laboratory, with the tactics of field sports, and with the commercial advantages that may result from an extended attendance at some higher institution of learning.

These are grave charges for serious-minded people to bring against the very best class of the youth of this country. The writers who make these statements are not prejudiced foreigners who might take pleasure in noting the weaknesses of our educational influences, but they are people who love the country so well that they would gladly open our eyes to the conditions under which we are at present living. Even granting that these evils be exaggerated, they are still sufficiently dangerous to cause anxiety on the part of thinking people who have at heart the best interests of the youth not only of the colleges and universities, but, also, of that larger class who lack opportunity for the broader development afforded by our higher

institutions of learning. No doubt more serious charges could be made, and indeed are made, against the youth and manhood of this country, both within and without the colleges and universities. A list of such charges of weakness, to call them by no harsher name, would include: heedlessness, self-indulgence, lawlessness, greed, brutality, sufficient to fill the mind of any ordinarily thoughtful person with the liveliest apprehension.

Every daily newspaper of this country, every day of the year, publishes events that show unmistakably that these charges are well founded. Even granting that only one tenth part of them may be true, the conditions are still sufficiently serious to excite alarm.

The question whether the schools have done, are doing, or possibly can do anything to influence our present social conditions is certainly a legitimate one. What possible connection can exist between our educational conditions, and the social difficulties that are at present perplexing the wisest men of the country?

During the past half century, a great change has taken place in the public school education of the United States. This change has affected not only the subjects taught in the schools, but it has reached as well the plans of procedure, the so-called methods of instruction.

About the year 1860, "object lessons" so-called were introduced into the schools. Later, these gave place to "objective instruction," and this in turn was succeeded by what has been known as "Elementary Science Teaching." Still more recently the schools have had a course of what we call "Industrial Education."

The principle, "first the idea, and then the word" so vigorously emphasized by Pestalozzi has dominated the educational effort of this country for a little more than forty years, during which time, the end and aim of school life, and indeed of home life as well, has been the acquisition of concrete images, *i. e.*, of ideas of concrete things. Everything that could appeal to the senses of the child has been presented to him. Every conceivable object has been subjected to sight, hearing, touch, taste, smell, etc. When the objects could not be brought into the schoolroom, the children have been taken to them, so that but little has escaped their attention. The result seems to be that our young people (if not also our adult population) have become addicted to things, and that they center their main interests and hopes of happiness upon the concrete world.

With the habit of occupation with concrete things for some twelve or fourteen years of the most impressionable period of life, we can hardly wonder that when a student goes to college he should show a greater disposition to occupy himself with

material things than with abstract questions. We can hardly wonder that later in life, the actual possession of a certain amount of plain hard cash should seem much more real, and far more desirable to him than a clear intellectual apprehension of a man's duties as a citizen, or of the moral distinction between *meum* and *tuum*. This would seem to be the logical outcome of excessive occupation with concrete things.

We can have no quarrel with "objective instruction" *per se*, nor with any form of instruction that leaves the child in a better condition than it finds him, but we must remember that there are other than material objects in a course of education, and it may be well to examine the scope of objective instruction as it is sometimes pursued in the schools, with a view to finding out whether it is calculated to meet the requirements of mental development.

In the first place the material object appeals to the senses, and to the senses alone. The psychological result of this appeal is a concrete image or an image of a concrete thing.

According to the previous experience of the child, and according to the degree of attention brought to bear upon the object at the time of presentation, this image is more or less vague. If the child has never before had anything like it, and if the attention be distracted by the presence of other striking objects, the chances are that no adequate image of the thing presented is formed.

Also, in childhood, the nerves of sense are often so incompletely developed, that the sensations formed through the excitation of eye, ear, etc., are totally unlike those which the teacher expects the pupil to gain, so that the mental product is no adequate foundation for the apprehension of other images to be gained through the presentation of other objects. In order that something like an adequately correct image may be formed, much time should be allowed for repeated observations of the same thing. Otherwise the mental content must be such that nothing but errors can result from its use in thinking. Just here is laid the foundation for that incomplete, inaccurate observation which Herbart has said "trains only dreamers and fools."

Also the clearness or vagueness of the image may be largely determined by the extent and kind of language used at the time of presenting the object. At best only the most simple images can be held before the attention without the use of words, and then but for a short time. The more complicated images depend for their existence upon the awakening of the intellect, which can only be secured through the use of language. The word, merely as the name of the individual image, is not sufficient even for the child of five years (perhaps it is

not sufficient for a normal child beyond three years). Images classified under the concept name can be held before the attention better, and, through the observation of their common characteristics, they become clearer than when each is observed individually.

The evil that objective instruction was intended to counteract was the acquisition of words without the ideas that they were intended to represent. This was the danger of learning books verbatim, as was largely the practice in the early history of public instruction. The stultifying effects of this process cannot be too severely condemned, and a reaction against it was inevitable. The dread of acquiring words without ideas has become so great that not a few teachers appear to be disposed to dispense with words altogether. However, since it is impossible to hold many ideas without words, and since words are indispensable to thinking, the last state of the children threatens to become worse than the first.

It is quite remarkable to find how few complete sentences, each containing subject, predicate, and suitable modifiers are exchanged between the ordinary teacher and his pupils. Presumably in every school, directions, questions, explanations, are given, yet if teachers were to review their own language, they would probably be astonished to find how few sentences composed of well-chosen words they speak in a day. Probably they would be still more surprised to find how few sentences, either correct, or incorrect, their pupils speak in a day. A sustained conversation between teacher and pupils is very unusual, frequently an unheard of thing. Yet it is only in conversation that individuals can learn to talk. A normal school student of more than twenty years stated recently that she never spoke for ten minutes uninterruptedly in her life. She thinks that she never talked in school for five whole minutes. She never conversed with her teachers, and she often spent days and weeks in school without speaking one complete sentence during recitations. Many a day she never recited orally at all. This is perhaps not an unfair representation of the language facilities in the ordinary public school. Questions that are asked are generally elliptical in form, often they are expressed in single words, while the answers are very generally sent back by the children in single words or phrases, not infrequently by the monosyllables "yes" and "no."

Very recently the writer found a young woman who went through her school course without ever reading aloud once, and who picked up such reading as she can do quite by chance.

It is not impossible that the wordless condition of the elementary public schools, may go far to explain the lamentable poverty of language on the part of high school, normal school, and college students.

In some schools, teachers may be found who express themselves well, but who seem to lack the power to secure fluent expression from the pupils. They seem not to recognize the fact that in order to be able to do his own thinking, a pupil must do his own talking.

Sometimes it is urged that in the schools the training in the use of language belongs to the work of the teacher of language. Even here, however, the language is often about as limited as it is in the recitation in arithmetic, and since the material object has also made its way into the language lesson, it is quite as concrete.

It may be remarked that the introduction of the material object into the language lesson is largely for the purpose of providing a subject concerning which the pupils may write. Just here it may be said that instruction in writing seems to be quite in excess of instruction in talking or in reading. The effort expended in this connection seems to be out of proportion to the results secured. Generally lack of power to talk connectedly implies lack of power to write. In both speaking and writing, thought is required. Children waste quantities of ink and paper, together with much energy, in trying to express in writing what they have never had an opportunity to think, simply because they have had no practice in using words to form concepts, and of using those concepts in oral sentences. If half the time which is spent in teaching pupils the art of written composition were spent in training them in oral expression, the results of the other half spent in writing would probably be vastly more valuable than they are at present.

In the work that was done before objective instruction was introduced into the schools, as before intimated, the children learned books by rote and recited them to the teacher. It was a chance whether the text was understood or not. Often no apprehension of the subject was gained. For the pupil's development, this was, of course, very bad, but upon the whole no worse than the accumulation of vague, fleeting, disconnected images, without, in many cases, words either to name or to classify them. Confusion and obscurity among images of concrete objects is just as great a hindrance to mental growth and to effective action, as confusion and obscurity among words. As to the rote-learning, we may say in its favor that the children had a much greater opportunity for speaking aloud than they have in objective work. The sentences were well constructed so that the right relation of subject and predicate was always secured. A copious vocabulary was also gained. Another advantage was that pupil's not infrequently studied their lessons aloud, thereby becoming accustomed to the sounds of

their own voices, so that they were free from confusion when required to speak. There is at least a probability that the habit of silence during school hours during the early years, may have something to do with the rigidity of the lower jaw which is so marked in a large majority of students when they attempt to speak connectedly for some time, or when they attempt to read aloud. Herbart reports that Pestalozzi, himself a very indistinct speaker, secured very fine results in articulation and expression on the part of his pupils by simultaneous oral recitation. Indeed, the well-known story of Pestalozzi's celebrated "hole in the paper," furnishes ample grounds for the inference that whatever the Swiss educator may have done for the development of the idea, he never once neglected the training in language necessary for the formation of concepts.

In connection with the study of objects, one great difficulty is that not infrequently both teacher and pupils regard the material object as the real object of study, instead of which it should be treated merely as a means by which the truths of the subject presented are to be illustrated. Where many and varied objects are presented, this misapprehension appears inevitable. The results are to be seen in many departments of school work. Instead of knowing botany, many of our students know the names of individual plants, and can enumerate their specific parts, together with the length, thickness, form, and color of each part. Notwithstanding the study of objects in both botany and zoölogy, it is not impossible to find high school students who cannot state anything approaching an adequate distinction between a plant and an animal. Instead of knowing zoölogy, the pupils know the hair of a dog, the toes of a horse, and the feathers of a canary bird. They have neither the concepts nor the language necessary for the intelligent statement of principles or rules.

In arithmetic, illustrative objects are numerous, and, as in the other subjects, are continued too long. After the age of seven, concrete objects are probably a hindrance to the apprehension of this subject. Children do not know arithmetic. They know that two blocks and two blocks make four blocks, and that two blocks from four blocks leave two blocks. After the objects are removed, the pupils are still held down to concrete things by the substitution of denominate numbers. It is not impossible to find, even in high schools, pupils who can neither add, subtract, multiply, nor divide, without making most amazing blunders. At this moment the writer has a vivid memory of a young normal school teacher (a graduate of both high school and normal school) weeping bitterly because she could not find the dimensions of the platform in her class room, her principal having given her permission to cover

it if she would tell him how many yards of carpeting would be required.

As to algebra, the concrete processes of adding, subtracting, multiplying and dividing may be fairly well understood, but one not infrequently finds students who cannot shorten a process of any kind by applying a known principle.

Even in grammar the influence of the inaccuracy arising from the study of concrete things may be seen. At least one high school pupil described an abstract noun as an "object not composed of matter, but yet a liquid, for example, water."

The complex character of geography seems to have demanded for its elucidation the introduction of multitudinous and varied objects into the schoolroom. A few years ago, the writer attended an exhibit of things to be used in teaching geography. The material filled two large rooms, and the visiting teachers were cheered by the information that the supply was by no means complete. And yet, the knowledge of geography as displayed by high school pupils is at times calculated to move one to tears. Among those that go to normal schools, some have been known to locate London and Berlin in south latitude. Others have ascribed to the earth two motions, viz.: "notation" and "remuneration." Some have never heard of latitude or longitude, while still others prove themselves quite innocent of any knowledge of mathematical geography whatever. A few months ago a letter addressed to the director of geography in perhaps one of the best training schools for teachers in this country brought this remarkable information: "We do nothing whatever with mathematical geography, as the teachers themselves know no more about it than the children do."

In this connection, it may be remarked that the material objects presented in connection with the study of geography may be divided into two classes, viz.: natural, and artificial objects. The natural objects presented are not infrequently entirely aside from the purpose of geography, being calculated rather to illustrate truths in agriculture, manufacture, art, etc., than designed to make geographical principles intelligible. One writer in this connection presents hints for a study in color, which he admits is not exactly geography but defends his presentation by asserting that color is a very interesting subject anyway. Much of the material suited, perhaps, to the study of physics, chemistry, etc., but presented in geography, must be explained on the same principle. Concrete objects presented in this manner must prevent the acquisition of geographical knowledge no matter how excellent the objects in themselves may be. Perhaps even a greater hindrance lies, however, in the presentation of artificial objects under the name of apparatus; as, maps, globes, mouldings, etc. These objects

are only useful when employed to illustrate a truth, and having filled their purpose, they should at once be dispensed with. After the illustration has been made, the continued use of the material object can only weaken the apprehension of the abstract truth, and must result in the thing assuming more importance in the mind of the pupil than the truth which we wish him to grasp. The object is remembered long after the lesson is forgotten. As an illustration, may be mentioned an incident of a number of normal school girls of about sixteen or seventeen years who were required to assist in laying out a plan of their State on half an acre of land in the school grounds. After an hour's work, one day, during which the director (an experienced and skillful civil engineer and a good teacher) had given very clear illustrations and explanations, the girls went to their class room, and looked at a sand model of the same State. "Oh, girls!" exclaimed one, "How much more satisfactory this is than that thing out of doors!" "Yes, of course!" answered another, "Because it is so much more like the real thing!" "What is the real thing, Emma?" asked a puzzled teacher who was present. "Why, that!" responded Emma as she pointed with an air of conviction to a map of the State which hung on the wall. Further conversation revealed the fact that all the girls were wondering why the "Professor" should make a representation of the map out on the grounds.

The globe used in geography very easily becomes the earth, and may greatly hinder the apprehension of facts concerning the earth itself.

A story is told of a bright school boy who had shown himself remarkably skillful in the use of maps and globes; when he heard a gentleman say that Russia had sent fifty thousand men into Germany, he asked his father how it was possible for so many men to stand upon the small space which stood for Germany on the map of Europe. This very well illustrates the distorted mental content which the excessive use of artificial objects (or indeed, the excessive use of any material objects), furnishes as a mass of ideas for the apprehension of new knowledge. A very successful teacher of geography stated that she was better able to develop the necessary ideas in the minds of her pupils by means of carefully chosen words, than by means of any concrete material that she could find.

In connection with the use of any material object as a means of illustration, careful and adequate language on the part of both teacher and pupil is very necessary. The lesson is not finished until the language of the child convinces the teacher that he is in possession of the concepts which the lesson was calculated to furnish.

It is sometimes urged that, if sense-perception be exercised,

and if concrete images be formed, later in life the pupils will make their own generalizations. This is very like, and quite as futile as the assertion which the people who formerly defended rote-learning were in the habit of making, viz.: that if the pupils learned verbatim the author's generalizations when young, later in life they would fit their experiences to them, and thus come to understand them. As a matter of fact, the latter proposition appears to be the more valid of the two. Students who have had years of school life do not show any special tendency to make their own generalizations.

When, by the nature of the subject, abstract language is required by them, they construct sentences that have at times no signification whatever, or else they say the very opposite of what they mean. A recent graduate being interviewed regarding her apprehension of a definition wrote: "A definition, psychologically speaking is an optical image." When asked to examine this statement, and to criticise it, after some reflection, she declared that she could see nothing wrong with it. Still another, a student of Ancient History, wrote: "The Assyrians became so powerful that they compelled another nation to come over and subdue them."

A third, being required to describe the "Salic Law," wrote: "The Salic Law was no woman or son of a woman could occupy the throne."

A fourth being questioned concerning "Westminster Abbey" wrote: "Westminster is in Montana, Abbey is in Africa."

These amazing statements, delivered with an innocence and a matter-of-course manner that leaves one somewhat dumb with astonishment, are a fair indication of the character of the ordinary expressions of these young people. It is perhaps no matter for wonder that such students should show little or no interest in abstract questions, or in the reading of books that present subjects in the smallest degree abstract. It is perhaps not too much to say that there are many young men and women students twenty years of age, who have been at school at least from ten to twelve years of their lives, who cannot possibly carry on a conversation on any topic beyond the every day happenings of their immediate neighborhood, and of these, they cannot give a listener even a fairly correct idea. When together, with no older persons taking part, their conversation presents a curiously intermingled mass of trivial personalities, expressed almost entirely in concrete terms, relieved and ornamented by slang expressions so specialized that a stranger cannot even guess their meaning. A somewhat appalling thought in this connection is that out of such material a by no means small portion of our public school teachers is constructed.

Since Pestalozzi worked much more by intuition than by

rational insight, it is somewhat difficult to determine just how far he apprehended the scope and the significance of his own procedure. From the interpretation which Herbart has given of his work, however, we believe that he advocated the use of objects in instruction only so far as they were calculated to secure to the child clear images, from the combination of whose common, essential characteristics the concept might be evolved. The denominative term and the proposition was the ultimate aim of the lesson.

The Pestalozzian method of instruction as it was interpreted by Professor Hermann Krüsi, and as it was pursued for the first thirty years at the Oswego Normal School, objective though it was in character, made provision at the close of every lesson, or series of lessons, upon a subject, for generalizations which put the pupil in possession of concepts that were developed through the exercise of his own individual comparison and judgment. The development of "perception, reason, judgment, conception, memory, and language," constituted the object or general purpose of every lesson, and no recitation was considered a success until this purpose was achieved.

As time has gone on, the tyranny of things seen has, to a large extent, excluded things not seen from the schoolroom. In objective work, generalizations appear to be more and more neglected, and, except in a casual and careless way, do not occur. Consequently, the intellectual processes beyond mere primitive attention are not adequately developed. The lack of purposeful connotation implies lack of concepts, which implies lack of power to think except in the crudest fashion.

As in Pestalozzi's practice, so in Herbart's theory, we find marked and ample provision made for the development of concepts, and of power to generalize. In the "Six Interests" and in the "Four Steps of Instruction," only in the first of each is occupation with concrete things implied. The speculative and æsthetic interests, as well as those of the family, society, and religion, all involve the consideration of abstract relations, while the second, third, and fourth steps of instruction afford the largest opportunity for abstract thinking, and for the development of intellectual language. It is doubtful, however, whether much attention is paid to any but the first steps of the Herbartian instruction. Teachers have, in many cases, not been able to understand the importance of association or system, or even of application in their work. As a matter of fact, the first step is only of real value in proportion to the work done in the three succeeding steps. The time spent upon the latter part of the lesson is of the greatest possible value in saving occupation with many things. Herbart, himself, warns teachers against mistaking much occupation with things for

much understanding of principles. He asserted that with only Homer's Iliad as material, he would undertake to develop the six interests in such a manner as to form the foundation for a well-rounded character.

In connection with the use of material objects in the recitation, are two conditions which may, in a way, explain the limited use of language in the class room. The first is that the distribution and collection of material, consumes a large portion of the time allotted to the recitation. The second is that the handling of many different things appears to exert an influence which is unfavorable to connected thinking. As the care and condition of the material is the concern of the teacher, one can understand that she may be so fully engaged with individual things that she has little time or energy left for the real teaching that ought to accompany the presentation of objects.

A teacher of some experience, with young teachers in training in normal schools, states that young students who, when they first enter school, develop considerable enthusiasm for abstract studies, after they have been in the practice school as teachers for ten weeks, upon returning to the normal department for further study, display a marked lack of interest in abstract work. There seems to be an apathy and a difficulty in becoming interested that can hardly be overcome. Principles are not understood, apparently, largely because these students do not develop sufficient energy to apply them. This teacher states: "The condition is not exactly indifference and not apathy. Rather it may be regarded as a complete reaction from tension. The handling daily for ten weeks of some thousands of objects, and the observations of their obvious relations so disperses the attention that these young teachers seem to partially lose their powers of concentration. They can be appealed to only through the senses, and then not for long at one time. Also, they seem less able to take care of themselves during study hours, and are frequently complained of for lack of self-control. They talk about little things not worthy of expression. The students who have done only the abstract work are hailed with relief by both departments, though these also do inferior work after they have returned from their ten weeks' teaching.

Some idea of the number of things handled during a single lesson in Art may be gained from the following data :

For a class of 40 pupils.

1. 40 trial papers,
2. 40 other papers,
3. 40 bowls,
4. 40 times water poured (in each bowl),

5. 40 paint boxes,
6. 40 brushes,
7. 40 specimens from which to paint.

Total, 280 objects.

This number of objects may vary slightly, but not essentially. At the close of the recitation these objects are to be collected and put away, thus making necessary the handling of 560 objects in thirty minutes. Sometimes the teacher employs the children to aid her in distributing and collecting material, but this does not lessen the number of objects handled. It only distributes the handling among more people; nor does it lessen the necessity of the teacher's attending to the individual objects, both in getting the material ready and in putting it away.

If the dispersion of attention incident to handling and caring for so many different things be perceptible in a teacher of ten weeks' standing, what effect must it have on a teacher who works in this way habitually a year at a time?

It is not impossible that this kind of work might go far to explain the apparent intellectual arrest not infrequently observed in teachers who have exceeded five years of continuous work in the primary grades. If adequate investigation could be made, it is not impossible that some peculiarities of much kindergarten and industrial teaching could be explained. As a matter of fact, concrete details do seem to occupy the attention of many of our teachers to the exclusion of abstract questions. At this moment we have in mind a teacher of "Decorative Art" as it is pursued in the public schools. She saw the objects in a landscape, as they would be if she were to represent them in a design on a cardboard of eight by ten inches. When she looked at a sunset, she became immediately troubled to know what proportions of several paints ought to be put together in order to get the glow. In the same school with this teacher was another who told the pupils of her class that the forms of nature were based upon the Prang models. The teaching of the Prang models had been a specialty of this teacher's for some time, and she saw signs of them everywhere.

It is a question whether the strongest mind can long withstand the deteriorating influence of constantly pointing out the characteristics of concrete things. The unsatisfying nature of such work, perhaps, shows itself in a curious restlessness on the part of many of our teachers who seem to be always seeking and never finding. They are eager for improvement and wander hither and thither to clubs, lectures, associations, etc., but it is interesting to observe the excuses which they will make even to themselves, to avoid sitting down to write a simple paper, or to do an hour's hard reading.

If the influence of individual things is deteriorating for a teacher who has some power of resistance, what must it be for children who cannot escape them?

A few years ago the writer had an opportunity to learn the condition of a graded school of five hundred children,—from the kindergarten through the last grammar grade. In the United States no school existed that had for so many years been so thoroughly conducted upon the principles of "objective" "Elementary Science," and "Industrial Methods." Through a change of principals the fact was discovered that the school was beyond the control of the teachers. Teachers from an advanced department came into the lower grades to aid in bringing something like order out of chaos. The children of the three lowest grades were in much better condition than those who had been longer in the school. In the grammar grades were pupils long past the age for admission to the high school. Year after year they had failed in their examinations, until finally there was no hope of their ever being able to enter the high school. The restlessness, excitability, and irritability of the whole school were very marked. The older pupils were noisy, insolent, and ugly. At times they utterly refused to work. The reading and writing throughout the school were incredibly poor, while the work in arithmetic was below that of any other subject. The power of attention was extremely limited, and, if a persistent attempt to hold the children to work were made, many children were attacked with sudden and violent headaches. Through a change of teachers, a change of subjects, and a change of procedure, a change for the better was effected, and an outbreak of school hysteria, or at least chorea, was avoided. The cause of the difficulty seemed to be a long course of ill-digested, or wholly undigested "objective instruction."

One of the most serious difficulties resulting from constant occupation with material things, is the consumption of energy involved. Any person, who, at any time in his life has been addicted to museums, "Worlds' Fairs," etc., will remember how soon during his observation of objects, fatigue set in, and how utterly incapable of thinking he became after an hour or two. Another difficulty is the mental helplessness of the person who is addicted to things. Within himself are no resources for amusement or entertainment. The higher pleasures of the imagination are denied him. He is constantly looking for some new physical excitement. This constant tendency toward excitement is the greatest possible hindrance to the capacity to learn anything that requires reason and reflection. It is, perhaps, not too much to say, that many of our young people in their pursuit of excitement, exhaust their capacity to learn at

a very early age, and seem to acquire a permanent nervous fatigue which may be the reason for the failure of such a large number of our men and women to stand a strain of care or trouble even in early manhood and womanhood.

The absence of the life of the imagination, and of power to think seriously, makes a great void in the life of the individual. To-day the world is full of wanderers flitting from mountain to seashore, from city to country, from island to mainland, from California to Alaska, India, Egypt, anywhere, where they may see or hear a new thing. Social life is full of concrete things; flowers, dresses, foods, play a large part in entertainments of every kind. Theatres are overflowing with things rich, showy, noisy; that shall, night after night, minister to the senses of restless, nervous spectators who are eagerly demanding something that shall excite them yet a little longer.

Occasionally, during the past five years, we have been met by an anxious question as to whether our present social conditions do, or do not, indicate a loss of civilization and a probable reversion to savagery. This dark prospect is certainly not attractive. Nor is it probable. No nation has ever yet passed from civilization to savagery; but, perhaps, not a few have fallen into a worse condition. An awakened and developed activity, without the judgment to direct it to desirable and legitimate ends, must always be more destructive than an activity that is but partially awakened and is still undeveloped. With the latter something may yet be done; for the former there is but little hope, and so long as it exists there is danger.

The school is the conventionalized expression of the social condition of the country. It assumes the form which the real or supposed social need indicates, and presumably fits the rising generation to supply that need. Just now the social need seems to point toward the possession of the material world, even at the risk of losing our immortal souls.

It is, perhaps, not too much to say that our excessive attention to material things, both in the school and in the world, means restriction to the language of material things, which means a loss of intellectual language, which means more primitive and more limited thinking under which our social conditions must deteriorate.

The remedy for existing conditions and the hope of preserving intellectual unity in the country, would seem to lie in everywhere subordinating the material things of life to their earlier and legitimate use, viz., that of making the abstract comprehensible to the end, that it may furnish us with the highest rules of action.

CYNO-PSYCHOSES.¹

CHILDREN'S THOUGHTS, REACTIONS, AND FEELINGS TOWARD PET DOGS.

By W. FOWLER BUCKE, Fellow in Clark University.

PART A. GENERAL CONSIDERATIONS.

I. *Introduction.* In a lecture upon the Love and Study of Nature,² President G. Stanley Hall said that the five great human interests of science, art, literature, religion, and human history and society, root in the love and study of nature. He proceeds to suggest how this has been, and under his direction a number of these forces in their relation to the child and the race have subsequently become problems of research, making as the basis of the study, material collected by the questionnaire method from a large number of children and adults. At that time he outlined what the child's relation and reactions to animals might be, and uses pets as the means of approach. Later, Dr. Hodge published his excellent volume, *Nature Study and Life*, which suggests in a most helpful way, how the school children's native interest in plant and animal life may be developed into an enthusiasm which shall contribute to a "safe philosophy of life." Here the question of domestication

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² Delivered at the public winter meeting of the Massachusetts State Board of Agriculture, at Amherst, Dec. 6, 1898; published in *Agriculture of Mass.*, for 1898.

is mentioned as an introduction to animal study. With the idea suggested by the address and by the book mentioned above, when President Hall named to the writer as a problem of research, the thoughts, reactions, and feelings of children to animal pets, it appealed to him as an interesting and fruitful problem upon which to work. Of course our investigations proved that the dog is the most popular with children.

It need scarcely be said that it is not a dog psychology. The nearest approach to it is in our second part, where are reviewed and brought together the views that the children, and a few psychologists, believed to be its psychic processes.

In its final analysis, the study, then, reduces itself to the answering of the following questions, made evident by the returns and the literature, bearing in mind that the purpose of the study has been, primarily, to know child interests: (1) What has been the rank of the dog with other pets at different ontogenetic periods? (2) What has been the nature of the mind of the dog as seen by those who are attracted by it, through the exercise of which the race and the child have been influenced? (3) What have been some of the chief influences that the dog has exerted upon primitive man, and upon the race in their development, as shown by industry, art, literature, and the returns?

II. In the *choice* of the dog by the children there are a number of interests that must be considered, chief among which are:—

1. *Rank.* Of the number of different pets owned by the more than 1,200 returns preferring the dog to other pets, fifty-six have given either the full list of those which they owned at different times, or if not, then those which they liked best. Thirty-five mention cats; 16 horses; 14 rabbits; 12 canaries; 10 chickens; 8 each, birds and squirrels; 4 each, lambs and turtles; 3 each, calf, pony, rats; 2 each, monkey, guinea pig, white mice, cow, parrot, fish; 1 each, camel, coon, deer, tiger, bear, duck, chipmunk, dove, bantam, pigeon, and ferrets.

Using the total number of returns upon all the animals about which the children wrote, and basing the comparative popularity of pets upon the one which each selects spontaneously, about which to write his feelings and reactions, one finds an interesting parallelism with the above. Of course some slight influence might have been manifest from the rubrics having been followed, making it easier to write upon one than another.

Dogs are admired generally by people not for sporting purposes but chiefly for their companionships. Countess Cassini's (32) three French poodles have lived in China, Russia, France, Germany, Austria, Japan, Italy, and the United States; Senators McMillan, of Michigan, and Edmunds, of Vermont, were

partial to bull dogs, which accompanied them on their strolls when in Washington. The late British Ambassador, Lord Paunceforte, was fond of his dog Briton, who had a registered ancestry (32). Queen Victoria, a lover of all pets, seemed especially to enjoy some of her dogs. Poets in general, and a number of distinguished novelists and naturalists, including Darwin, were fond of dogs. In early historic times dogs were similarly admired. More than 4000 B. C., in Egypt (66), the dog was the friend and servant of man, living with him in the house, following him in his walks, and appearing with him in public ceremonies. Clerke (22) thinks the Trojans possessed him in domestication, as a luxury. Homer has written about him. Women had toy dogs from the island of Malta (57).

The following table is based on the 2,804 returns, then, from school children ranging in age from six to seventeen years, where age is mentioned. The reminiscent papers frequently gave no age, but here the essay was upon the pet appealing to them even yet, in most cases.

Of the 2,804 papers written upon pet animals, the proportion is as follows: Dogs, 42.86% ; cats, 27.57% ; canaries, 6.28% ; rabbits, 5.45% ; horses, 4.64% ; parrots, 3.18% ; chickens, 2.39% ; ponies, 1.42% ; pigeons and squirrels, each, 1.07% ; fish, 0.60% ; lambs and monkeys, each, 0.50% ; goats, 0.49% ; doves and cows, each, 0.39% ; coons and mocking-birds, each, 0.28% ; ferrets and turtles, each, 0.14% ; ducks, crows and donkeys, each, 0.13% ; deer, 0.07% ; orioles and quail, each, 0.04% ; all birds combined, 13.93%.

Langkavel (58) shows dogs to be rare in but few localities among primitives. At Tarim and Flores, in Asia ; among the Suyas, Bakairi, Manitsanos, and Bororo of South America ; in parts of the Linkin, the Maldive, and islands of the Persian Gulf, and in the Comora and old Tasmania Islands of Africa, dogs are not known to exist.

Cope has found osseous remains of dogs in prehistoric strata, and made a careful classification of the types and evolutions of those in the strata of the United States.

Children early form a fondness for dogs. Miss Shinn's niece, at six months, is described as having a new awakening on observing the dog that was in the home all the child's life. Rarely do they appear to acquire a natural antipathy to dogs, although Fèrè (34.358) discusses cynophobia, but observes that it is more rare than a morbid fear of insects and animals of a smaller kind. Helen Keller (56.214), although at twelve owning a "beautiful pony and a large dog," said she would like a little dog to hold in her lap.

It will thus be seen that children, history, anthropology, geology, and various types of people at the present, each make

a contribution to prove the universality of the dog, and its long life and intimacy with the child and the race, making it difficult to say, whether as a result or as the cause of his popularity, Hachet-Souplet (43) have found him to rank next to man in his intelligence to learn through persuasion.

2. *Sex differences.* As the returns are from children of both sexes, between the ages of seven and sixteen, one is afforded a means of observing sex and age differences to some extent without attempting to formulate any definite norms in regard to either. That the significance may best be understood, it is necessary, however, to make a few comparisons with the other pets at this point. It will be seen below where the age and sex interests of the six most popular animals, dog, cat, canary, rabbit, horse, and parrot, are represented: (1) That the dog, horse, and rabbit, are more in favor with boys than with girls in every age studied; (2) That the cat, canary, and parrot lead with the girls in every age; (3) The cat seems to be most popular with the girls at eight years of age, then declines steadily, while eleven is the culminating age with the boys, with rapid decline thereafter; (4) With both boys and girls there is a steady increase or growth in favor of the dog, perhaps greater with the boys during or at the dawn of adolescence; (5) During the earlier years the dog stands in about the same favor with girls as the cat does with the boys, and *vice versa*.

Interest in the six most popular pets at different ages:

		Age, 7	8	9	10	11	12	13	14	15	16 yrs.
Dog,	B.....	33.5	41	44.5	42.5	53	51	50.5	57	54	53%
	G.....	6	3.5	36	37	45	42	44.5	40.5	46.5	48%
Cat,	B.....	6	16.5	19	22.5	24	15	19	9.5	12.5	
	G.....	33.5	41	39	35.5	36.5	31	28	32.5	27	19%
Canary,	B.....	2	1	5	5.5	2.5	1.5	3.5	3.5		
	G.....	6.5	2	5.5	5.5	6.5	12	9	8.5	8.5	10%
Rabbit,	B.....	16.5	16.5	9.5	10.5	8.5	9.5	7	5.5	7.5%	
	G.....	13.5	12	8.5	5	3.5	2.5	2.5	2.5	2.5%	
Parrot,	B.....	5.5	0	5	1	1	1.5	0	1.5	1.5	3%
	G.....	6.5	2	1	4	3.5	5.5	8	4.5	6.5	6.5%
Horse,	B.....	11	0	5	3	1.5	7.5	9	8	13.5	24%
	G.....	6.5	6	2	2	2.5	3.5	3.5	5	5	10%

The percentage in each case is computed from the total number of returns at the respective ages on animal pets.

3. In a study of this kind there are many *things external to the real qualities* of the animal that may assist in making it popular among children, such as the associations of friends, or some single act which may have served to win its way to the heart of the child. While these considerations may be secondary, yet they have a place in the study and will here be considered. Three hundred and seventy-five, nearly one-third, were gifts. One third of these were from father, and is some

index of the father's interest in his children's pets, or perhaps, in many cases, his own interest in this animal, although some parents provide each new child of the house with a puppy, that they two may grow up together and assist in each other's development. Some were found, while others came, and out of the humane spirit of the child, or a desire to own a dog, the home was afforded an asylum for the new comer. In twelve cases the animal was rescued either from the "pound" or from the hands of some "inhuman" creature, out of sympathy aroused by the observation. One can only guess how the first dogs became pets, but since then they have frequently been acceptable presents. In England (107), dogs are sometimes ranked according to the rank of the owner, and English dogs were regarded as acceptable presents even to kings, down to the days of James I. The East India Company sent out English dogs to Great Mogul, and Sir Thomas Roe, ambassadors to the court of Jehon Ghir. The King of Ajmere was delighted with an English mastiff, and Keridge says: 'Two or three fierce mastifys, a couple of Irish greyhounds, and a coppel of well-bred water-spanyells would give him greate contentt.' Charles Kingsley (50) was pleased to accept his dog Victor, a present from the Queen.

4. *Length of Association* is frequently a factor which develops strong friendship, as is shown by the curious relationships formed by prisoners and others to overcome solitude. Although this element may have little conscious recognition among children, it throws some light upon the study of pets. Less than half give any intimation of how long the pet has been in the home, but of these the time has been from a few months to eighteen years, or an average of 3.4 years.

5. Many reasons are given by the children for preferring the dog to other pets. In their own language the reasons are as follows :

"Papa's gift," "pet," "does tricks," "catches rats and mice," "watches house," "quiet," "likes me," "intelligent," "obedient," "guards me," "my own," "hunts," "follows me," "protects me," "only pet I have," "barks when I come from school," "more suitable for boys," "pretty," "good to me," "cute, clean, bright," "more of a comfort," "useful," "faithful," "tries to talk," "I raised him," "affectionate," "woolly and soft," "nice color," "companion," "not troublesome," "peculiar," "pedigree," "he rescued me," "hard to win," "small," "large," "gentle," "playful." F., It seemed more nearly human; it was more sympathetic than other animals.

We see in these expressions all of the essentials of domestication mentioned by Galton (39.259), and perhaps some which he does not mention, as follows: (1) hardiness; (2) fondness of man; (3) desire of comfort; (4) usefulness to man; (5) breeding freely; (6) easy to tend; (7) selection. The reader may

readily group the expressions of the children under the foregoing heads.

III. *The names* given to dogs do not always signify that the dog has made a certain impression on the child or upon man, yet, looking at a list of about eight hundred names for this pet, a clue to his friendship with the race may be found. Dogs' names, in story and legend, have had little to do with his name; neither have famous show dogs. The motive which gives the name has not always been mentioned, which, along with other reasons, would not admit of fast lines of classification, yet there is, with children, a sense of fitness recognized, which affords an idea of what some of the qualities are which stand out most prominently in the dog's personality. Six per cent. of the list suggested the heroic idea as embodied in such names as Anthony, Colonel, Commodore, Dewey, Gelert, Hero, etc. The recognition of poise, dignity, command, power, and the like, are exemplified in such names as Noble, Judge, Queen, Victor, Rex, etc., making over twelve per cent. of the list. A few may, perhaps, be classified under the recognition of the fighting propensities, as Lion, Bounce, Dash, Tammany, etc. The guarding and protecting qualities are seen in such names as Collie, Shep, Guard, Safety, etc. General types of character and temperament may be seen in such names as Boosy, Bum, Buffalo Bill, Dandy, Gip, Sly, Sport, Tramp, etc. More than one-sixth of all the names are suggested by what would appeal to the eye, subordinated, more or less, by the other senses. Examples of such are Beauty, Blacky, Cozy, Diamond, Goo Goo, Pearl, Sparkle, Speck, etc., of which the most popular are Spot, Tip, Beauty, and Brownie. Size is recognized in names such as Babie, Beppo, Midget, Peanut, etc.

Among the primitives and ancients, similar characteristics or motives may have given the name. Among the Egyptians, (66) Si-to-gai meant son of the bat; Akeni, the ferreter; Soubou, the strong; Nahsi, the black; and Rameses II had a dog whose name signified "brave as the goddess Anaitis" (Anaitiennaktou). The primitives, in some places, give to the dog the name for mammals in general, and with others dog and pig have the same name; elsewhere the generic name is synonymous with beast of prey, carnivorous animal, sometimes animal in general, so that here we have use, habits, and rank of the animal in his relation to the race suggested, as motives in giving him his name. His well-known habit of bolting his food, and the lack of esteem in which he was held, impressed themselves upon the Turko-Tartars that he acquired the generic name "kurt" (greedy animal), and "et" (low, base). Shakespeare calls one of the dogs of his creation, Crab, and

describes him as "the sourest natured dog that lives,—a cruel hearted cur." The power of a name may sometimes be recognized and used, as with the inhabitants of Grenada (36), who are careful to name their dogs Melampo, Cubilon, or Lubina; said to be the names of the three who went with the shepherds to see the infant Jesus at Bethlehem. Dogs bearing these names, they believe will never go mad. Purely onomatopœic names can also be found, doubtless.

Our conclusion is, that perhaps universally the name suggests a recognition of personality, be it great or small, commendable or objectionable, and in some cases the feeling is not unlike that among primitives where a name is synonymous with an essential part of the soul.

IV. *Some interests, chiefly somatic*, or with a strong physical element in them, have been prominent in the returns, and, while they are minor in nature, they give a side picture of the relation of the child to the dog.

1. *Kinds of dogs.* Our returns show no abnormal admiration for any special breeds of dogs. The fact is sometimes observed that the dogs are highly bred; "he has a pedigree," or "he is very large." His peculiarities are described. His color is frequently attractive. His general form, or some peculiar formations are noted. Points are sometimes observed which dog judges mark as distinguished. Broad classifications have been made, however, beginning in early adolescence, and about twenty-three per cent. of the whole number of papers touch it more or less; the girls leading. The order of popularity here is Collie, Fox Terrier, Newfoundland, Bull dog, Pug, Water Spaniel, Setter, Bird dog, Pointer, Greyhound, Skye, Rat Terrier, of which the first three and the Water Spaniel are almost as popular with boys as with girls. St. Bernards, Poodles, Pugs, Wolfhounds and Greyhounds seem especially in favor with girls, while Bull dogs, Bird dogs, Skyes, Rat terriers, and Pointers are admired by boys. As has been mentioned, differentiation of species does not begin much before the twelfth year, hence is strong during adolescence. Hunting dogs are first mentioned in the 13th year. Bull dogs are mentioned by one boy at 7, next by two boys at 9. Mummified specimens of the Shepherd dog are found in Egypt (66); the Terrier was also known there. One of Darwin's most favored dogs was a terrier (28.91). The Bull dog was known among the Romans as the Pugnaces (12). The Pug is a very old dog, known in ancient Egypt (66). The Spaniel existed in Switzerland during the neolithic age. Fitzinger (12) reports 30 varieties of this dog. Sir Philip Sidney especially admired the Spaniel, which he called "the gentleman of doggies" (36). Among the admirers of the St. Bernard may be mentioned Mrs. J.

Grant (72.444), Mrs. Browning, and Mrs. Anna Whitney, who was the first to start kennels for them in this country.

This interest in species and varieties might be traced indefinitely, and so far as it goes would suggest in what features people and classes are interested. It would develop the fact that man may have great authority over selection, that there is a wide difference in features that are pleasing; it would show to what extent the eye must be satisfied, and perhaps, make clear what is seen in our returns, that psychic characteristics are, after all, perhaps the centre of interest. The laws necessary to produce such transformations, show to be in evidence with the adolescent, and have not been overlooked among some primitives, as observed by Darwin (25.II.190) in regard to the Ostyaks of Northern Siberia.

The observation to be made upon breeds, as studied in relation to children, is that the selective interest has its dawn in early adolescence, when the dog must conform, more or less, to the general interests of the owner, differentiating among boys to pugnacious, hunting, courageous, and intelligent qualities; among girls to grace, beauty, fidelity, companionableness, and sometimes, to dependence. The interest at adolescence is more of an active one; while previous to that it seems to be a little passive in the sense that the environment is rather accepted than made.

2. *Adornments.* That the dog must appeal to the eye is a motive among the children for adorning their dogs with collars and ribbons. Especially when others may see him he must show off in this manner. To attract attention, the ear is sometimes appealed to by means of a bell on the collar. Of course, responsibility has been a motive for collars, also, as in municipal and government ordinances and laws, where damage may be done. Identification makes it necessary, also, that dogs be labeled. In 1883 a French society instituted "Colleurs d'honneur" (36), and have bestowed such on a number of dogs for "heroic deeds," recognizing among such unusual types of mind, as shown by their sagacity in heroic conduct. Utility caused the historic war dogs to be garbed in large spiked collars.

The collar interest has not gone without notice by a few of the poets, and have called out some quaint inscriptions. Ownership was recognized by Swift when he wrote:—

"Pray, steal me not, I'm Mrs. Quigby's,
Whose heart in this four-footed thing lies." (49).

Pope wrote likewise for the collar of one of the pup's of Bounce, upon whom he wrote a poem. The pup was given to

Frederick, Prince of Wales. Ownership, seems here to have been the motive :

“ I am his highness' dog at Kew,
Pray tell me, sir, whose dog are you? ” (61.)

The spread of the collar interest in this country, at least, has been recent. In 1878 the whole traffic amounted to \$5,000 annually, all but \$1,000 worth imported. Ten years later a company, with Bremer, of Medford, Mass., at its head, was doing a business in Newark, N. J., amounting to a million dollars annually (113).

In fine, this interest with children is one of attachment, prompting the desire of impressive appearance, or ownership, with reward for good deeds. With adults, these are mingled with fear of hydrophobia, desire to suppress number, and responsibility, or utility.

G. I bought a collar for him, and had his name marked on it. G. Each week she would have a bath and then I would put a new bow of some bright-colored ribbon on her collar. G. I tied a blue ribbon around his neck and a little bell which tinkled when he moved around. B., 11. When I took him out I would make him get his ribbon and stand until I put it on his neck. G., 14. I bought a collar with bells on and Teddy runs around to hear the bells ring.

3. *Appearance of teeth, hair, etc.* As shown by the names which dogs bear, the interest in their shaggy coat suggested by the blind, interest in the markings and incidental mention of the dog's coat, one may understand how it is that primitives, as the Wahaha (58), carry dog tails on their spears, or how some Australasian tribes insert the bushy tails of the Dingo dog into their beards, in order to make them longer. The girdle of the Parsi, worn at puberty, the Mesopotamian Jews say are plaited from dog's hair (58), with other material. Even blankets are made of it on Puget Sound. The general expression of the dog's face has made its impression, as with the children, giving origin to dog head features. The Cubans described the Caribs to Columbus as man eaters with dogs' muzzles. This might throw some light upon the beliefs in dog origin. The primitive club houses are adorned with dog skulls. In the returns it will be seen how the teeth have been noticed either for sharpness or for the whiteness.

G., 15. If you would tell him to laugh he would show all of his white teeth. G. He raised one side of his nose and opened his mouth, showing his closed teeth, and rolled his eyes so that only the whites could be seen. G. If I came back he would wag his tail and show his teeth which was always a proof that he was especially delighted. B., 10. Color black, feet white stripes, piece of white on the side of his neck, point of his tail was shaggy, his whiskers white, and he had sharp teeth.

When there were fewer polished objects for adornment, it is

no wonder that the teeth of dogs were coveted among primitives. Men, women, and girls wore the eye-teeth of dogs and other animals for this purpose. They were used as a breast ornament at Frederick Wilhelm's Haven, in New Guinea; and as necklaces and bracelets in the western part of the south coast of the British portion of that island. A traveller on the Solomon Island, saw 500 dog teeth in a single necklace, each carefully bored through. They were taken, two from each dog when alive. In the southeast portion of New Guinea all four eye-teeth were taken and used as money. The Igorotto wear ornaments of dog teeth. In Africa, similar necklaces have been seen (58). The old eastern legend will be remembered, how, it is said, Jesus and his disciples approached the body of a dead dog, when Jesus said: "Pearls are not whiter than his teeth" (36).

The appropriateness of trimmed ears and a cobbled tail, seems to be recognized by some, without comment as to the cruelty of the treatment, except in one case where a girl observes that her dog was pained by it, and another whose dog suffered, but there was nothing else to do to make the dog fashionable. This habit of tail amputation was resorted to by the Esquimaux of Alaska, where they drive their dogs four abreast, and have them follow each other so close that the tails were too much in the way (58). In Plutarch, it is related that Alcibiadar had a dog whose beauty was great, but he had his tail cut off, indicating that thus the dog was disfigured, that instead of appearing in fashion, he was out of style so much that his friends criticised him. He said if it were not that, they would speak of some greater fault. Langkavel (58) speaks of dog mutilations by the English, but contrasts it with the savages who do not mutilate their animals. Convenience, appearance, and contrasty effects, have been, then, the interests which have led to mutilation.

4. *The interest in the dog's food* is not much in evidence, perhaps from the general feeling sometimes present in the reports, that a dog needs very little genuine care, and from tradition in regard to his food. That the anthropomorphic idea of feeding prevails, needs no further proof than to list the articles of diet in descending order of frequency of mention: Meat, milk, bread, potatoes, candy, "all kinds," bones, cakes, gravy, ice cream, cooked meats, dog crackers, coffee, soup, peanuts, pie, apples, vegetables, force, eggs, crackers, tomatoes, fish, turkey, liver, sugar, corn pone, chewing gum, and pretzels. This may throw some light upon the thoroughness with which the dog has been made a domestic animal, and how much he has become man's companion. The time for feeding has been given but slight attention, but it is usually after the family meal,

when he enjoys the remaining viands, or the plate scrapings, or what has been shaken from the table cloth, as, when Lazarus begged at the rich man's gate. Some discrimination is made in favor of puppies, which are fed soft foods, and more frequently, although all are fed much more frequently than dogs require food according to the best authorities, and given also, without discrimination, a greater variety. The dog seems to be so abundantly able to help himself that the whole matter receives less attention than one might suppose. There is concern for the dog in many cases, however, and such as would contradict Cornish (23.xxv), who contends that the dog is largely a vegetable feeder, for meat is clearly evident as his leading diet, although cooking may have much widened his bill of fare, and necessarily along the vegetable line. A large number say "he eats everything," or "anything." Perhaps Langkavel would include more than the children mean when he speaks of the value of the dog as a street scavenger; man feeding him what he does not want,—as dead animals, the bones of game, and in many cases, human corpses. This is, and has been true, in many places and times in the history of the dog, however, among the Mongolians of Asia with "misera plebs," in Bactria, by Hyrcanians and Sogdians. While the Kalmucks burn the corpses of the better classes, the inferior types are thus disposed of. In Kuldja, beggars are fed to the dogs (58); "in Urga, the dogs stand waiting for his last breath, and he is devoured." It is said that in Kuldja even the better class are merely carried to the cemeteries while "the dogs conduct the interment by means of their stomachs" (58). In these particulars and that of the authentic case in Chambers' Journal for '81, where a Scotch terrier killed and swallowed twenty-seven mice, and where, as the children have noticed, that dogs bolt their food, the dog has not gotten far from his original habits when all these things were necessary to life. It would seem, from our papers, that even now these traits are not without their genuine service to our canine friend.

But there is another side, more prominent with the children, which accounts for the many over-fed dogs, dogs too fat to be active, too round to be shapely. As will be noticed, his appetite is catered to in the way of sweetmeats and all things that the children care for. The animal of the child's affection must have a comfortable stomach, a feeling that has doubtless prevailed in parts, ever since his domestication. In many instances the motive has changed, for his use has changed. Mr. Oldfield (25.199) says the Aborigines of Australia are so anxious about European kangaroo dogs, that several instances have been known of the father killing his own infant, that the mother might suckle the much prized puppy. Of course the

practice of suckling puppies in dog eating countries, as in New Guinea, Tahiti, Hawaii, and Society Islands, is well known (58). Joest saw in Burma, in 1879, a girl nursing her own offspring at one breast, and a pup at the other (58). In Gran Chaco, women nurse young dogs, but not motherless babes. The dogs in parts of Siberia are well cared for. The people endure pangs of hunger to support them. Along the Kolyma, 2,265 dogs each receive four herrings daily, or 3,306,900 fishes for a year's support (58). In North Borneo, flesh is suspended from a tree, where dogs eat it to acquire courage for the wild boar hunt (58). In some sections where our returns have been collected, there is a feeling that gunpowder fed to dogs will produce a courageous hunting dog. This did not appear in the returns, but many mention feeding this, or sulphur, in food for health's sake. Hopkins (47) observes that in the Rig Veda the dog is so much the companion and ally of man that he pokes his too familiar head into his master's dish; which is the intimacy of many of our dogs under consideration. Perhaps no dogs were better cared for than those of Queen Victoria (15), whose feeding time was 4 P. M., the food being prepared in a special kitchen, and consisting of soaked biscuits, vegetables, meat, bullock's head, pluck, and sometimes a little beef. Oat-meal was added. Stables (92) says the dog should have a very light breakfast, and a dinner at 4 P. M. in winter, and 5 P. M. in summer, and suggests as an ideal bill of fare, that similar to the one used in the Queen's kennels. There seems to be a consensus of opinion that one-third of the amount of food should be meat, but these points have not been observed by any of the children.

Sir Edwin Landseer, who, by some, has been styled the "Shakspeare of Dogs," has not overlooked in his paintings the boy in relation to the dogs' diet, in this friendly and careful relation of the one to the other, in his "The Highland Breakfast." He has shown here many points, but one cannot observe it without the recognition of the genuine satisfaction of the dogs, and the modern dog nature as to his foods, but especially the pleasure of the boy in observing the dogs.

Upon the whole point of hygienic diet, it might here be observed that with a pet so universal, some practical lessons of hygiene, and an excellent point of contact with this subject and the child, has been generally overlooked by teachers. The best way of getting a valuable knowledge of physical comfort is by a comparative study such as here afforded.

5. *His bed* is as varied, depending upon size, disposition, practical wisdom, sense of fitness, etc. Some observe that their dogs are almost entirely nocturnal, or that they have a rhythm of rest and activity through the day, and that their

sleep is so light at night that they are aroused by noises that the human ear does not detect. A general feeling that he must be comfortable in sleep, seems to characterize the returns, as will be seen in the illustrations following.

G., 11. He sleeps in a basket, and he is always awake when I come down stairs. G., 11. He had a very comfortable bed and he showed that he liked it. He would sometimes play with the covers. G., 11. He sleeps under the stairs on an old comfort. G., 11. She likes to sleep in the coal house. B., 11. He sleeps in a large box at night when it is cold. B., 11. He sleeps in the little house made for him. B., 11. In a box in the kitchen. B., 12. On the porch in a box with a piece of goods to sleep on, and something to cover him. G., 12. Curled up in the box filled with hay, and we cover him with the blanket mamma made for him. G., 13. Sometimes about four or five o'clock in the morning she would get in bed with me. B., 13. At bedtime it will hide until we are in bed, then it will get in bed with us. G.,—. Under the stove in winter. G., 13. Prefers the lounge or sofa pillows to his box in the yard.

That the dog must be comfortably provided for by the master, and that no other would do quite so much for him, must have been the spirit of the people in Homer's day, for he makes Argus a neglected dog after the departure of his master, making his bed on a manure pile, dirty, full of parasites, and swarming with vermin (22), although the Greeks had the reputation of caring for their animals and giving them the best of the field. The gods honored them with their harvests (57). Darwin, while at Cambridge, won the affection of the dog of his cousin, W. D. Fox, and it is believed that this may have been the animal that used to creep down inside his bed, and sleep at the foot every night (28.91). His dog Polly had her home in a basket in his study (28.92). In general a pet dog is too highly humanized to be placed in a kennel made of a barrel, filled with straw with an opening even at the side, near one end, and open to the leeward, as recommended by men of dog lore.

Desire to produce efficiency, interest in personal comforts of the dog, economy, attachment, a desire for close relationship, have been some of the various factors impelling the child and the race to the food and shelter interests upon the dog, which, in many cases, has not been sufficiently great to produce a feeling against using him as a scavenger.

6. Scarcely more than one-fifth have had any *experience in nursing* dogs through any sickness, or have needed to administer any remedies. One sad thing seemed to be that in cases that seemed hopeless so many times, artificial death, like in the philosophy of Seneca, seemed to be the way of escape. Some experiences have been interesting and profitable on the part of the child and the dog. The illustrative expressions are as follows:

"Rocked it to sleep," "went for the doctor," "put it in warm water," "kept it nice and warm," "sent it to the dog hospital," "bound up its sore foot," "sick from over eating then gave him only limited rations," "druggist gave me medicine," "had consumption and I took him to the pound," "gave him sweet milk when he was poisoned," "would eat grass and be all right," "when he was ill we sent for a book on dogs."

It will be seen that hydrophobia, epilepsy, constipation, accidents, nausea, tuberculosis, nostalgia, and general diseases have been diagnosed, and in many cases the children have been stimulated to seek further knowledge that the dog may be genuinely cared for. It is certain that a feeling of sympathy prompted the care in every case. In some cases, where it was evident that no help could cure, the dog mysteriously disappeared. None ventured to nurse a dog through hydrophobia, which is universally dreaded, although Byron's love for his dog Boatswain, prompted him to do even this (61). This fear of the disease hydrophobia, is due, doubtless, to the folk lore of this country that one bitten by dog will go mad if the dog goes mad, and at the same time. This is true in Great Britain (30). Shakspeare has evidently made use of the idea in *The Merry Wives of Windsor* (IV.2), "This is mad as a mad dog," and in *The Comedy of Errors* (V.1), to show the force of jealousy,

"The venom clamorous of a jealous woman,
Poison more deadly than a mad dog's tooth."

The interest in providing remedies for pet dogs in this and the more hopeful cases of sickness, has inspired much study, not only, as has been seen, among children, but among adults, and has called out some excellent manuals upon the treatment of dogs, best of which in English, perhaps, is that of Wesley Mills, M.D., of Canada. Pat, the famous dog of the 72nd regiment of Scotland, when taken ill in Egypt, was sent home that he might have the best treatment, and for this purpose highly enthusiastic devotees have founded hospitals. Ferrero (35) refers to the fact that in India there have been animal hospitals from time immemorial, and at Halloway, in October, 1860 (73), a home was established in London for lost, starving, and sick dogs, with the following motto: "I cannot understand that morality which excludes animals from human sympathy, or releases man from the debt and obligation he owes to them." Within a year this place had fifty annual subscribers, and another fifty donors. It owes its existence to a benevolent lady of Canonbury. Following this example, such hospitals are now numerous in all sections of many countries. In Germany (42) there are establishments for washing, shearing, cropping, and training dogs.

The returns, as will be noticed, show a recognition of the

dog's appreciation for injuries cared for, or for nursing in general, which is not alone a juvenile fancy. Gordon Stables, M.D. (93), rendering medical service to dogs, has observed that having removed a lachrymal fistula from a Pomeranian, three miles away, and having nursed and cured him, the dog afterwards paid him periodic visits. His own dog Tyro, on being periodically tapped for dropsy, would go around the room and lick the hands of the assistants, as he believed, in gratitude, realizing that the operation was necessary. He believes the same dog showed appreciation to a woman who saved his life by holding a cut artery, that ever after, although he did not like cats, he befriended hers. Dr. Lindsay is quite serious in his work on animal psychology, that dogs have this fine sense of appreciation and a knowledge of the purpose of one who operates upon him, but it seems that while the observations may be as recorded in every case, a careful study might not always warrant the interpretations placed upon them. For instance, would not and have not dogs licked the hands of those who have purposely done them an injury? But in our returns, whatever the dog's attitude may be, in truth, we see the rudiments of that which grows into the numerous enterprises for the the care and comfort of the dog, which is the object of so much of our affection and sympathy.

PART B. THE PSYCHIC LIFE THAT HAS INTERESTED MAN.

So far as this study has proceeded, it has doubtless become evident that the centre of interest, which has made itself felt in naming the dog, which has influenced choice, given meaning to various breeds, and induced him to be fed and cared for in sickness and health, has been in the main the nature and type of mental power, the character and scope of emotions and activities which the children, adult admirers, and the race have been induced to give to this favorite pet. The question which next concerns us then, is, what is the psychology of the dog, as seen by children and other admirers? What is the type of mind with which, in a composite way, it has drawn out the race and the child in this great interest?

I. *Intelligence.* Comparative psychologists differ largely in most details, and such men as Romanes, Lindsay, Courmeller, Houzeau, Alix, etc., construe in an anthropomorphic manner, while Ribot is less so, and Morgan and Thorndike seem to be almost alone in the conservative field, following the motto that nothing shall have a higher interpretation than is necessary to explain. Hachet-Souplet (43) caution students against accounts given by friends of the activities of favorite dogs, yet place him high in psychic power. Whitman (103) calls attention to

gross errors of interpretation, and exhorts to "make haste slowly." Zabriskie (105), who acknowledges that he never knew but two dogs, and those unfavorably, contends that there is too much abnormality of feeling about him, and believes all would be better if less sentimentality existed upon the point. That such a type would be as little able to interpret a dog's power as a devoted friend, goes without saying. Lubbock (64.272) admits the true friendships of dog for man, but contends that we do not know the nature of his mind. Morgan (71.140) says his intelligence ceases with the concrete, and his acts are of the sense trial and error order. Hachet-Souplet (43) make his intelligence "overt," throwing light on reason, abstraction, etc., which is virtually an agreement with Morgan's statement. But that the dog is valued more for his mental qualities and senses than for any other reason, has been observed many years ago by Darwin (25.205) and is substantiated by the many anecdotes written of him, and the copious illustration in the returns from the children. Schopenhauer (4.67) believes the difference between man's and animal's mind is quantitative, not qualitative; and Jesse (53) gives the dog every quality possessed by man, although not all in the same dog. William Smith, author of *Thorndale*, calls him "an arrested development of man" (16). It is rare that his intelligence is not attributed to his long association with man. His bark, as will be seen, is perhaps due to this change, and he certainly conforms more or less to man's notions, either for the good or evil of the dog. Romanes (84.437) takes the view of improvement, and Evans (31.218) calls attention to what is probably true, that in China and Polynesia, where the dog is used merely for food, he is a dull and sluggish beast. There is a feeling in parts of this country that to know the character of a man's dog is to know the man. The observations, selected to show as much variety as possible on intelligence, are as follows:

B., 12. When you let him smell a handkerchief, then hide it, he will find it. G., 11. Used to come to mine, and to my brother's room, and wake us up in the morning. G., 11. If I were up stairs and mamma wanted me, the dog would come up and bark to tell me. If we do not want him to know what is taking place, we must spell some words like *out*, *walk*, and *take*, and even then he seems to know. G., 11. If his first call in the morning was not heeded, he would make the second trip after me. G., 12. He distinguishes between the two telephone bells and the door bell. When the door bell rings he runs to the front door, barking. When the telephones ring he lies quiet. G., 12. Its brightest thing is that it sits up in a corner and counts seven with its fore feet. G., 12. When he wants anything he will bark three times. G., 12. She can understand French, because my uncle always speaks it to her and she understands him. G., 12. Think he knows what we talk about, for when I must go to the store and I ask for the basket, he

goes to the place where the basket hangs, and barks. B., 12. I taught him to come when I gave a certain whistle. B., 12. One day a mouse got in the sweeper. Ever since then every time my mother uses it he barks. B., 13. If I say 'cats' or 'rats' it will put up its ears and look in the corners and under the bureau. G., 13. She seems to understand and obey me, but no one else. G., 13. He will be very quiet while we are eating, but if he thinks we are too long he will put his head in my lap. If mamma says, 'Is the boy hungry too,' he will bark, wag his tail, and run out in the kitchen. G., 13. He can understand German and English languages. G., 13. Its mistress before me must have used the broom as a reminder, because he always growls when we show it to him. G., 14. When mother rattles any money he barks, thinking we are going to the store, and he wishes to go along. G., 15. He can always tell the butcher's bell, and he barks till I give him a piece of meat.

In observing these returns, and the various writers upon the psychology of the dog, we note the following points of interest:

1. *Perception.* Although we have no record of his reaction-time having been studied experimentally, it is generally believed, with Charles Dudley Warner (99), that it is shorter than man's, and perhaps his hearing is more acute, while his scent has been regarded as superior. Grant Allen (2) believes it is his sense of smell that makes him intelligent; that by scent he knows his master and objects, and calls attention to the size of his olfactory lobes. Romanes (86.93) says "the external world must be to these animals quite different from what it is to us; the whole fabric of their ideas concerning it being so largely founded on what is virtually a new sense; not simply our own sense greatly magnified" (smell). And later (67) he made some very careful experimental tests upon a dog which he owned for eight years, which show his remarkable power of scent. His observation by sight has impressed itself very much for he has been attributed the power of reading facial expression to a great degree. His acute hearing makes him the trusted guardian of the house, a police assistant, and a servant in picket duty. Morgan (71.144) makes his dog a keen observer by saying that he always lifts the latch of the gate in the way he did it in the first time. After the habit was once formed it can otherwise be explained, but not until then.¹

2. *The memory of the dog* has impressed people throughout civilization. Without it his many examples of fidelity would be lacking. Homer, in the *Odyssey*, makes the dog Argus recognize his master after an absence of twenty years, and Darwin (27.74) (28.91) had a surly dog, savage to others, which, after the return from his Beagle voyage, being absent five years

¹ Upon this point Hobhouse, in *Evolution of the Mind*, suggests in opposition to Morgan and Thorndike, that attention is an important factor.

and two days, rushed out and set off with him on his walk as he had done five years before. When Geddes (61) desires to note the change produced in the dog's mistress by having her locks cut off, he has the dog not to recognize her. In Southey's poem, "Roderick, the Last of the Goths," none recognize the hero on his return, not his own mother, but Theron, the dog, follows him. A writer in the *British Quarterly Review* observes that when a dog's master has deserted him, in despair the dog takes the cast off clothing, lies upon it for days. This is paralleled by the behavior of one of the dogs in our returns when the clothing of his little mistress are seen. Grant Allen (2) thinks the dog knows old friends by memory of odor. But this could not be entirely correct if I interpret correctly a small dog's behavior in front of a life size portrait of her mistress, deceased sometime before; a fact which has likewise been observed by Romanes (84.449) and Alix (1). Jesse gives various anecdotes of these interesting observations. Gerald Massey, in the beautiful little soliloquy by the dog before the boy's portrait in "The Dead Boy's Portrait," has immortalized this sentiment of the dog. Dogs trained to bring cards in order (71.200), ring bells (65), know words and sounds (70), etc., must have some degree of memory, perhaps much of it a muscular memory. Scott, in the *Talisman*, recognizes the trustworthiness of the dog's memory in having him bring a culprit to justice—having Richard say of Rosval, "He forgets neither friend nor foe, remembers, and with accuracy, both benefit and injury. He hath a share of man's intelligence, but no share of man's falsehood." . . . "You may bribe a soldier to slay a man with his sword, or a witness to take life by accusation; but you cannot make a hound tear his benefactor." He continues to suggest that no possible disguise can put him beyond the dog's recognition.

3. *Imagination* has some attraction. Dreams, a fact observed by naturalists and others, Darwin (27.74) believes to be the best evidence that he has an imagination. Jesse (64) notes this fact; Romanes (86.148) says "that dogs dream is proverbial," and it has been observed by Seneca and Lucretius. It has been noticed in our returns that dogs run around the house playing with some imaginary things. Dogs barking at the moon on a bright night is thought by some to be an illusion. Tennyson, in *Locksley Hall*, Pt. 1, speaking of Amy's husband, "Like a dog he hunts in dreams."

4. *Judgment and reasoning*. Evans (31.86) says that the dog distinguishes between canine and feline. Darwin (27.75) says animals may be seen to pause, deliberate and resolve. Lindsay (63.462) believes dogs can judge distance; judge rapidity of currents; has idea of money; and quotes Watson

as authority for recognizing distinction of human rank. Lubbock (64.277), (also 14), could not find in an experimental way that a dog knew how to count. Piatt (76) is impressed with the discrimination of dogs. He had one which separated a calf of the household from a drove of his neighbor's cattle. Many say the dog has idea of time. Warner (99) says his dog has little if any idea of number and cannot compute the passing of time. Lindsay (63.II.393) uses the illustration of Landseer's dog (in begging of his deaf father would always bark louder) to show that he knows man's infirmities. But other dogs bark in degrees of loudness, when such conditions do not follow. Morgan (71.200) makes use of the anecdotes of dogs calling others to their assistance. Büchner (14) quotes Duncker of a dog in Pymont, which duty it was to watch the stock, and especially the poultry. He used to hunt hidden eggs and bring them to the kitchen. He once laid one on the sofa instead of the stone floor as usual owing to the imprisoned chick that was in it. He assisted the chick out with his tongue, and became its nurse. Dr. Bardeen (6) speaks of a dog at the University where he took his medical course, having had a silver fistula for the purpose of obtaining the gastric juice. The cork came out and the dog kept himself on his back while the food was digesting in his stomach. Robinson (81) quotes Dr. S. T. Pruen as reporting a dog's going to leeward side to get the scent, then the Skye standing wagging his tail to line up the pack, then jumping in and running out the rabbit. Romanes (84.457) of a dog's act of inference in tracking his master who had three possible ways of going. Having smelled for the trail on two of the ways, he went off on the third without smelling. Houzeau's dogs went where from the natural slope of the land there should be water, but came back disappointed at not finding a drink. He believes they reason in some form (48.265). He compares the dog's powers to a child of one year. To use Morgan's method, most of these examples of reasoning may be explained in some other manner. He says (71.271) that if a shepherd's dog watching a flock were closely observed it would be seen how well the dog knows and responds to the signal of the master, and how completely all initiation is in the master's mind. Schopenhauer (4) is quoted as denying reason to animals. James in his Principles says about dog reasoning: "The mental process involved may, as a rule, be perfectly accounted for by mere contiguous association based on experience." Ribot (78.30) says that it consists of a heritage of concrete or generic images, adapted to a determined end, intermediary between the precepts and the acts. They reason by a generic image and lack substitution (79). To this he thinks James and Romanes would agree. These latter opinions seem

to be the safest from the standpoint of most recent study, but it appears not to be the most pleasing consideration to most of the genuine dog enthusiasts.

5. There are a few *cases of orientation* in dogs which seemed to make an impression upon the children. None of the cases were of the extreme type of finding the way over a country which they had never before been, as will be noticed in the examples.

G., 11. If I ever wanted to go any place where mother used to take me, Beast took me, because he remembered the place, and brought me safely home. G., 12. He had visited friends in Trenton (N. J.), and so one morning he went down to the station (Steelton, Pa.), got on the right train, and went to visit the same people.

Grant Allen (2) refers to a hound which had been sent from County Dublin to County Meath, thence, long afterwards, to Dublin town where he broke loose and completed the third side of the triangle, not before traversed, that he might get home. Dr. Oswald (74) made elaborate experiments upon dogs, taking them drugged and at night, 60 miles from where they had ever been, and in a short time they came home. He believes in a special sense of orientation. Romanes (84.468) refers to a case of a dog's having hunted his master by train. Dyce (88), a famous Edinburgh dog, fell out of the military train in India and was supposedly lost, but he appeared at the next station. Monteith (70) mentions a blind dog which was taken to a place six miles from home, and she found her way home to San Diego. Ouida (75) has a Pomeranian, quite blind and deaf, which is instantly aware of her presence, and "follows her about with unerring accuracy." Mills (69) observed a dog totally blind, which knew every regular thing in the room, but ran against any new objects. Smell has been suggested as an explanation for sense of location, direction, etc., with dogs; others admit that we do not know; while a few believe in a special sense. Helen Keller (56.119) may throw some light on the question when she says: "It is fun to try to steer (a boat) by the scent of water grasses and lilies, and of bushes that grow on the shore." But this offers no clue to many of the cases enumerated.

6. *Intuition.* There is a certain power apparently recognized to exist in a dog, which, on the one hand may be classed as power of inference, yet in another sense it is more nearly like what some psychologists have styled, intuition, or a means of knowing very many things intuitively. The classification is difficult to make, and without fine discriminations they are here offered.

B., 14. He would pretend he was sick. G., 9. When I lie down and pretend I am going to sleep, he pulls my hair. B., 11. When I am

mad and going to give it a licken, he understands what I say. G., 12. When he hears that he must go to the shed he hides somewhere. G., 12. When about to be punished for disobedience he would sit up and wink his eyes very hard until the tears ran down his face. G., 12. When we speak of him he goes over and lays his big head on our lap. G., 12. When he is tied in the yard he will watch how we tie the knot, and in about half an hour he will be running around the yard having a fine time. G., 12. He sometimes lies on the floor with his two paws over his ears pretending to be sick. But as soon as I say 'Come, Roy wants some medicine,' and give him some milk, he is all right, and comes around loving and kissing me. B., 13. He wants to be in everything. Papa took some pictures of the frozen and icy scenery about the home one day, and the dog was determined to be in every one of them. B., 13. Every time the milk man would come he would run out to the gate and look back to see if my mother was coming. He did it because when she came in she would give him some milk. G., 15. When he had done wrong and I punished him he walked away, but soon he came back, extended his front paw as if to shake and make up. G., 15. If we caught two rats in a trap, and let them out at once, he would grab and bite one enough to disable it, then he would grab the other, never letting either of them get away. G., 16. He would overtake us and be at the place we were going before we could arrive. G., —. If any one was playing with him and laughing, he would take on a very funny expression which was just like a smile. G., —. He seemed to understand every thing I said to him. If I told him he was a bad dog he would come cringing up to me with his head and tail down. If I told him that he was a good dog, up went his head, and he would jump around and try to show his joy. G., —. He would lie on the couch like a child until all the family had looked at him.

It is doubtless the recognition of such power that prompted Dickens to characterize Bullseye, Bill Sikes' dog in *Oliver Twist*, as knowing the real character of Sikes when he intended to kill the dog, which always managed to keep away from Sikes just far enough. Lee (59) says he knows and shuns his enemies. Many believe animals know the difference between intention and make-believe. Westcott (102) reports that a dog having heard his master threaten to shoot him, never again became the friend of the man. Dyer (30) gives report of folk lore in regard to the dog which would be easily connected with this idea, namely, that the dog knows approaching danger and foretells it. The howling of a dog under a window foretells death. Pausanias relates how, before the destruction of the Messenians, the dogs set up a fiercer howl than usual. And Vergil, speaking of the Roman misfortunes in the Pharsalic war says: *Obscoenique canes, importunaeque volucres, Signa dabant.* Capitolinus tells how dogs howling presaged the death of Maximus (30). Among the Highlanders of Scotland there is a feeling that if a dog passes between a couple to be married, or jumps over a coffin, he must be killed (30). The dog as the omen of death, exists in German mythology (58), in France (58), and at least in parts of Pennsylvania. In Formosa, when the dog howls the people have the priest come, for some mem-

ber of the family is about to die (58). Courmelles (29.236) says, too, that every time the dog paws the ground, eats grass, and paws in barking, it is a sure sign of rain. Lindsay (63.I.153) says that the dog has premonitions of death, danger, and misfortune.

Romanes cites Spencer as observing that his dog associated the fetching of game with the pleasure of the master, and she would perform this act of propitiation even with a leaf. He believes it similar to certain fetichistic observances (86.155). The Spectator (110) says they do tricks to please the master, and are sometimes guilty of affectation to attract pity and get petted. A dog will limp long after necessity, if by that means it gets petted. Hutchinson (55) speaks of offending the personal dignity of a dog by watching him. Lindsay (63.I.295) says he has a feeling of shame, and is susceptible to praise and blame.

8. *Communication.* Almost unanimous is the expression of the returns in favor of the dog's ability to understand. He understands voice, facial expression, gesture, and pitch. "Hunters and shepherds know that dogs understand exactly their speech," says Langkavel (58). H. Carrington Bolton (8) says that in India the natives carry on conversation with their bullocks, and that "speechless animals doubtless comprehend the tone of voice, expression of face, and gesture." He observes that man pays an unconscious tribute to the dog by addressing him with words of ordinary speech, while in addressing other domestic animals he uses terms which he never uses in speaking to his fellows. He might have included the language addressed to children by the folk. Generally, trainers and others use few words, and the children do likewise. Substantives and verbs only, are used, as Hachet-Souplet suggest (43.107). It has been observed that English dogs are stupid in France, because they do not know the accent (16), which would imply that manner of expression likewise assists, although Romanes (85.99) relates that the dog of his friend Prof. Yeo distinguished between "paid for" and "pinafore." Warner (99) admits what is a common feeling in our returns, that his dog understands him better than he understands his dog. Brehm (10.210) has observed that he knows the language of the eyes and face, and Letourneau (62) goes so far as to say that the dog understands the language of different animals. Monteith (70) speaks of a dog which knows what people are talking about.

That the dog talks is almost as thoroughly denied, although most will admit that he has the power of communicating certain ideas and needs. In the representative expressions which follow, it will be seen that the dog's language is very similar to

the human modes of expression, being by modulation of the barks; succession of barks; by the eye; or by general bodily attitudes, the tail playing no small part.

B., 7. I think it said, "I want my dinner." G., 9. Said, "good morning" one day when I came home from school. G., 10. He comes to me waiting for his meal. I hold up a bone and say 'speak.' He stands on his hind legs and barks. B., 10. He can talk in his way, that is, to whine. B., 11. He can act in the show and can talk. G., 12. He can almost talk with his eyes. G., 12. At times one could almost imagine his asking for a drink by the expression in his eyes and his actions. B., 12. He can talk in one sense. When he wants a drink he will sit at my feet and look into my face and bark as though he says, "I want a drink." B., 13. By actions he can make himself understood. B., 13. He would bark in a different way when he wants me. G., 13. He cannot talk by articulation, but by signs. G., 13. When you are eating, and he would like to have some, his eyes look so pleading as if to say 'please may I have some.' G., 13. He says 'please' by growling. B., 14. One means of making himself understood is by talking with his tail. Any one who has a dog can very easily tell by the movement of his tail what he tries to say. B., 14. Talks with his eyes and tail. G., 15. Taught him to hold a book and bark as if reading. G., 17. He seems to be able to talk with his eyes.

While the curve of belief in talk gradually declines with the age of the child, like that in the study of the crow, the bark has made an impression that seems to develop the confidence of children, and there is a pretty general feeling, since barking is an acquisition of the dog in domestication. [See Darwin (25.27), and Evans (31.219)], that it is his improved method of thought expression. Bannister (5) and others call attention to the fact that the Esquimaux dog does not bark. Some relation similar must be felt by the Hawaiians, among whom there is a belief that men, on account of their evil deeds, may lose their voices, and must, for punishment, bark like dogs (58). Hachet-Souplet say (43.105): "It seems that barking is an imitation of human speech, and such is their flexibility that they express shades of feeling understood by their masters. Anger is distinguished from joy; pain has a distinct lamentation; ennui can be known." Darwin expressed the same idea much earlier (27.84). The inhabitants of the Gold Coast formerly believed that the European dogs could talk" (58). In Unyoro it is believed that the dog is endowed with speech. Lindsay (63.I.355) quotes Sir Walter Scott as entertaining the belief that the intercommunication of thought between man and the dog is capable of much improvement. The whole idea that there is ability to communicate is, perhaps, one of the reasons that the dog is so companionable to men; and Hood, in his Bachelor's Dream, has illustrated it reasonably well.

Habitual signs of special dogs are interesting, and have been noticed by the children.

G., 10. When it wants a drink it goes to the sink and stands up, and then barks. B., 14. When it wanted you to get a drink it would bark and claw you, and then run to its dish and bark. G., 14. Whenever it wanted a drink it would put its fore feet up to the sink and whine until some one gave it a drink. G., 14. It would hunt for things stored up, and it would sneeze for them. G., 14. When he wanted a drink he went to the spigot and pawed on it until some one gave him a drink. G., 15. If you ask him if he wanted some candy or peanuts, he would hunt through your pockets for them. G.,— . When he wanted anything he would paw at my clothing, then go in the direction to which he wanted me to go. G.,— . When Sport wished a drink of water he would go to the pump which was in the back-yard, and whine until some one gave him a drink. G.,— . He would crawl all over the floor when he wanted to be taken out. When given permission he would go and get his blanket, carrying it in his mouth to have it put on.

Cornish (23.320) says a terrier can almost transform his whole body into an animated note of interrogation. He gives an account of a retriever in London directing a team by taking the driver's glove and running ahead to where it was to go. Romanes (85.100) describes how a dog outside of his house went in to arouse another from sleep, that the two might go out after a cart which was passing. The same author (84.425) speaks of a dog which had been taught to knock at a knocker to get in. Mr. Rae (Nature, Vol. XIX, p. 459) describes how a dog would ring a bell to call the servant. Romanes (85.99) gives an instance of a dog's wanting a drink when the servant was busy, so the dog took the drinking cup to the servant. He believes that the panting habit of some dogs is a gesture sign.

II. *Interest in emotions.* No one to my knowledge will deny emotions to dogs. When it progresses to the extent of a religious and moral sense, perhaps more will deny than admit. De Courmelles (29.314) enumerates in ascending order in animals, the feelings which he believes to exist, as follows:— timidity, surprise, astonishment, fear, conservation of the individual and the species, sexual attractions, paternal affection, the fighting instinct, recognition of offspring, sociability, jealousy, anger, joy, affection, sympathy, emulation, vanity, resentment, love of show, appearance, terror, chagrin, hate, cruelty, benevolence, vengeance, rage, honesty, remorse, deceit, and laughter. The last, he believes, is very rare. It is not to be supposed that all these should be seen by the children, in their pets, nor would it be surprising if the author were unable to draw the lines and give the differentiations up the scale, that this list would seem to promise.

Those feelings which have especially interested the children are:—

1. *Joy.* Joy is expressed in the dog by jumping up and down; running around; his eyes have a characteristic look; he

wags his tail rapidly; curls it up on his back like a plume; curls up his upper lip; and he barks with quick, short barks.

2. *Sadness* is much less frequent, and is shown by a limp tail.

B., 9. My dog showed that it was happy by jumping up and down. G., 10. Happy when he sees us come from school. B., 11. Very sorry on my leaving. On my return he wags his tail and barks. G., 12. His eyes showed that he was very glad. B., 12. When he wags his tail he is happy, and when his tail is down he is sad. G., 13. When he is happy his tail curls up just like a plume over his back, but when he is unhappy, it is left hanging limp, right behind his back. G., 16. He will bark, wag his tail, and curl up his upper lip just as though he were laughing when we come back to him. G., —. When Rover was glad he would leap up and down and wag his tail hard, and bark with quick, short barks.

A comparison of these returns with Darwin's "Emotions" (26), would show that there is but slight difference of opinion, if any.

3. *Fear* has been observed, but it is not supposed that it should be frequent with children in relation to their pets.

B., 12. He is afraid of water, smoke, and fire. B., 13. He was very much afraid of thunder. On hearing it he would crouch under the table.

Fears of special things, too, have been noticed. One such dog was afraid of a broom, supposedly because his former mistress used it as a reminder. Romanes (86,155) speaks of a dog being afraid of a stick after being hurt by it. He records Darwin's observation on the conduct of a dog when he drew away from him a hoisted umbrella. Galton (39,215) goes a step further in suggesting a related feeling of curiosity to investigate, referring to the attention that a strange dog attracts. Spencer (86,156) believes dog fears are due to a sense of the mysterious; that the dog's knowledge of causation is like that of primitive man. Lindsay (63,223) under dog superstitions, classifies what may be observed as fears under (1) excessive reverence or fear; (2) false worship; (3) belief in what is absurd without evidence; and (4) idolatry of the unknown and mysterious.

4. *Love*. The dog is an ardent lover of his master, evidence of which is expressed in the following methods:

G., 8. "It runs to me;" B., 8. "the way it plays with me;" "because it wags its tail when it sees me;" "he jumps up on me;" B., 9. "he would bite the boy that would hit me;" "runs and plays with me;" "does every thing I tell it;" G., 9. "wanted to be with me all the time;" "licks my face and hands;" "jumps up on me whenever I go in the house;" "shakes his tail when he sees me;" "when it gets in my lap it whines and cries;" G., 10. "followed me everywhere;" "nearly goes wild jumping up on me after I have been away;" "jumps in my lap and looks into my face;" "rubs himself against my dress;" "wants to get near me and lick my face;"

"protects me;" "licks my feet, wags its tail, and jumps all over me;" B., 10. "always whines when I go away;" "followed me, and protected me from danger;" "speaks to me for food;" "almost knocks me down."

Darwin (26) says the dog shows affection by the head and whole body lowered, the tail extended and wagging from side to side, the ears down and backward, and the whole appearance of the face altered. The lips are loose, the hair is smooth. They rub against their masters, lick their hands, faces, and ears; originating perhaps, in the habit of females licking their puppies. He (27) relates how a little timid dog, too weak to defend a lady receiving a pretended beating, returned afterwards to lick her mistress' face and try to comfort her. Mr. Hogg, Kingsley in Hypatia, Tuberville (61) and George Eliot, have interested themselves in the dog's love.

Some of the children do not believe the dog does love. Occasionally a sharp distinction is drawn between love and like, doubtless as taught in some text-books on grammar. These have an advocate in Adrian Leonard, quoted by Menault (68). He pretends that the dog does not love his master, but that he sees in his master the means of conservation, claiming that fear is the motive which prompts him to lick the hands of his master; and the instinct of preservation his general ruling motive. The other idea is the strong one, and has been of great educational value, as may be seen elsewhere.

5. *Jealousy*. Closely related to love is the feeling of jealousy observed by the children approaching adolescence. This is shown in most cases by growling, snapping, biting, and various forms of monopolies. The cause has been: another dog, a child, or other substitutions. The result is invariably ill temper.

G., 13. I had a friend stopping with me, of which he was very jealous. One morning we were weeding the garden, and he came and jumped at her and bit her arm. B., 15. He was a very jealous dog and the only time I ever saw him fight another dog was when I petted or spoke kindly to it. Then he would growl and fight the dog until he ran away from me. G.,—. Whenever he saw me petting another dog or cat, he would come to me and cry until I would pet him. G., 11. Snowball, a strange dog, jumped into papa's lap. Rob grew jealous and jumped up with all feet. B., 15. If any one comes to our house with a baby she will jump on my lap, for fear I will nurse it, for she is very jealous of babies. G., 16. When my little sister was born he was very jealous to think she was petted so much and we did not notice him as much as we used to. G., 15. The mother dog finally became jealous of her own pup.

Cornish (23), Romanes (84), Hutchinson (52) and Dr. Stables, have been impressed by jealousies which they saw in dogs of their own. It is reported as authentic (20), how a single gentleman enjoyed the companionship of a golden collie.

Not long after marriage the wife's only means of self defense, owing to jealousy, was to drown the dog in a desperate struggle in which he had forced her into a canal not far from their country home.

6. *Pity*. The highest level of sympathy of the order of carnivora, says Sutherland (96.I.330), is found in the dog. He believes the greater part to have been acquired by contact with man, yet he recognizes the companionableness of wild puppies tamed by Australian natives, and of wolves by North American Indians. This emotion is observed by children of every age, and may be a trait which makes the dog such a popular pet. Kingsley recognizes it in his Bran of Hypatia. In the picture of the murder of the Princess de Lomballe, by Gerard, a dog of this period—the reign of terror—appears. He has a tender heart. His eyes rest with pity on the princess. In the older pictures of the crucifixion, a dog is in the scene to pity.

G., 7. Pities me when I get hurt. B., 8. He pities, for when I cry it tries to comfort me. G., 10. It feels sorry for me when I am sick, or have the cold. G., 11. It shows pity by lying down beside me and wagging its tail. B., 11. When any one is crying he sits down in front of him, on his hind legs, and looks him in the face. G., 13. Sometimes if you are sitting very quiet it will come up and lick you as if it were pitying you. G.,—. Was sorry when he saw any one else sad. One day I was crying, and he came and smuggled up close to me and tried to kiss me. G.,—. Whenever I cried, he licked my hand as if to express pity. G.,—. She sympathized with any who were ill, and often when I was crying she would put her nose in my hand and stand still, or else lick my hand. G.,—. Carlo showed pity. Once he carried a bloody kitten into the kitchen and wanted the maid to care for it. G.,—. When my brother died, Tip used to come and lie at my feet and look at me as much as to say that he was sorry. When I spoke to him he would come into my lap and lick my hands, and try to lick my face.

7. *Antipathies* are recognized by the children, but none of them seem to be in any sense natural. The reason is almost always suggested, depending upon a wrong committed, and the remembrance of the same.

B., 12. Will not catch our chickens, but will catch other people's chickens. B., 15. Good to his friends, cross to others. G., 15. I could tease him and he would not snap at me, but he would snap at others. G., 12. He was caught by the dog catcher, who was a negro. Ever since then he will not let a negro in the house. G.,—. Two postmen came to our house, one of whom he liked, the other he did not. One day the one he liked came, but he mistook him for the other at first, and ran down the steps and barked. When he discovered his mistake, he dropped his head and put his tail between his legs. B.,—. Had a dog that would not allow a peddler, or any one with bundles in the yard.

Allen (2) believes it is smell that produces some antipathies, referring to the idea that the spoor of the negro will drive the

bloodhound mad. He knew one in Jamaica that could not endure the colored servant that usually fed him. A writer in Chambers' Journal (17) says that Eastern dogs have an aversion to Western travellers, "while the vile Arab, tattered or leprous, may pass within an inch of their nose without comment." Cornish (23) and Jesse (54) say that dogs have antipathies to cripples and ragged beggars. Romanes (86.187) quotes Dr. Huggins in a case of inherited antipathy to butchers, running through several generations of dogs. Scott makes the dog Roswal in the Talisman, hate the traitor, and intimates that a dog has antipathies for such characters. Cumming (24) calls attention to the idea that antipathies to nationalities have been employed by the French in the South Tunisian campaign in 1881, repeatedly giving the alarm ere his human comrade suspected danger,—saying that the dog knew whether it was a Turko or an Arab. Lindsay (63.II.279) says that dogs have a strong repugnance to dog stealers, killers, or catchers. According to Cornish (23.166), belief in animal antipathies is ancient; as that of the otter versus the crocodile, the unicorn versus the elephant, the dragon versus the hart. He makes the broad statement that all monkeys hate a negro.

It is thought by some that the dog is cynomorphic in his attitude toward all externalities, his human companions and associates being considered in his own pack, and his master the "boss" of it. The fact that he hides a bone given to him, Robinson (82) thinks is proof of this. Many dog antipathies would be explained by them from this point of view.

8. A few have observed that *weather* and physical comfort or discomfort have their effects upon the disposition of the pet.

G., 13. In the summer time she is rather cross, but other times she is very happy. B., 14. He is very cross during the hot weather, and fights every animal he meets. G., 12. Sometimes bad, but when he is fed he is all right again. G., 12. Very cross when ill. B., 15. He had streaks for badness, like any boy or girl. G.,— . When he is hungry he is a little cross.

Chambers (21), Mills, and writers generally upon dogs' diseases, have observed that rabies is more frequent in warm than in cold weather. Charles Warren (100) has collected some important statistics relative to London dogs, which show that in hot weather madness is from four to five times the minimum of that in cold weather. The effect of hunger upon the disposition of any animal needs no comment.

9. Varied is the opinion of the *dog's musical sense*. Howling, to many, has been poetically called music. Some actually enjoy it in silence, others are pleased with parts and displeased at others. Some seem to fear sounds of most descriptions, and the children have been puzzled to know how to interpret the

dog's conduct in many cases. It is doubtless true that there is much individual difference on the part of children and dogs.

G., 9. Likes music very much. G., 10. If there is any music outside she will always sing with it. G., 10. When I play on the piano he barks. G., 11. Sometimes he hears a horn blowing and he throws his head back and sings. B., 11. A beautiful musician. B., 11. He does not like music. If he hears any one making music he will sit down and howl a sad tune. He will do the same when the fire-whistle blows. B., 12. Were at a parade one day and the band scared him, for I have not seen him since. G., 14. When a band is passing and Bob hears it, or if he hears a bugle, he will sing because he does not like that kind of music. G., 14. If a man would come around with an organ she would stop what she was doing, and set up a howl. B., 14. When mamma plays the organ it sings. B., 15. Sings only to accompany the piano. G.,— . Whenever I played the organ in the summer he would come up on the porch and howl. I thought he enjoyed the music, but papa said it worried him. G.,— . Unlike other dogs, when he heard music, he sat perfectly still, with erect ears. G.,— . Set up piteous howling when my brother played the harmonica. G.,— . My friend had a dog that would always sing when she played the piano.

Baker's (3) study of the effect of music on caged animals, may help to explain. He concludes that soft music is more pleasurable than lively jigs; that females are more attentive than males; that nocturnal mammals are more interested than diurnal birds. His experiments were made when the house was lighted by electricity, and his music made after dark. Evans (31.343) describes a St. Bernard belonging to his friend, which used to lie quietly when the violoncello was played, until his master struck up a certain tune, when the dog immediately and invariably sat up on his haunches and began to howl. Evans does not believe that the howling indicates that the sound is painful. Darwin (27.569) reports a letter he received of Mr. Peach, who has repeatedly found an old dog of his howl when B flat is sounded on the flute, but at no other note. Romanes and Huggins (86.94) have noticed dogs which accompanied a song, following the prolonged notes of the human voice with some approximation to unison, and to the notes of an organ, respectively. Alix (1.365) knows a dog which accompanies, very well, his mistress when she runs the scales on the piano. Dr. Weir (101.112) believes the dogs voice is "exceedingly" pleasing to himself as when "baying the moon," of which he feels certain from the fact that he always selects the same place for this sport. In the "Taming of the Shrew," one of Shakspeare's points with the hounds was their ability to contribute tunefully and sonorously to the cry. "The triple-headed hound of hell" appreciated music. A dog is carved upon the sarcophagus, seated beside the chair of Phedra while the musician is dispensing music (57.14). These latter recognitions seem to suggest that the

dog has long been regarded as enjoying music, and as having some ability to execute a music of his own.

10. The curve of *belief in a dog conscience* at eight years, is about at 15% with both sexes, rises almost regularly, until at 11 with boys, and 12 with girls, it reaches its maximum of 33 $\frac{1}{3}$ %, then declines to about 23% for both at fourteen, when it again rises. It will be observed that never more than a third are positive upon this point. A few indicate that dogs mature into this power, but that puppies do not possess it. Many mention the symptoms, such as hanging the head, hiding, penitent eyes, and the like, as will be seen in the following records.

G., 8. Knows right and wrong, for when it gets cross it is very sorry afterwards. G., 9. He does not know right and wrong yet, because he is not big enough. B., 10. When I scold him he goes and hides because he knows he has done wrong. G., 12. If he gets up on a chair near the table and any one comes in the room, he runs out with his tail between his legs. He knows it is not right for him to be there, hence he sneaks out. G., 12. When I have punished him for having done wrong he comes along with his paws and puts them in my hand. He wants me to forgive for what he has done. G., 12. There is always such a penitent look in his large brown eyes, one finds it almost impossible to punish him for his faults. B., 12. When she does what she thinks we don't want her to do, she comes up to us and rolls on her back, and does everything she can to make up with us. G., 12. One day he killed a bird, and he tried to hide it, but we saw it and we locked him in the doghouse and did not give him any supper. B., 12. At first he was bad and we licked him, and now he knows right and wrong. B., 14. He does not like to look me in the face when he has done wrong; he also puts his tail between his legs. B., 15. When he has done wrong he will either look sheepish, or slide off under the stove where he will stay until he thinks you have forgotten about it. G., 15. Drops his ears and hangs out his tongue when he has done wrong. G.,—. Not being allowed to lie in the cozy corner on my cushions, when found in the act he would immediately walk out of the room in a dejected manner, evidently ashamed of himself. G.,—. Would look up into my face and cry when he had done wrong.

A writer (108) suggests that the dog includes a sentiment not unlike in ourselves we call religious. He has an imperfect worship, and noble impulses, but he is not responsible for bad, nor commendable for good. Evans (31.98) quotes Wayland, Hickok, and the Jesuit Victor Cathrein, as denying moral faculty to animals. Lindsay, Houzeau, and Sutherland, are positive of a dog conscience. Warner (99) says his dog frequently does things he knows to be wrong. "He seems to struggle in his nature to know whether he will please himself or me." Darwin (27.103), "I agree with Agassiz that dogs possess something very like a conscience." It is to be presumed that all that may be included as conscience may be explained as a process of training to know what is allowed and what is forbidden by the master, but this same law might cover most of what is thus catalogued with human beings.

III. *Interest in dog activities.* Having observed what are the intellectual and emotional types in which our children and others have been interested, we shall turn to the activities in which special interest has been shown, or that are believed in.

Among the doings of dogs one is able to find some of the traits which are the results of training into purely human qualities. Children seem to enjoy those activities most like their own, and are fond of thus training their dogs. At adolescence some differentiation seems to come, and a desire to have him do things for which he is adapted. It is needless to say that the dog's intelligence is largely based upon what he can do, and his whole range of feeling is to some extent determined in his activities. Some things he does must naturally be considered under the sociologic aspects of the study, however, as will be seen.

1. *Hunting.* G., 8. He would get into the river and catch frogs. G., 12. He never catches birds. He is good. B., 12. He caught a fox when my brother was out hunting with him. B., 12. As a sporting dog he is great. B., 14. He and I killed over 200 rats one winter, and many rabbits. B., 16. He has caught four opossums, a remarkable thing for a pug dog. B., 12. He will track rabbits and scare up birds, and if you shoot them he will bring them to you. B., 12. The good thing about this dog is that it will go into the brush and weeds and other things and chase the rabbits out. B., 12. I put him in the box while the children lifted the lid. It was not an eye's wink before out of the box came Dewey, with a mouse in his mouth. B., 12. I like him because he chases foxes.

This activity is more in evidence with boys than girls. However, the curve rises in both cases, very rapidly with the boys, after the age of thirteen, at that age it being but 12% and 6½% respectively. This is one of the traits which Shakspeare repeatedly refers to. Scott, in "The Chase," has aroused much sentiment, or has catered to a general interest in this sport. Their first activity in this direction was doubtless that they might assist in maintaining the tribes, after the real necessity of the dog to find his own food had ceased. The savages used dogs for hunting in Australia, New Guinea, among the Tehuel of Guanaco, in America, in Matto Grasso, in Ecuador. Natives of Haiti raised a breed of small dogs for hunting on the island (58). Before the time of Columbus, Tarumas had hunting dogs which were kept in a cage when not in use. Homer refers to "ferocious dogs" following the wild boar (57). Romanes (86.227) believes some dogs instinctively hunt, but that the young dogs learn it by imitating their elders.

2. *Activities showing a fixed habit* have been of interest to children. We cannot examine all of them but the *opening of doors* is one which has been especially impressed. Lloyd Morgan (71.144) makes the observation that his dog opens a gate

in the same manner every time he does it, thus calling attention to uniformity of action by means of that and other activities, after he once finds a means whereby the activity can be done. He says: "In lifting the latch of the garden gate he always did it in the way he accidentally discovered it could be done." Hobhouse, in *Evolution of Mind*, contends that attention is necessary to this learning process. This uniformity of acts, seems to have been observed by many of the children, as will be seen.

B., 9. He scratches at the door until we let him in. B., 9. He can knock his tail against the door when it wants to come in. B., 9. When he wants to get out he sticks his nose in the crack of the door and opens it. G., 11. When he wants in a room he will scratch on the door with his foot. G., 12. When he was hungry he knocked at the door. G., 12. When he is out in the yard and wants to get in he stands up and takes one of his paws, lifts the latch, and walks in. G., 13. He can open any door if it is not locked. G., 13. When he wanted to get out into the yard he would go to the back door, and cry to get out, and stand on his hind legs. G., 13. When he is at the seashore and wants to come in the yard and the gate is latched, he stands up and supports himself on the stationary part of the fence, and with the other paw he pulls the latch open. B., 14. When Frank was shut up in the barn he would push a box up to the door, lift the hook with his nose, and secure his liberty. G., 17. He would stand on his hind feet, and with the front feet rattle the door knob to go out or in.

Monteith (70) observes that Toots, his dog, opens a door by drawing himself back to give himself sufficient momentum. "He learned it by opening a screen door in which his tail would be pinched unless he went out with enough speed."

3. How much we make use of our own meridian is seen by the *anthropomorphic element* in dog activities, which forms a special interest. Brehm (10.210) notes that the dog can dance, drum, walk a rope, mount guard, take and defend fortresses, shoot off pistols, turn the spits, take his master's slippers, take his hat off, bring the slippers, and even attempt to take his shoes off. Things similar to this, and with some greater variety are of special interest to children, and receive very frequent mention. The interest is high with both boys and girls, 46½ per cent. of each sex mentioning these traits at age of nine, then rising rapidly and steadily until at 14 with boys it reaches its maximum of 80½%, and at 15 its maximum with girls being 85%. For convenience in examining them, three divisions have been made.

a. Acrobatic. B., 7. Stood on the top of a broom. G., 9. Jumps over a stick three feet high, and jumps through your arms when you would hold them like a ring. G., 10. It will roll over or lie down at command. B., 10. When I say "up," it will stand on its hind feet. B., 10. He could walk on hind feet, turn summersaults, and balance a lump of sugar on his nose. G., 11. Jump through a hoop when you roll it. G., 11. He would jump over the chair, lick my hand, and

walk the ladder. G., 11. Stand on hind legs and dance. B., 11. He could throw a piece of cake in the air and catch it on his nose. G., 12. He folds arms to jump over the candlestick. G., 12. When I say walk, he gets up and walks around on his hind legs. B., 12. Taught him to ride "piggy back." B., 13. He would climb a ladder. B., 13. He could jump over a stick three feet high, land on his hind feet and walk. B., 13. He would jump forward and backward over a rope. G.,—. Taught him to ride a horse. B., 12. He will toss a ball or a book on his nose.

Francis Darwin (28.92) says of his father, in relation to Polly: "My father used to make her catch biscuits off her nose, and had an affectionate and mock-solemn way of explaining to her beforehand that she must 'be a very good girl.'" Morgan (71.147) had his dog catch and find a ball. Groos (41.115) notices a striking case of this order.

b. Muscular anthropomorphisms. G., 9. Can sit up for his dinner and do tricks. B., 9. If you say 'charge' he will lie down; 'jump,' he would jump. B., 9. Can get a stick out of the woodpile if I tell him to. G., 10. Taught him to push doll coach, stand up in a corner and beg. B., 10. When he gets up in the morning he always washes himself. G., 11. He can sit up and bark for 'Princeton.' G., 11. Seeing the girls sprinkle clothes he got up and sprinkled the floor. G., 12. He cannot do any tricks but rides on my sled with me, and lets me pull him. G., 11. He can walk, speak for his meals, put out a match, and jump. B., 12. I have taught her to sit up with a basket on her arm, to pretend she is a dead dog, and to walk on her hind legs. B., 13. Taught many tricks. Told her to sit in a chair, which she did until I allowed her freedom. Would have her jump over objects, having trained her by having her catch a ball which I threw. G., 13. His cutest thing is wiping his nose with his front paw. G., 13. If I sit in a chair he will get up back of me and push me off. B., 14. It would sneeze when you told it to. G., 14. Used to rock my little sister to sleep.

c. More purely psychic in appearance. G., 9. Jumps up on my lap and puts her head on my shoulder and cries. G., 10. He will creep like a baby, roll over, and say his prayers. B., 10. Brightest thing was to greet me when I came home from school. B., 12. He would sit in the attitude of prayer until we would say 'Amen,' when he would get down. B., 12. The brightest thing he does is to try to play the organ. G., 13. It plays music with its two paws. G., 13. When I would enter the house he would sit on his hind legs and extend his paw to me to shake hands. B., 14. He sits up in a chair with glasses on his eyes, and a book in his paws. G., 14. If I take him up in my arms and tell him to kiss me, he will lick all over my face. B., 15. If I would tell him to cry he would sit on his haunches, put his forepaws up to his face and begin to cry. G., 15. He will play 'dead dog,' say his prayers, smoke a pipe, play fire department, play old woman. G., 15. He would show how people went to church and said their prayers. G., 16. When we would go away he would always shake hands with us. When we came home he was standing at the gate ready to shake hands again. G.,—. Could say his prayers. He would lean his head down on the top of the chair and keep it there while I said: 'Cats, dogs, peanuts, candy, ice cream, cake, a big dog, Amen.' B., 12. He begged by sitting up on his hind legs and moving his front ones. B., 12. He would help blow out the light at night. G., 14. When you tell him to play the fiddle he will scratch his side.

It will be seen that in these enumerations are found the programmes into which show dogs are usually trained, and which receive so much applause from spectators. It represents the efforts to train dogs, that the feeling to have things act like ourselves, may be gratified. It represents standards which too frequently are set up to mark the intelligence of the animal kingdom generally, and the means of grading in school and in the world. This is the nature of the training which Charles Dudley Warner (99) had in mind when he said that a dog had a hard time because he must develop as a dog and as a human being. But in this interest it may be that some hint at domestication may be found. In all the activities of the dog, marked regularity is observed and impressed upon the child and adult alike, that aside from the effort made in fixing these acts into the dog organism the child is here impressed with the power and economy of habit, or of various organizations of habits. If he should fail to observe it, this pet affords a golden opportunity for the parent and the teacher to impress the force, either for right or wrong, of the dominion of habits.

PART C. ECONOMIC AND SOCIOLOGIC RELATIONS WITH THE DOG.

We have thus far considered how the dog ranks with other pets in children's interests; the psychology of ownership and names as here in evidence; the interest seen in the physical well being of the pet, and what is perhaps the secret of the whole dog interest,—the character and type of mind and activities which children and others have seen in him, and by which he has made himself the friend and ally of man. Our final consideration will be his dynamic relation, as he touches and reacts upon the child and the race, and *vice versa*, playing an important rôle in the civilization of the race, and in the development and harmonizing elements of the child.

I. The pet dog's most common animal companion to-day, and for many centuries, has been the cat. This animal relationship has interested the child and the race. It has been observed to vary from sheer indifference and strong friendships on the one hand, to permanent feuds on the other. The children say:—

B., 14. He likes to fight cats, but does not fight dogs. G., 14. He had one bad fault, and that was to chase cats. If he caught them he very often killed them. G., —. Used to carry our cat's little kittens around the cellar in its mouth. G., 10. When I would say "Cats, Beauty" she would run, open the door, and jump up on the back to see if the cats were really there. B., 13. Found him asleep with the little kitten resting its head on his side.

The puppyhood of Monteith's dog (70) was passed in company with a gray kitten, "whom he treated with respect and

affection, never failing to impress a kiss on its nose when morning came, or after a temporary separation." Darwin (27.103) and others have noticed that dogs frequently care very tenderly for motherless or stray kittens, or for sick kittens, licking them, which is "the secret sign of kind feeling in a dog." Lindsay discusses it (63.II.387). On the other hand, many dogs do not get along well with cats. Cornish (23.166) believes, owing to an inherited dislike from the destruction of the whelps of some of the large felidæ by wild dogs. Hutchinson (52) notices what is in most cases true, that strange cats are intolerable, but when a cat and a dog grow up together their relations will be intimate. Pepys gives this observation space in his diary. Mr. Wm. Watson's epitaph for a dog was:

"His friends he loved. His fellest earthly foes,
Cats, I believe, he did but feigu to hate."

II. Dogs are sometimes *recognized to be great fighters*. At the dawn of adolescence this trait seems to be more especially noticed. The pleasure arises in seeing the dog win a hard fought battle. Many take it as a matter of course that dogs will fight, others offer an apology in suggesting a mitigating circumstance. The bulldog is an acknowledged fighter. Girls are much less frequent in observing this characteristic, perhaps because of less interest in it, and because they are not where the encounters take place. Chivalry is usually observed in this connection.

G., 11. Sometimes he fights when some big dog fights with him. G., 12. It would fight, but it was never cross. G., 13. He could whip almost any dog around the neighborhood. B., 14. He fights like a bulldog. He licked two bigger dogs the day before he died. B., 15. He never fights unless another dog fights it first. B., 15. He must have fought before I got him, but he has never been seen to fight since. G., 15. He would not fight with dogs smaller than himself. G., 15. Other dogs pitched on to him, so he took his own part, as one would expect of a bull-dog. G., 15. The little dog and the mother were together. The little dog was very saucy. B., 16. My dog would fight any dog that would try to fight him.

Some writers describe their dogs as great fighters. The bulldog's history is known. Brehm (10) refers to the fact that Alexander made his dogs fight with the lion, then with an elephant, and he killed both. Hudson (51.336) says that dogs in the cattle raising districts of South America are fierce. "The fights are usually between dogs that are well matched. When one fighter is gone the next best takes his place. From the foremost in strength and power, down to the weakest, there is gradation of authority." He observes that the weakest are slaves to the others, and that they must give up their bone with good grace. As to chivalry, Woods Hutchinson (52) observes that "no dog of size or courage will conde-

scend to attack a smaller or obviously weaker dog." He believes that little dogs are fighters, because they seem to realize this. He knew a great Dane that would simply hold smaller dogs down with his large paws. Marryot, in "Dog Fiend" makes the statement that no dog will bite a good master, even though the master's character is not the best (83). Lindsay (63.I.197) says what many believe, that a dog which is the playmate of a child appears to recognize its responsibility. He takes treatment from a child that he would not take from a man. The poet Cowper relates how his spaniel, "prettiest of his race," fetched him a water lily which he so much desired to have from the breast of Ouse (61). Generally, then, with some exceptions, there seems to be a feeling that a dog has a sense of dignity, a judgment as to fitness, a measure of his strength, and a desire to please, in relation to his own race, and to the child, and man.

III. These pets are not always *good*. Some are never *bad*, but most of them have days and times when they digress from what pleases, when there is a good reason. If no good reason can be recognized, he must be punished.

B., 9. It was a good dog, and will not do any objectionable thing. B., 10. He goes to Sunday School and lies under the seat. G., 11. Sometimes he is bad, but I only whip him a little. G., 12. Cannot say he is bad but when he gets hold of my gum shoes he tears them almost in pieces. B., 12. My dog gets so angry that he would tear my sister's dresses all up. He would bite everybody that came in the yard. B., 15. Sometimes he would catch young chickens, but would not eat them. He did it only for sport. G.,—, Bowler was never really bad except on one occasion. During the summer he had sore ears. One day I was playing near the door. Mother had just said: 'Be careful, do not pull Bowler's sore ears.' I did not heed mother's words, but went on climbing up his back by holding on to his ears. The poor dog endured the pain as long as he could, and suddenly snapped me, biting my upper lip. When the doctor came I was lying on the sofa near the window. The dog came and looked in the window, and gave a pitiful whine, and for several days went about with his head down, and his tail between his legs. I begged father not to kill him, as he threatened to do.

Bible references to the dog are characteristic of reproach. The Arabs and most Mohammedans so regard the dog (58). The Usbeks are insulted to be asked about either their wives or their dogs (58). Romanes and Lindsay observe that the dog is deceitful. With the English perhaps, the good qualities are most especially emphasized, and their companionship was desired even in the people's devotions at one time, it being their habit in one church to have a dog pew, and to inaugurate means of control. One of the queens was thus especially delighted to see the minister's dog sit beside him on the steps leading to the pulpit (18).

IV. *Interest in plays and games.*

G., 9. If I throw a stone it will run after it and bring it back to me. B., 9. He will chase stones and sticks. B., 9. It could swim in the creek. G., 10. Brightest thing was to get its head fastened in a tin can. G., 10. Carry off my shoes and stockings. B., 10. Likes to shake strings, old shoes, stockings, etc. G., 11. He can pull hair and tear dresses. B., 11. It likes to dive in the water where it is deep. B., 12. In the summer we go swimming and catch dogs. B., 12. He would ride me on his back.

The play life of the child has been shared with the dog, which, in many cases, seems to have been the ruling motive of the play. A child, seven or eight years of age, sitting on the curb recently, petting a happy looking bull terrier, exclaimed: "He is a bright dog, and plays hide and seek with us, just like a girl, and he can always find us." Hide and seek, "catcher," and ball are the three games chiefly played. "Dead dog" is mentioned, sometimes "games" only, but it will be seen that the dog and the child are both interested in the running games, with the exception of ball, which affords a compromise between the arm movements on the part of the child, and running for the dog. Of these games "hide and seek" is the most popular with both sexes, but the girls show almost double the interest of boys in it. The curve for girls reaches its maximum at 9 years of age when $33\frac{1}{2}\%$ report their interest in this game, with a rapid decline until at 11, when at 22% it is nearly steady until the age of 15 years. Sixteen per cent. of the boys at nine, and 25% at 14, represent the greatest interest in this game. Catcher seems to be a good game at 8 years for both sexes, reported by 44% of the girls and 23% of the boys, but declines rapidly, never being higher than 16% at eleven with girls, and 12% at 13 with boys. Ball, at 10 years, falls as low as 4% with boys, and is maximum at 11 years, being but 14%. No mention is made of ball by any boy beyond the age of 15. Girls begin with the same interest, but rise gradually reaching 12% at 12 years. The dog is rarely used as a doll, although six young ladies in the reminiscent list speak of the pleasure they found in dressing the dog as a doll, and four other girls mention this means of amusement. It would seem that the chief interest in games is that of companionship, although one can see that the cheerful exercise in the open air has been of much value to the children.

B., 11. Would play he was a bear and have him catch me. G., 12. Hide and seek seems to be his favorite game. He certainly does act as if he understood the game perfectly. B., 12. We did not play with him much, for papa said we would spoil him. B., 13. I could play all day with her. I like her better than any boys. G., 16. When I was very small I would run and play with the dog in our yard. Then Gyp would run after me and grab hold of my dress and pull back as hard as she could. Then I would fall and sometimes cry, when Mamma

would scold Gyp. After that she would play as carefully with me, until I began to play rough. G., —. Used to dress him up in dresses belonging to our dolls, and would wheel him up and down in the carriage. M., —. I had no brother to play with and no neighbor boys I liked very well for playmates, so I used the dog for that purpose.

Upon urns it is not uncommon to see representations of Greek children in play with dogs. The beautiful "sluge" is the Arab's favorite, and that of his children. He is treated well by the boys. With the Battaks each boy has a particular dog as a "kaban," or companion, that is highly regarded, even when very old. The Patagonians adopt favorite dogs (58). We see, too, how in the case of children employing a dog for purposes of playing "horse," what has been serious business is a rudimentary organ with children. See elsewhere how the dog has been used economically. Galton (39.247) quotes Hearne as seeing the Indians go to the wolves, get out the young and play with them. He has seen them paint the faces of the young wolves with vermilion, or red ochre. A lullaby from the Rig Veda (47) shows the dog as a companion in the house.

Perhaps no one will ever know what these plays and games, and this companionship means either to the life of the child, or to the dog. The child has, in the dog, a real force, leading, instructing, exercising, and helping, in a manner that it is hoped our study may throw just a little light.

V. *Why the child and even man is attached to the dog* in so many strong bonds, must be concluded from the entire study. Here, we shall look at some facts and reasons that are presented in the words of the returns, and from the literature more directly expressed. Trolley cars in many places must stop for a dog, but no penalty is attached to cat killing in this way. The Wagondas, the Shilluks, the Arabs, the Battaks, and the Patagonians, set a high value on their dogs, chiefly for hunting and companionable purposes (58). A few children will sell dogs, but rarely does it occur that a money value is stipulated. The dog is too much a part of the child's life to enter the commercial phase of interest, so evident among Americans, at least. "In German University life each corps of students has its large canine, whose expenses are shared, and who is cared for week about. He goes with the students everywhere, on walks, or on smokings, billiards, and drinking Weissbier" (42). Æschylus elevates and enlarges the idea of divine companionship in the eagle, by calling it the "winged dog of Zeus" (22). The specific reasons mentioned for the dog companionships are:—

1 *His ministrations in solitude.* G., 11. Keeps me company and plays with me when I am lonesome. G., 11. Keeps me company when I have n't any one to play with. She is just like a sister. B., 12. When I must stay in the house and have nothing to do, he stays in the house

and plays with me. G., 12. When I am discouraged he makes me happy; when I am lonesome he keeps me company. B., 15. Did me much good. When all the rest of the family went away I would play with him. G., 13. It taught me how dogs know their owners and love them. He kept me from being lonely at home, and when going some where. G., —. When I was cross or angry I would play with him awhile until I got real happy and cheerful. G., —. He helped to amuse me, kept me out of mischief, and was a great deal of company for me, as I had no brothers nor sisters. G., —. She did me much good in that when I reached the age when I lost confidence in human beings, I carried all my joys and sorrows to her, and she was at one time, to my thinking, my only true friend. She not only sympathized with me, but she watched and cared for me. Once or twice, in my babyhood, I ran away from home. When I was found she was always close by my side. When I started to school, she insisted, for a long time, upon accompanying me.

Perhaps a single child in a home is unfortunate. The reaction of one upon the other stimulates, enervates, incites the best that is in each, but we see in the words of the children, how such a pet fills a niche in the child's life and affords a valuable substitute for another child. Small says, "Isolated people must have companionship," and in an excellent way has given us some idea of what pets have been to some people whose misfortune it was to be alone (91). Our returns supplement his list. The Bachelor's Dream, by Hood, shows how one in solitude finds himself not alone when he has his pets, to which to gossip, and to which to relate even his dreams, and call for response from his cat or his dog. Byron finds a comfort in his Boatswain, upon whose grave he pays the high tribute of "friend," saying:

"I never knew but one—and here he lies."

Clarence Hawkes (44), the blind poet, says to his dog:—

"And deem it joy to be alone with me:
My dear old dog, unto creation's end
Of all the world thou art my dearest friend."

And Ouida, the French novelist, has strongly given as a reason the words that would almost parallel those of one of our returns, and might afford a summary, somewhat strong, of the reason in saying why all men of genius or greatness are so fond of dogs: "They find the world full of parasites, toadies, liars, fawners, hypocrites; the incorruptible candor, loyalty, and honor of the dog are to such, like water in a barren place to the thirsty traveller."

2. *The feeling when separated* is a further evidence of genuine attachment.

G., 9. I was homesick to see it. G., 9. Felt lonely to be away from him. G., 11. Often wish I had the dog with me to give it some of the good things to eat which I have; and if I could only pat it when it is eating them. G., 15. Missed him more than I did some of my friends.

G., 13. When he goes away to the country I am very lonesome because I have no nice dog to play with, and I do nothing until he returns. G., 17. Glad to see them when I returned, but did not miss them when I was away. G., 16. When I was separated from him I always felt lonesome, and the first thing I did on coming home was to have a romp with him. B., 9. We miss each other's company and feel bad. We are happy when we meet again. B., 9. I am glad when I see him.

It is recognized that if a dog be kept from his master, it interferes with the former's disposition. The above confessions show a reciprocation. Upon monuments to women among the Greeks, Kurtz (57) observes that it is not uncommon to find a carving of her dog. Scott, on the death of Maida, staid home, declining an invitation that day (36). At München, Mary Louise was compelled to separate from a little dog of her affection. She shed tears over the separation. "She was then given her dog. It knew her step, and whined with impatience" (90). The Fugeians, when hard pressed for want, kill their old women for food, rather than separate from their dogs in this way (25.199). Byron's will of 1811 directed that his own body should be buried in a vault in the garden near his faithful dog (49). It cannot be said in these feelings of attachment, shown by the unwillingness to be separated, that there is a norm suggested for pet relationships. It is rather to be supposed that we have the maximum of attachment, which might grade down to indifference, where feeling for any pet fades out entirely. This is shown in our returns, when here and there we find that no special discomfort appears from separation. The feeling may better be studied in

3. *Funerals and respect for the dead bodies.* Since the average life of a dog is perhaps ten years (Brehm says he reaches old age at 12 and dies at 20), it is reasonable to suppose that children would have experiences in witnessing the death, burial, or other unavoidable separations from their dog companions and friends. They, too, have experienced many unpleasant persecutions in common with our English dog friends and fanciers, through a few heartless individuals in relation to this "faithful" animal.

About forty-five per cent. of our children have undergone this unpleasant experience in some form. The order of frequency in the method has been as follows: Natural death; poisoned at hands of "canicides;" "killed," shot or chloroformed as result of hopeless disease; strayed away; given away for good reasons; killed either by trolley, steam car, wagon, or drowning; lost; stolen; and seven cases of hydrophobia, necessitating shooting.

In most cases of parting there was much grief and no little anxiety. They were frequently thought of with much tenderness, and when buried, as was always the case with those

which died, except in an instance or two where they were stuffed, an appropriate and tender funeral or burial solemnized the occasion, with little markers, monuments, and a frequent banquet to keep his remembrance fresh in the young hearts. The whole experience is always referred to in a touching manner, so much so that perhaps the real feeling is destroyed in many instances by our terse method of quoting the children's words.

B., 9. Will bury my dog in the yard and plant a tree near by it. B., 10. Buried in front yard where he has a tombstone. B., 11. On the stone where he is buried, is marked "Rover," died July 27, 1900. B., 11. Buried in the cemetery. Put a monument over him. B., 11. Buried on the hill between two large oak trees. G., 12. When he dies I shall make a coffin, line it with silk and lace, and put a pillow in, and a ribbon around its neck. B., 13. I dug a grave and had a funeral in our back yard. We hauled him in an express wagon, and when the funeral was over I came home and cried all afternoon. B., 14. I shall give a funeral oration when it dies. G., 15. Our Dick and five other dogs were pall-bearers at a dog funeral. Had a coffin, and they buried it near the cemetery. B., 17. We shall put him in the cold ground to await the judgment day. G., —. I mourned a long time for him. No other could take his place. G., 12. I trust he went to heaven. G., —. He was killed by the cars, but I could hear his cry for many months afterwards. G., 11. If it dies I will bury it in my pansy-bed in a little white coffin. B., 12. When she dies I want to bury her in the place that she liked most to be when she was alive, and that is in the woods, where the wind rustles through the trees, and the birds will sing her death song.

In this respect, we see no change in feeling to that which seems to have existed as far back as we are able to find any data. Sully (94.167) believes it is a trait of the uncultured man to love strong effect. He says: "The pathos of the death of a pet animal or of the child has to be made obvious and strongly effective, by a mass of painful detail." Perhaps these observations would lead one to cut out the qualifying word "uncultured," and to say that there is a desire on the part of people of all classes to make pathos obvious and effective by painful details. Bonny negroes, Bushmen, and North American Indians bury their favorite dogs or revere them in death (58). Families have shaved their heads in mourning at such times (36). Dog mummies of Egypt tell their own story (66). Xantippus and Theophrastus are exponents of an early Greek feeling and interest (57). Eve Simpson (88) has shown how this feeling and demonstration has held the Scottish mind for distinguished dogs. At the street-corner, near Greyfriar's churchyard is a granite fountain with an effigy of a dog on guard. It has the following self-explanatory inscription: "A tribute to the affectionate fidelity of Greyfriar's Bobby. In 1858 this faithful dog followed the remains of his master to Greyfriar's churchyard, and lingered near this spot until his

death, in 1872. With permission, erected by the Baroness Burdett Coutts" (88). Charles Kingsley's remains and those of his dogs, by plan, sleep only a few rods from each other, with Latin epitaphs suggestive of their strong attachment. Matthew Arnold, Wordsworth, Queen Victoria, Byron, the Duchess of York, Ouida, and Mrs. Ewing have been touched by these separations, and many of them have been inspired to write immortal tributes to deceased dogs. This same interest finds its expression in elaborate cemeteries for dogs, notably in London (49), Summer Palace, Pekin (11), near Tarrytown-on-Hudson, Paris, etc., for which large sums of money are appropriated by the dog lovers.

From these observations one is able to draw his own conclusions as to the love so generally shown pet dogs, and the manner in which some qualities, regarded as noble, have impressed themselves. N. U. Thomas says (97), "Burying a dead animal for other than sanitary reasons, seems to bear clear marks of totemism." Reinach, in formulating the principles of totemism, gives as the second one (77), the mourning of the accidental death of an animal, and burying it in the same manner as a member of a clan is buried. To say the least, it is an index of how the dog has affiliated himself with the race and the child, that there is an unwillingness to part or sever the tie, and the next best thing to his presence is provided, viz., the remembrance of the departure and his life and association, by a symbolic ceremony or marker. In the words of Herrick,—

"This shall my love do, give thy sad death one
Tear, that deserves of me a million."

4. *The belief in the dog's immortality* has been observed in the returns, and is another evidence of attachment. It is easy and natural that many who use funerals and monuments as means of expressing the emotions toward the dog, and who entertain the belief in the immortality of the soul, should think well enough of the dog to extend that belief that it may include him, as suggested in a few instances by the children. That this, too, is a very ancient belief, is evident. According to the Zend Avesta, says Langkavel, certain dogs have the power of protecting departed spirits in their perilous passage. The Koran refers to dog spirits (58). Luther asserts in his Table Talk that dogs, also, go to heaven. Klopstock's Messiah has Elisama's dogs go to heaven. Plato, Plutarch (57), Locke, Des Cartes, Condillac (88), Bishop Butler (108), Robert L. Stevenson (13), and Leonard, are quoted as entertaining this belief. The triple-headed hound of hell, appearing in so much mythical literature, of course, was immortal. Southey, in his elegy on Phillis, asserts that his "is no

narrow creed." . . . "There is another world for all that live and move,"

"Where the proud bipeds, who would fain confine
Infinite goodness to the little bounds
Of their own charity, may envy thee,"

and St. Hubert (36) always appeared in visions to their devout worshippers, accompanied by hounds. In Staffordshire and North Devon, the sweeping hounds, or Dogs of Hell, were thought to be the souls of unbaptized babies (36). R. Buchanan in "The School Master's Story;" Matthew Arnold; Horsfield on "Old Rocket;" Sir Francis Doyle on The Fusilier's Dog; Mortimer Collins on Tory (49); Lamartine and De Quincey (50), refer to his immortality. Spectral dogs appear in parts of England and Wales. There is also a belief that the spirit of a favorite dog which has died returns to visit its master (30).

VI. *The love for the dog as shown by the children's words.* There is a legend in the Rig Veda, that after a glorious reign a monarch mounts to heaven. His dog, faithful to the end, accompanies him. The dog is refused entrance, and the king refuses to enter without him (47). This is typical of much of the genuine love for the dog, so generally expressed in our returns, and shown as follows:

G., 12. I love my dog because I have no brothers or sisters to play with. B., 12. Because he is very affectionate and jumps up and wags his tail whenever he sees me. B., 12. Could stick my fingers in his eyes and pull his tail. He would allow no one else to do that. B., 12. He would follow me everywhere I went. B., 12. Because he is nice. B., 12. Because you can play and go hunting with him. B., 12. It will take my part. B., 12. Because it is little. G., 13. Because he was a hero in saving a little girl four years old. B., 13. Because it jumps up on me. G., 15. He is very fond of me. G., 17. Because he could play and romp, and show pleasure at the sight of me. G., —. Because she was the only real constant companion I had, and she seemed like another child. G., —. Because he belonged to my dead brother. G., —. He loved little children and would delight to play with them. G., 13. He is so true and faithful. B., 14. Love it as any person loves his relations. He would come on the sofa and lie down with me, and curl up close and lick my hands, as if he were never to see me again.

The dog's affection, his patient companionship in play, his guardianship, his heroic deeds, and his plasticity, are here mentioned as his winning qualities. The entire history of his domestication is necessary to see how he has generally won his way to become a member of the human family, however. Langkavel (58) ably summarizes his relation to the savage tribes, and shows how many practical functions he has performed. They may be grouped under a classification admitted

by our questionnaire material into economic, care of the sick, guardian in periods of danger, and as a hero. To plot these relations noted by our papers, the curve gradually rises with the age of the children, making a rapid upward shoot in early adolescence.

a. There is much *interest in the economic value of the pet.* With many this is his reason for being, and the interest here seems to steadily increase. It is various and expressed as follows :

"Draws you around on sleds;" "carry packages from the store;" "carries mail;" "brings wood;" "brings the cow;" "takes bucket to milk man;" "chases pigs;" "brings the paper;" "drive the horses and cows to the field;" "rock the baby's cradle;" "guarded the house and chased thieves;" "churns for grandma;" "carries the lantern for papa." B., II. The only good thing he ever did was to knock a peddler over one day as he was coming into the house.

These duties of watching sheep, running errands, guarding flower beds, etc., show an interest persisting really beyond the period of absolute need, but which were at one time basic in civilizing the race by aiding in man's struggle, and affording him leisure to devote to higher pursuits, or more greatly organized labor. What was once serious business, and a reason for domestication, is seen yet to have much of interest for the child. The first use with prehistoric man to which the dog was perhaps put, is believed to be that of food. Mutilated dog bones and skulls throw some light upon the point. He gradually arose to be of service to man in the hunt, and by an easy step to sheep guarding. Chinese women of Java use the dog as a wet nurse (58); the North American Indians as a beast of burden; and until recently people of the British Isle as turnspits (24). They are used in the carts of fruit vender women, wash women, and baggage delivery in Berlin; for Belgian crockery carts; Brussels milk carts; Italian organs; cat's meat-barrows; crippled beggars and costermonger's carts (104). Their use as draft animals was in the middle of the last century prohibited in England (24), first in London, 1839, all over the kingdom, 1854 (87). Their excrement is used as pharmaceutical gentian for tanning, by people of Western Asia. Great cargoes come from Constantinople to the United States for the tanning of morocco. The Tlinkits throw the bodies into the sea. After a time they become covered with dentalia and are then withdrawn (58). In Manchuria and Mongolia a young woman's wedding portion consists of so many dogs as a nucleus of a dog farm. They are valued for their fur, and for the gloves and boas made of their skin (24). Some of the French use them for smuggling.

b. *With the sick.* In parts of America there is a belief that

if a dog licks a sore it will afford of itself a remedy. The story of Lazarus at the gate of Dives will here be recalled. Weir (101.220) asserts that dogs have a knowledge of medicine. His value in the sick room is variously expressed.

G., 11. When I was sick he made me feel better. B., 12. He did me good by licking a scratch, then it got better. B., 12. Always did me good when anything went wrong. G., 14. When I was sick he would lie in a chair beside me. B., 14. When some one gets sick and is in bed, it sits on the bed all the time. G., 11. When I am sick he pities me, lies near me, and kisses me all the time. G., 12. He pities you when you get hurt, for he licks your hand. G., 13. After having him about a week I was taken to the hospital for an operation. Two weeks from that time my parents and sister came to the hospital to see me. Learning that they had the dog in the carriage, I wanted to see him, which request was granted. As soon as he came in the door he saw me, and fairly bounded out of my sister's arms on to the bed. He whined and jumped around the bed, licking me every place he could get hold of me, and when they took him away he whined and tried to get back on the bed. G., —. When my father was very ill with typhoid fever, it wanted to go up in his room. I know one time it fairly cried to go up. G., —. I sprained my ankle once and he never left my side only to sleep and eat.

The ministrations seem to be a relief from solitude, with the feeling that the dog extends his sympathy. Dogs are trained for certain kinds of hospital work (33). Mrs. Browning was inspired to verse by the ministrations of her dog Flush when she was ill. Dr. Brown traces Rab (13) through the series of hospital experience of his mistress, and reports him as a witness of and sympathizer with all her sufferings. Bullseye, of Dickens, is made to care for Sikes, hurt in a burglary. It may be that this interest, and this supposed power, mysterious as it may have seemed, brought about the custom of the Western Himalayas and the Breadalbone, who intoxicated a dog, fed him sweetmeats, and after other ceremonies killed him with sticks and stones as a safeguard against disease and misfortune, or that induced the Iroquois to sacrifice a white dog on New Year's day for a similar purpose (37.194).

c. As guardian the dog has won his reputation. Those charged with responsibility, or otherwise afraid under various conditions, frequently feel safe in the presence of an able dog friend. St. Bernards, bulldogs, mastiffs, have guarded their master's wealth. The dog's sagacity, discrimination, faithfulness, and power, make him an animal which those not of his pack are driven to respect.

B., 9. If any one would come around at night he would take a leg off of him. B., 9. He always takes my part. G., 9. Boys would be afraid to touch me. G., 11. He protects me, makes me happy, and watches the house. G., 11. Is my bodyguard when I go out alone at night. B., 11. He always kept other boys from fighting me. G., 17. If any one strikes me he barks and jumps at them. G., —. He taught me the lesson of faithfulness. G., —. Kept me from going too near a

snake by jumping in front of me and biting the snake just as I was about to step on it.

Dr. Stables (93) was interested in a dog which guarded a sleeping child, and gave the alarm when the child awoke. Policemen of some cities, the armies of France, Germany, and Russia, use him for outpost duty. This guarding quality has its traces in myth fiction and poetry. The Eskimo placed him in the graves of young children who could not find the way alone to the spirit land (58). In Borneo it is believed that the dog's creation by God was for the purpose of guarding the serpent who betrays man. Dyer (30) thinks the death omen in howling has a kindred meaning in Aryan mythology. Saramâ, the dog of the Aryan god, is his faithful guide (7). In some places the dog is buried alive under the corner stone of a church, that his ghost might guard it against profanity (30). Virgil's *Æneid* (Bk.VIII.462) gives a recognition to watchdogs. The dog is regarded by others as a guardian spirit, as in the Icelandic idea of "Aettarflygia" belonging to each family dwelling, as well as an individual guardian spirit. Sometimes it is an animal most appropriate to the temper of the owner (97). This is almost, if not entirely, the sense in which Reinach (77) defines "totem"—"a class of objects considered as a guardian in the larger sense. Animal totems are for the protection of members of the totemic clan. They announce the future to their friends, and serve as guides." Thomas names the totemic attitude toward dogs in parts of France.

d. The *heroism* of dogs either in belief or fact, has inspired the race almost generally, and has produced organizations. The fame of the St. Bernard is wide. Longfellow's *Excelsior* closes with a beautiful tribute to this species. Some of the children feel this trait rather keenly, as their words show. The younger children are not so much interested. Perhaps the first to mention it is eleven years old. In brief the expressions are :

"He jumped into the river and pulled me out;" "dragged the child out of the water while others ran to the house for help;" "scratched to tell us gas was escaping;" "took me home when I was lost;" "barked when my brother met with an accident;" "held me down with his paws on my shoulders, for had I attempted to get up I would have been hurt;" "notified us of a fire in the kitchen;" "puts out a fire;" "rescued a boy when the boat capsized;" "saved my life by rescuing me at Asbury Park."

Col. Hamilton Smith was impressed by a spaniel's plunging "into a roaring sluice to save a little cur" (75). Others, by the stopping of runaways by grabbing bridle or line (107, 1, and 19). Rover's heroism at a fire inspires Tennyson's "Old Rover." The saving of a child and the rescuing of its doll, produces Robert Browning's "Tray." The abandoning of

sport to save a struggling friend, has given us Wordsworth's beautiful story of Little Music. It may never be known how far reaching upon the race or the child, this influence has been in presenting a model of courage, devotion, and altruism.

2. *Interest in the dog's attachment to man* culminates in such a piece of work as the artist Landseer's *The Shepherd's Chief-mourner*, or in Scott's poem, "Fidelity," or in Charles Reade's figure, "Only a man, and yet as faithful as a dog." Cuvier believes it to be the dog's instinct, due to his cynomorphic attitude toward his human friend (81). The child's faith in this attachment is strong.

G., 13. When I am away she will hunt for me everywhere, and whine if they show her any of my clothes. B., 13. When all went out he would bark and cry. B., 13. It never wanted to be left alone. When we left it alone it would go around the house crying and looking out of the windows. G., 13. Poor little thing was so homesick that he did not touch food for a day. G., 16. He died because mamma, for whom he had so much love, was taken to the hospital for an operation. G., 12. When I went anywhere that it was impossible to take him, he would lie outside of my bedroom door and await my return. B., 12. When I went to the country to stay a week I got a letter from mamma telling me I would have to come home, because Prince would not eat. I went the next day. Prince was all right after that. B., 12. It howls all night when I am away. G., 10. When I am away from home Prince does not romp and play about, but lies down on the rug before the door. G., 10. He would cry like a baby when I was away. G., 12. He came back to our house and rang the bell, then barked, as if to say he could not stay away. B., 13. When I was away for about a week, I was told he went into my study room and lay down at the chair I use. G., 13. When my mother died he felt so homesick for her that he got sick and would not eat. We had to take him to the hospital.

A dog which followed his master up the platform where he was to be executed, was pinned with the bayonet of the gardarmes. The sight was too much for those who were willing even to be the witnesses of the Christians who were being murdered (90). A starving dog upon the grave of his master, produced the poem on "True Love" by Sir Roger, in the reign of Henry VI. The psychologists have been interested in explaining this phenomena. Romanes (86.184) observes that it exists between, for instance, a lion and a dog. One writer (110) believes it is the dog's deepest instinct, and Robinson (82) believes it is the result of mutual dependence. Sully (95) fears that the dogs' recent relation to man will stamp it out, since appearance is valued more highly in a dog than his psychic worth, saying: "As the dog grows more generally amiable, he will grow less partial, and so be incapable of a heart-absorbing attachment."

With few exceptions the children are extremely interested

in the demonstrations of their pets on their *home coming*. How he proves his attachment in this experience is indelibly impressed.

G., 7. "Happy;" B., 9. "sits up in window;" "runs to meet;" "jumps up and tries to bite my fingers;" G., 9. "runs around the house several times;" G., 10. "wags its tail, jumps upon me, and barks;" "kisses my hand;" G., 11. "kisses me on the face;" "climbs up on my back;" G., 12. "wags its tail, jumps up on the table and dances;" G., 13. "almost tears me to pieces;" G., 15. "jumps and barks, and if I do not pay attention he will catch hold of my skirt and shake it;" G., —. "just about train time would always start for the station and wait until my train came in, to see me;" B., 15. "dances hysterically at our feet." B., 14. A long time after our dog was given away, on going by where he was he heard us and came frisking out to us. G., —. When I was away and returned he would wag his tail and show his teeth, proving that he was delighted to see me.

Darwin's Polly (28.92) was demonstrative at such times. He noticed the packing to go away, and the excitement in preparing for the reception. Mrs. Browning (36) had lost poor Flush, "and when he came home he began to cry. His heart was full, like my own."

VII. *Training*. The responsibility for the conduct of the dog, the desire to make him an agreeable element of society and home, the pleasure arising from his ability to do "intelligent" acts, and the use that can be made of him in various ways through training, are strong motives inducing the children to interest in his intellectual and moral development. Aside from the children who derived their development through experience, and the efforts of their parents, there is little doubt that the dog was the next to be trained. Langkavel feels that, to some extent, the development of the race must depend upon efforts to train animals. He says: "As the dog is the oldest domesticated animal, so the peoples that extend their training to no other animals probably from natural incapacity for progress, remain at the lowest and oldest stage of the development of man. In other words, they appear as primitive races." He quotes Waitz as mentioning a dance in which adults introduce dogs to teach boys to acquire control over them. The writer has been told by Prof. O. H. Bakeless, who has had ten or more years' experience with the Indians as academic superintendent of the Carlisle Industrial School, that these young people show unusual influence with wild animal life of the kinds with which they meet. The Kamchatkans are recognized masters in training (58).

The curve of recognition of the dog's ability to perform "stunts," and the interest in training him to perform them, beginning at the age of eight and continuing to that of sixteen, runs thus: Boys—41, 44, 44, 61, 70, 70, 81, 74, 65 per cent. respectively; girls—59, 44, 59, 56, 68, 86, 82, 90, 61 per cent.

B., 7. Bit me once, and I gave it a whipping. G., 9. When it was bad I put it in the smoke house and made it stay there for one hour. G., 11. When we would shake our finger at him he would stop whatever he was doing and would look at us as if to say, "Have I done wrong?" B., 11. When it was bad I would say in a coarse voice, "Go, lie down, Dan." G., 11. When she was bad I put her to bed. G., 12. When about to be punished he sat up and winked his eyes very hard until the tears ran down his face. When he did this he usually escaped punishment. B., 12. Do not give it any dinner when it is bad. G., 12. When she is bad I point my finger at her and say, 'Are n't you ashamed of yourself?' and she will hang her head and look so sorrowful and ashamed. G., 13. When the dog does anything naughty I tell him to go lie down. He goes in his bed and does not come out until I tell him to, then he comes out and looks around with his tail down, and no doubt he feels very sorry. B., 15. I do not whip him, because if I would it would make him worse. G., 16. If I should scold her she would hang her head and go under the table, waiting for some one to pity her. Then she would come out and rub her nose against my chair, or put her nose in my lap. B., 17. He has such an innocent look that I do not have the nerve to touch him. G., —. When I spoke kindly to it, it would immediately lift its head, and rush to me, and kiss me all over. G., 17. Would try to train her not to catch birds, but could not. She seemed to say, 'I know it is wrong, but I can't help it.' G., —. Used to think my dog was wicked and would beat him, but before I got half through I would cease, to hug and kiss him.

The strong anthropomorphic attitude is here evident, yet with much keen insight into dog nature. Doubtless there is some imitation from the recollections of parent and child, but some of the primitive peoples have adopted similar means. The Greenland dogs are broken of obstinacy by being beaten with a whip made of lashes of walrus hide. On Hudson Strait and King Williams Land, snowballs and sticks are hurled at the dogs to direct them (58). It is a matter of interest to observe that the children, in a manner, recognize the principles of good animal training, *viz.*, gradation of stimuli, persistence, reward, regularity, a single master, kindness, clear understanding, knowledge of instincts, sequence of habits, and mastery, resulting only in a metamorphosis of instincts, when proper time is observed in training. These principles, learned through the process of training, should be of permanent value to the trainers in equipping themselves for the ultimate environment in which they may find themselves, either in the home or as teachers of the youth. If, in addition to this, it can be impressed that in the training of pets the same traits of character are demanded on the part of the child, as Bostock (9) enumerates as essential in wild animal training, this interest alone is worth all that has ever been spent in time and care upon pets. These essentials are unconscious physical courage, good personal habits, personality, patience, nerve, and physical agility in reserve.

VIII. *The influence of the dog.* There is a relation between

the number of domesticated animals and the grade of civilization. The use of any new thing by man has been an uplift to him. Environment has materially developed him if he has been interested. No one can recount what the dog has done in the life of the race nor the child, to give the type of mind we see to-day. The children's testimony here is striking.

G., 9. I learned to be a good girl from him. G., 10. It taught me how polite animals are to the other creatures around them. G., 10. She taught me to be kind to all dumb animals. G., 10. It does me much good. Gave me a pleasant face, and made me gentle and kind. B., 10. Taught me to be playful with other dogs. G., 12. He made me love animals because he was so kind to me. G., 12. Perhaps no one can tell the good these little animals do. They show you how cruel it is to maltreat any animal, and that all of God's creatures appreciate any kindness shown them. B., 12. He taught me to love the animals. G., 12. He exercises our patience and teaches us to be good to dumb animals. G., 12. He was kind and gentle, and he taught us to be the same. G., 12. He has taught me to show thanks for what I get, just as he is thankful for what we give him. B., 14. He made me a better boy in the house. G., 14. Taught me patience. G., 14. Learned that animals have feelings, as well as human beings have. B., 15. I have learned to like all kinds of animals. G., 13. Pets will make any one gentle, and he cannot help liking them. G., 16. He did me some good by teaching me how to run. B., 17. He has taught me many things about rabbits. G., —. Did me good by setting me a good example. He got everything he wanted and was liked by everybody because he was so good-natured. G., —. He incited in me a love for all animals, and made me feel in sympathy with them. G., —. I think I have always felt better toward people than if I had not had her to teach me. G., —. By owning a pet I was impressed with the love animals have, and that they should not be treated like senseless objects. G., —. Felt impelled to be like him in cheerfulness, obedience, and good nature. I had a little fear that he should look down on me, for he was such a noble fellow. He was so polite; he never took a thing until it was given to him, nor whined when told he could not have it, that he was really my ideal which I tried hard to follow.

This pet, then, has taught the children goodness, politeness, sympathy, cheerfulness, companionableness, appreciation, patience, gentleness, cleanliness, the reward for good nature, interest in and knowledge of all animal life, and the exalted position of all animal nature. It has made them more interested in their fellows and humanity, and has furnished the ideals of life. If these have been the conscious forces reacting upon life, to measure the unconscious must be left for after consideration. Langkavel says, "If this dog (Eskimo) becomes extinct, the Greenlander would perish just as the prairie Indian after the death of the last buffalo." In the *Veridad*, the oldest of the *Zend-Avesta*, it is said, "The world is maintained by the intelligence of the dog." Brehm—"We cannot conceive of savage man without the dog." Langkavel—"The dog is a part of man himself." Cuvier—"The most remarkable, complete, and useful acquisition which man has

ever made." (See 58.) What has been the influence of such a story as that of Gelert, common with so many peoples, of the fidelity of the dog in guarding the child from the attack of an enemy, calling out the best efforts of the pen to enrich the literature? Sully (95) is right when he says the world will be poorer without such a story. When Napoleon saw a dog pitifully mourning over the death of his master, he called the attention of the generals to the animal, and said: "Voyez, messieurs, ce chien nous donne un leçon d'humanité" (89). Kingsley gives Bran a prominent place in Hypatia. He makes Raphael say to Hypatia: "I took her, my dog, for my teacher, and obeyed her, for she was wiser than I, and she led me back, the poor dumb beast, like a God-sent, and God-obeying angel, to human nature, to mercy, to self sacrifice, to belief, to worship, to pure and wedded love." The dog seems frequently to have been an example to human lives. Evans (p. 118) refers to the fact that the Dakota Indians eat the liver of the dog that they might acquire the fleetness, the courage, and the hunting sagacity of this animal. The ancient Egyptians worshipped a dog-headed god (36). In early times there was a tradition in Nicobar, Portugal, and now in the island of Hainan, Khirgises, Ainos, Chuchacas, Kodiaks, and Chippeways, that they are of dog origin (58), which, according to Reinach, and others, is a mark of totemism, and Jevons (55) says that "man did not get beyond totemism where there were no animals admitting of domestication," and that "totemism is a stage in the evolution of religion." Frazer (38) suggests that the desire to become like an animal in quality is also a characteristic of totemism. If these conceptions and facts may be relied upon, —although concerning totemism there is much difference of opinion,—it would seem that the dog has been a totem animal and that the relation which he sustains to some children, is totemic in character. It could further be concluded, as has been observed, that the dog, as an animal under domestication, has served as a natural means of evolving religion from earth to heaven. The dog himself has been considered by Burns (107), Bacon (90), and others, to be religious in his devotion, fidelity, and obedience to his master. Cowper says of Beau:

"But chief myself I will enjoin
Awake at duty's call,
And show a love as prompt as thine,
To him who gives me all."

SUMMARY AND CONCLUSIONS.

1. The dog has been, and is, a great force in the development and natural education of the child and the race.
2. All indications seem to show that his first relation to

man was that of an economic assistant in life's struggle, and that his qualities made him companionable to children and adults alike.

3. The child recognizes in the dog qualities superior to his own, and regards him as a member of a common family with himself. This tie has in it a strong element of mutual dependence.

4. There seems to be a common relation between the history of domestication, the popularity of pets, and their ability to learn man's desires.

5. Scent is recognized as his keenest sense, memory his most remarkable faculty, in both of which he is regarded as superior to man; and fidelity the most striking principle of his life.

6. The attachment of many children to their dog, and the regard in which he is held by them, has traces of a similar relation to that between many primitive races and their respective totem animals.

7. The scope of his intellectual power; his breadth of feeling and devotion; his unusual patience with children; his economic and sporting propensities, which have the faculty of leading human beings back to their commonplace activities, so deeply rooted in the human race, make him more and more popular with years.

8. For a playfellow to an only child, he fills almost an indispensable relation, if the child is to repeat the race history; and his absence from a family of children is an irreparable loss, from present modes of life.

9. Solitude, which always craves some relationships, loses its gloom in many cases in company with a dog.

10. The number and shape of the bones, the number and form of his toes, the composition of his body, as to whether his teeth are carnivorous or herbivorous, the character of his skeleton etc., have not once been mentioned by any child, although many books on nature study have emphasized these points especially.

11. The whole interest is in life, and when death interests are indicated, whatever has been done, is in *memory of his life*.

12. A dog book, touching the characteristics which this study has shown as appealing especially to them, would supply an excellent means of supplementary reading for the schools which these children attend.

13. A good point of attack for the proper study of hygiene, would be an interest in dog hygiene by the public schools.

14. The dogs of various tribes and peoples, would afford an excellent basis of luminous stories, giving pictures of the life and habits of these races, desirable as supplementary reading in the schools.

15. It is reasonable to believe that she who has had successful experience in training a pet dog, would better understand child life and be more successful in teaching the child, than one who has not had such experience.

16. Where the interest warrants the dog affords an excellent subject for problems of biologic and psychic study in observing and making records of the functioning of sight, hearing, physical maturity, food effects, etc., thus introducing and developing an interest in a first hand study of all animal nature.

17. A genuine interest in a pet like the dog, develops a humane spirit, and creates a safeguard against many criminal offences.

BIBLIOGRAPHY.

1. ALIX E. *L'esprit de nos bêtes*. Paris, 1890.
2. ALLEN, GRANT. *The dog's universe*. *Gent. Mag.*, '80.
3. BAKER, F. C. *Effect of Music on Caged Animals*. *Am. Nat.*, '97.
4. BAMBERGER, HERZ. *Das Tier in der Philos. Schopenhauer's*, '97.
5. BANNISTER, H. M. *The Esquimaux dog*. *Am. Nat.*, '70.
6. BARDEEN, F. L. *Intelligence of dogs*. *Knowledge*, '82.
7. BARTH, A. *The Religions of India*. Boston, '82.
8. BOLTON, H. C. *The language used in talking to domestic animals*. *American Anthropologist*, '97.
9. BOSTOCK, FRANK. *The training of wild animals*. N. Y., 1903.
10. BREHM, A. E. *Brehm's Life of Animals. Mammalia*, Chicago, 95.
11. BOLTON SARAH K. *Our devoted friend, the dog*. Boston, '02.
12. BLAND, MRS. E. N. *A book of dogs*. N. Y., '98.
13. BROWN, DR. JOHN. *Rab and his friends*. Boston, '93.
14. BUECHNER. *Liebe and Liebesleben in der Thierwelt*.
15. BURGIN AND JESSOP. *The Queen's Animals. The Idler*, '93.
16. CHAMBERS' JOURNAL, V. 30; (No. 17)—V. 48; (No. 18)—V. 62; (No. 19)—V. 64; (No. 20)—V. 78.
21. CHAMBERS, W. *Mad dogs*. *Cham. Jour.*, '74.
22. CLERKE, A. M. *The dog in Homer*. *Brit. Quar. Rev.*, '83.
23. CORNISH, C. J. *Animals of to-day*. London, '98.
24. CUMMING, C. F. *Professions for dogs*. *Living Age*, '88.
25. DARWIN, CHAS. *Domesticated Animals*. N. Y., '84; (No. 26)—*Expression of Emotions*, '73; (No. 27)—*Descent of Man*, '78.
28. DARWIN, FRANCIS. *Life and Letters of Chas. Darwin*. N. Y., 1901.
29. DE COURMELLES, FOVEAU. *Les facultés mentales des animaux*. Paris, '90.
30. DYER, T. F. T. *The dog and its folklore*. *Gent. Mag.*, '80.
31. EVANS, E. P. *Evolutional ethics and animal psychology*. New York, '98.
32. FAWCETT, WALDON. *Pets in official life*. St. Nicholas, 1903.
33. FOSTER, MAXIMILIAN. *Dogs of War*. *Idler*, 1902.
34. FÈRÈ, CH. *The pathology of emotions*. London, '99.
35. FERRERO, WM. *Crime among animals*. *Forum*, '95.
36. FINCH, BARBARA CLAY. *Dogs*. *Gent. Mag.*, '95.
37. FRAZER, J. G. *The golden bough*, London, '90; (No. 38)—*The origin of totemism*. *Fort. Rev.*, '99.
39. GALTON, F. *Inquiries into human faculty*. London, '83.
40. GIBBONS, DANIEL. *Biog. of a famous dog*. *Wide Wd. Mag.*, '03.
41. GROOS, KARL. *The play of animals*. N. Y., '98.

42. GUGGENBERGER, L. S. Dogs in Germany. *Liv. Age*, '87.
43. HACHET-SOUPLET. Examen psychologique des animaux. Paris, 1900.
44. HAWKES, CLARENCE. My dog. *Outing*, '96.
45. HENNING, CHAS. L. On the origin of religion. *The Am. Anthropol.*, '98.
46. HOLDER, C. F. Pets in the sea. *Outlook*, '98.
47. HOPKINS, E. W. The dog in the Rig Veda. *Am. Jour. of Philology*, '94.
48. HOUZEAU, J. C. Etudes sur les facultés mentales des animaux. Paris, '72.
- 49-50. HUDSON, J. Dogs in poetry. *Westmin. Rev.*, '98.
51. HUDSON, W. H. The naturalist in La Plata. London, '95.
52. HUTCHINSON, WOODS. Animal chivalry. *Contem. Rev.*, '99.
53. JESSE, EDW. Anecdotes of dogs. London, '46.
54. JESSE, GEO. R. History of the British dog, 2 V. London, '66.
55. JEVONS, F. B. The place of totemism in the evolution of religion. *Folklore*, '99.
56. KELLER, HELEN. The story of my life. N. Y., '03.
57. KURTZ, EDWARD. Tierbeobachtung und Tierliebhaberei der alten Griechen. Leipzig, '86.
58. LANGKAVEL, B. Dogs and savages. *Smithsonian Rep.*, '98.
59. LEE, ADELE W. The care of the dog. *Outing*, '01.
60. LE ROSSIGNAL, J. E. Malevolence in the lower animal. Ohio W., 1893.
61. LEONARD, R. MAYNARD. The dog in British Poetry. *Gent. Mag.*, 1894.
62. LETOURNEAU. Ed. in animal kingdom. *Pop. Sci. Monthly*, '97.
63. LINDSAY, W. L. Mind in the lower animals, 2 V. N. Y., '80.
64. LUBBOCK, J. On the senses, Ins. and Intell. of Animal. N. Y., '97; (No. 65)—On the intelligence of the dog. *Nature*, '86.
66. MASPERO, M. G. The dogs of Ancient Egypt. *Pop. Sci. Monthly*, 1891.
67. MCPHERSON, J. G. Scent in Dogs. *Gent. Mag.*, '02.
68. MENAULT, ERNEST. L'Amour Maternal Chez les animaux. Paris, 1877.
69. MILLS, WESLEY. The behavior of blind animals. *Pop. Sci. Monthly*, '02.
70. MONTEITH, JOHN. The psychology of a dog. *Pop. Sci. Monthly*, 1894.
71. MORGAN, C. LLOYD. Animal behavior. London, 1900.
72. MORRIS, EDWIN H. The St. Bernard kennels of Am. *Outing*, '91.
73. ORNE, LENNIE. Humanity of the dogs. *Good Words*, '61.
74. OSWALD, FELIX L. A zoological Enigma. *Pop. Sci. Mon.*, '80.
75. OUIDA. Dogs and their affections. *N. Am. Rev.*, '91.
76. PIAT, DONN. About dogs. *Lipp. Mag.*, '70.
77. REINACH, M. SOLOMON. Le Totemisme Animal. *Rev. Scientifique*, 1900.
78. RIBOT, TH. The evolution of general ideas. Chicago, '99; (No. 79)—The intelligence of animals. *The Open Court*, '99.
80. RINGUEBERG, E. A superstitious dog. *Pop. Sci. Mon.*, '83.
81. ROBINSON, LOUIS. Canine Morals and Manners. *Pop. Sci. Mon.*, '93; (No. 82)—*Liv. Age*, '92.
83. ROBINSON, PHIL. Some notable dogs in fiction. *Liv. Age*, '98.
84. ROMANES, GEO. J. Animal Intelligence. N. Y., '84; (No. 85)—*Mental Ev. in Man*, '89; (No. 86)—*In animals*, '00.
87. SALT, H. S. Animals' rights. London, '92.
88. SIMPSON, EVE B. Edinburgh Dogs. *Cham. Jour.*, '99; (No. 89) *D—of War. Art Journal*, '92; (No. 90)—*Some French hist. dogs, do. 1888.*

91. SMALL, MAURICE H. Some physical relations of soc. and solitude. *Ped. Sem.*, '00.
92. STABLES, G. R. M. Dogs. *Cham. Jour.* '83; (No. 93)—Gratitude in dogs. *Leisure Hours*, '86.
94. SULLY, JAMES. Children's Ways. N. Y., '97; (No. 95)—Decay of Canine Fidelity. *Liv. Age*, '90.
96. SUTHERLAND, ALEX. Origin and growth of moral instinct, 2 V. N. Y., '98.
97. THOMAS, N. W. Animal superstitions and totemism. *Folklore*, 1900.
98. WALLER, JOHN J. If they had been muzzled. *Sunday Mag.*, '97.
99. WARNER, CHAS. DUDLEY. The education of Sam. *Century*, '00.
100. WARREN, CHARLES. Dogs in London. *Cont. Rev.*, '87.
101. WEIR, JAMES, JR. The dawn of reason. N. Y., '99.
102. WESTCOTT, MICHAEL. Do dogs understand human speech? *Recreative Science*, '60.
103. WHITMAN, C. D. Myths in animal psychology. *Monist*, '98.
104. WOOD, REV. J. G. A few dogs. *Leisure Hours*, '87.
105. ZABRISKI, F. N. The truth about dogs. *Lipp. Mag.*, '85.
106. Landseer's Dogs. *Leisure Hours*, '64.
107. The dog. *Westminster Rev.* '66; (No. 108)—The Consciousness of dogs. *Liv. Age*, '72; (No. 109)—Dogs of literature. *Eclectic Mag.*, 188L.
110. The society of dogs. *The Spectator*, '87.
111. SHALER, N. S. Domesticated Animals. N. Y. '95.
112. MARSH, MABEL A. Children and animals. *Barnes' Studies in Education*, 1902.
113. REGIN, E. S. A word about dog collars. *Outing*, '88.

BIBLIOGRAPHY OF CHILD STUDY.

For the Year 1902.

By LOUIS N. WILSON, Librarian, Clark University.

1. **Abt, G.** *L'écriture en miroir.* *L'Année Psychologique.* Paris, 1902. Vol. 8, pp. 221-255.
A study of 13 mirror writers found among 80 left-handed persons.
2. ——— Note sur la lecture et l'écriture chez trois enfants anormaux. *Bull. Soc. Étude Psychol. de l'Enfant*, 1902, pp. 169-175.
3. **Adams, Cecilia** Hindrances to the development of language. *Proc. N. E. A. for 1902*, pp. 412-417. Also *Kindergarten Magazine*, Sept., 1902. Vol 15, pp. 20-24.
Differentiates speech and language development and discusses speech defects.
4. **Alexander, G.** Zur Frage des postembryonalen Wachstumes des menschlichen Ohrlabyrinthes. *Anat. Hefte*, 1902. Vol. 19, pp. 569-578.
——— See also Kreidle and Alexander.
5. **Aley, Robert J.** *Arithmetic.* *Rev. of Ed.*, Jan., 1902. Vol. 7, pp. 235-236.
6. **D'Alfonso, N. R.** *Le Anomalia del Linguaggio e la loro Educabilità*, Roma, Soc. Ed. Dante Alighieri, 1902, pp. 47.
7. **Allin, Arthur** Some experimental observations on practice and habit. *Jour. of Ped.*, March, 1902. Vol. 14, pp. 237-254.
8. **Allison, James** Practical thoughts on reformatory work. *Nat. Conf. Char. and Corr.*, Boston, 1902, pp. 250-264.
Deals with the nutrition, occupation, and punishment of delinquents.
9. **Ament, Wilhelm** Begriff und Begriffe der Kindersprache. *Sammlung von Abhandlungen aus dem Gebiete der pädagogischen Psychologie und Physiologie.* Berlin, 1902. Vol. 5, pp. 85.
10. **André, A. E.** *L'œuvre des voyages scolaires.* *Rev. Péd.*, July, 1902. Vol. 41, pp. 23-42.
An account of the school-journey movement in France.
11. **Apert, E.** *Les enfants retardataires.* Baillière, Paris, 1902, pp. 96.
12. **Arnett, L. D.** Origin and development of home and love of home. *Ped. Sem.*, Sept., 1902. Vol. 9, pp. 324-365.

Previous installments of the BIBLIOGRAPHY OF CHILD STUDY have appeared in the *Pedagogical Seminary*, as follows: April, 1898, Vol. 5, pp. 541-589; Sept., 1899, Vol. 6, pp. 386-410; Dec., 1900, Vol. 7, pp. 526-556; Dec., 1901, Vol. 8, pp. 515-537; Dec., 1902, Vol. 9, pp. 521-542.

13. **Arnold, Sarah L.** Mission of the kindergarten. Rev. of Ed., March, 1902. Vol. 9, pp. 297-298.
14. **Axmann, —** Zür Behandlung kranker Schulkinder durch Beihülfe der Lehrerschaft. Zeits. für Schulgesundheitspflege, No. 3-4, 1902. Vol. 15, pp. 148-156.
15. **Bacon, John** Thoughts on imitation. The Paidologist, July and Nov., 1902. Vol. 4, pp. 100-104; 160-163.
16. **Bair, J. H.** The practice curve; a study in the formation of habits. New York, 1902, pp. 70.
This is supplement No. 19 of the Psychological Review monographs.
17. **Baker, C. D.** Biology as a means of inducing the pupil to think. Proc. N. E. A., 1902, pp. 468-470.
18. **Baldwin, J. M.** (Editor) Dictionary of philosophy and psychology in 3 vols. Vol. 1, 1901; Vol. 2, 1902, New York and London, Macmillans, pp. 644; 892.
19. — — Social and ethical interpretations in mental development. Macmillan Co., N. Y., 1902, pp. 606.
20. **Barnes, Anna Köhler** Children's ideas of lady and gentleman. Barnes' Studies in Education, June, 1902. Vol. 2, pp. 141-150.
Study of class distinctions among English and American children.
21. **Barnes, Earl** Chautauqua lectures on the moral development of the child. Kindergarten Magazine, Oct., 1902. Vol. 15, pp. 73-84.
22. — — Children's attitude toward future occupation. Barnes' Studies in Education, Sept., 1902. Vol. 2, pp. 243-258.
A statistical study of 2,360 English children—what they would like to do when they grow to be men and women.
23. — — Children's attitude towards theology. Barnes' Studies in Education, Oct., 1902. Vol. 2, pp. 283-307.
Comparative English and American statistical studies on children's ideas of God, heaven, hell, and Old and New Testament preferences.
24. — — Children's ideas of war. Barnes' Studies in Education, Nov., 1902. Vol. 2, pp. 323-337.
Compositions by English children on the causes of the South African war furnish the basis of this study. Its purpose is to throw light on the management of adult opinion.
25. — — Children's stories and poetry. Barnes' Studies in Education, March to Nov., 1902. Vol. 2, pp. 31-33; 71-73; 112-114; 155-156; 196-197; 234-236; 274-276; 317-318; 356-358.
Stories and verses written by young children with comments on the same.
26. — — The development of children's political ideas. Barnes' Studies in Education, March, 1902. Vol. 2, pp. 5-24.
Why English children wish to be like Queen Victoria.
27. — — Growth of social judgment. Barnes' Studies in Education, Aug., 1902. Vol. 2, pp. 203-217.
Punishments advocated by English and American children. The study is based on the story of Jennie's paints.

28. **Barnes, Earl** How words get content. *Barnes' Studies in Education*, April, 1902. Vol. 2, pp. 43-61.
Study of the definition of common words by London and Boston school children.
29. — — Political ideas of American children. *Barnes' Studies in Education*, March, 1902. Vol. 2, pp. 25-30.
Why 1,800 New Jersey children would like to be like the late President McKinley.
30. — — The present and future of child study in America. *Barnes' Studies in Education*, Dec., 1902. Vol. 2, pp. 363-372.
The author seeks in the results of child study a basis in theory and practice in definite knowledge.
31. — — The prettiest thing. *Barnes' Studies in Education*, July, 1902. Vol. 2, pp. 180-194.
A study based upon the prettiest things seen by 700 London children.
32. — — Studies on children's drawings. *Barnes' Studies in Education*, March to June, Aug. to Dec., 1902. Vol. 2, pp. 34-35; 74-77; 109-111; 151-154; 231-233; 271-273; 314-317; 352-355; 388-391.
Collections of spontaneous drawings by children and comments on the same.
33. — — Truth versus lies. *Kindergarten Magazine*, Nov., 1902. Vol. 15, pp. 147-151.
34. — — Type study on ideals. *Barnes' Studies in Education*, March to Nov., 1902. Vol. 2, pp. 36-40; 78-80; 115-120; 157-160; 198-200; 237-240; 277-280; 319-320; 359-360.
35. **Barr, M. W.** Mental defectives; their classification and training. *Phila. Med. Jour.*, 1902. Vol. 9, pp. 195-199.
36. — — The recognition and training of mental defectives. *Phila. Med. Jour.*, 1902. Vol. 9, pp. 407-410.
37. **Baudrillart and Roussel** La mémoire de l'orthographe. *Bull. Soc. Étude Psy. de l'Enfant*, 1902, pp. 140-151.
38. **Beard, R. O.** The physiology of childhood as applied to education. *Proc. N. E. A.*, 1902, pp. 720-727.
Motor training is made the basis of normal development.
39. **Bell, Sanford** A preliminary study of the emotion of love between the sexes. *Am. Jour. of Psy.*, July, 1902. Vol. 13, pp. 325-354.
40. **Benda, Th.** Die Schwachbegabten auf den höheren Schulen. *Zeits. f. Schulgesundheitspflege*, 1902. Vol. 15, pp. 160-164.
41. **Bentley, I. Madison** The psychology of mental arrangement. *Am. Jour. of Psy.*, April, 1902. Vol. 13, pp. 269-293.
42. **Berkhan, —** Über den angeborenen oder früh sich zeigenden Wasserkopf (Hydrocephalus internus) und seine Beziehungen zur geistigen Entwicklung. *Die Kinderfehler*, 1902. Vol. 7, pp. 49-58.
Discusses the large heads of congenitally mentally deficient children.
43. **Bertrand, M.** L'infantilisme dysthyroïdien. (Thèse méd.) Paris, 1902, pp. 60.

44. **Besnard, A.** Dessins d'enfants. Bull. Soc. Étude Psychol. de l'Enfant, 1902, pp. 162-169.
45. **Binet, Alfred** La croissance du crâne et de la face chez les normaux entre 4 ans et 18 ans. L'Année Psychologique, Paris, 1902. Vol. 8, pp. 345-362.
46. — — Les proportions du crâne chez les aveugles. L'Année Psychologique, Paris, 1902. Vol. 8, pp. 369-384.
47. — — Les proportions du crâne chez les sourds-muets. L'Année Psychologique, Paris, 1902. Vol. 8, pp. 385-389.
48. **Bishop, William Warner and Manny, Frank A.** Do children know the alphabet. Rev. of Ed., April, 1902. Vol. 10, pp. 355-356.
49. **Boitel, J.** La criminalité juvénile. Manuel général de l'instruction primaire, 21 Mai, 1902. Vol. 38, pp. 324-325.
50. **Bolk, L.** De Oorzaken en Beteckenis der Rechtshandigheid. Haarlem, 1901.
51. **Bolton, Frederick E.** New lines of attack in child study. Proc. N. E. A., 1902, pp. 703-710.
52. **Bonser, F. G.** Chums: A study in youthful friendships. Ped. Sem., June, 1902. Vol. 9, pp. 221-236.
An application of the questionnaire method to analyze the propensity of children to form strong individual attachments.
53. **Booth, F. W.** Lessons to be learned by the general teacher from teaching language to the deaf. Proc. N. E. A., 1902, pp. 831-836.
54. **Bourdon, B.** Recherches sur l'habitude. L'Année Psychologique, Paris, 1902. Vol. 8, pp. 327-340.
55. **Boyer, H.** Recherches sur les causes et les époques de la surdité accidentelle infantine. Bull. de Laryngol., Otol., etc., 1902, pp. 23-25.
56. **Bradley, John E.** The educational value of play. Rev. of Ed., Jan., 1902. Vol. 7, pp. 226-231.
57. **Breton, M. E.** Le syndrome infantilisme: sa nature dysthyroïdienne. Thèse méd., Lille, 1901, pp. 130
58. **Brinton, D. G.** (Farrand, L. ed.) The basis of social relations. Putnams, N. Y. and London, 1902, pp. 204.
59. **Brockman, F. S.** A study of the moral and religious life of 251 preparatory school students in the United States. Ped. Sem., Sept., 1902. Vol. 9, pp. 255-273.
Shows that 17 is the age of most frequent conversions.
60. **Brown, George P.** Criticism on Stanley Hall's "School of the Future." Kindergarten Magazine, Feb., 1902. Vol. 14, pp. 331-333.
61. **Browne-Chrichton, Sir James** Address at the child study conference. Paidologist, Nov., 1902. Vol. 4, pp. 132-137.

62. **Buchner, Edward Franklin** Fixed visualization: Three new forms. *Am. Jour. of Psy.*, July, 1902. Vol. 13, pp. 355-363.
63. — — Some characteristics of the genetic method. *Psy. Rev.*, 1902. Vol. 9, pp. 490-507.
64. **Burgess, M. H.** Evolution of "children's house," *Rev. of Ed.*, March, 1902. Vol. 9, pp. 293-301.
65. **Burk, Frederic** From fundamental to accessory in the development of the nervous system of movements. *Rep. Commissioner of Ed.*, 1900-1901. Vol. 1, pp. 325-344.
The republication of a valuable neurological study.
66. — — The genetic versus the logical order in drawing. *Ped. Sem.*, Sept., 1902. Vol. 9, pp. 296-323.
An excellent discussion of the psychologic basis and the pedagogic value of spontaneous drawing in the mental development of the child.
67. **Čáda, Frantěšek** (Editor) *Česká Mysl*. Prague, 1902.
An excellent Bohemian journal published in the Czeck language with a department of child study, edited by Dr. Čáda.
68. — — *Hodnota Pedopsychologie*. Prague, 1902, pp. 49.
A critical and comprehensive survey of the child study movement.
69. **Call, A. D.** Education versus crime. A study of the state reformatory at Elmira, N. Y., *Education*. Vol. 22, pp. 587-603.
70. **Cambell, C. Victor** Kindergarten training and motor development; a study of a thousand children. *Kindergarten Magazine*, Nov., 1902. Vol. 15, pp. 135-142.
71. **Carman, E. Kate** Notes on school activity. *Ped. Sem.*, March, 1902. Vol. 9, pp. 106-117.
Shows how the restless nature of the child chafes against the restrained life of the school.
72. **Carr, Harvey A.** Survival values of play. Investigations of the Dept. of Psychology and Education of the University of Colorado. Boulder, 1902, pp. 47.
A valuable study with an excellent bibliography appended.
73. **Cash, K. G.** Children's pets: A side study. *Barnes' Studies in Education*, May, 1902. Vol. 2, pp. 100-108.
A statistical study of the humane instincts of English children.
74. — — Children's sense of truth. *Barnes' Studies in Education*, Oct., 1902. Vol. 2, pp. 308-313.
75. **Chadwick-Pratt, Mrs. M. L.** Illustrations for children's stories. *Paidologist*, Nov., 1902. Vol. 4, pp. 166-170.
76. **Chamberlain, Alexander F.** The contact of "higher" and "lower" races. *Ped. Sem.*, Dec., 1902. Vol. 9, pp. 507-520.
77. — — Some recent child-study literature. *Ped. Sem.*, March, 1902. Vol. 9, pp. 43-49.
78. — — Work and rest; genius and stupidity. *Pop. Sci. Mo.*, 1902. Vol. 60, pp. 413-423.

79. **Chapin, T. F.** Dietaries. Nat. Conf. Char. and Corr., Boston, 1902, pp. 453-462.
Nutrition suitable for juvenile delinquents.
80. — — Play as a reformatory agency. Nat. Conf. Char. and Corr., Boston, 1902, pp. 437-440.
Discusses play as an agency in the physical development of delinquents.
81. — — Punishments. Nat. Conf. Char. and Corr., Boston, 1902, pp. 426-427.
Use of punishment in reform schools.
82. **Chapple, B. P.** What Minnesota is doing for her blind children. Proc. N. E. A., 1902, pp. 840-844.
83. **Chase, Philo F.** Why children break down in school. Rev. of Ed., March, 1902. Vol. 9, pp. 296-297.
84. **Cheatle, A. H.** The report of an examination of the ears of 1,000 school children between the ages of three and sixteen years in Hanwell Dist. School. Jour. of Laryngol, Rhinol & Otol, 1902. Vol. 17, pp. 282-292.
85. **Cohn, Herm.** Ueber den Druck der Breslauer Schulbücher vom augenärztlichen Standpunkte. Zeits. für Schulgesundheitspflege No. 6, 1902. Vol. 15, pp. 331-333.
86. — — Die Augen der in Breslau Medicin Studirenden. Arch. f. Augenhk., 1902. Vol. 46, pp. 29-48.
87. **Colson, O.** Jeux d'enfants dans la Belgique. Archivio per le Tradizioni Popolari, Palermo, 1902. Vol. 21, pp. 104-110.
A collection of Belgian finger-rhymes.
88. **Colucci, —** Sui criteri e metodi per l'educabilità dei deficienti e dei dementi. Riv. Sperim. di Freniat., Reggio, 1902. Vol. 28, pp. 410-451.
89. **Colvin, Stephen S.** Invention versus form in English composition. An inductive study. Ped. Sem., Dec., 1902. Vol. 9, pp. 393-421.
Discusses the relations between content and form in teaching of English.
90. — — Rhythm, time and number. Am. Jour. of Psy., Jan., 1902. Vol. 13, pp. 80-97.
91. **Combe, A.** La nervosité de l'enfant. Paris, 1902, pp. 200.
92. **Compayré, Gabriel** Development of the child in later infancy. (Int. Ed. Series), Appleton, New York, 1902, pp. 300.
This is a translation of Part II of Compayré's intellectual and moral development of the child. It treats of the instincts, judgment and reasoning, language, voluntary activities, character and morbid tendencies.
93. **Cook, O. F.** Kinetic evolution in man. Science, June 13, 1902, N. S. Vol. 15, pp. 927-933.
94. **Crothers, Samuel M.** The humor of childhood. Kindergarten Rev., May, 1901. Vol. 12, pp. 515-517.

95. **Curtis, H. S.** Inhibition. Rep. Commissioner Ed., 1900-1901. Vol. 1, pp. 345-356.
Republished from the Pedagogical Seminary, Oct., 1898. Vol. 6, pp. 65-113.
96. **Davis, E. G.** A Saturday school. *The Paidologist*, April, 1902. Vol. 4, pp. 38-40.
97. **DeCock, A.** Taalvervorming in den kindermoud. *Volkskunde*, 1901-2. Vol. 14, pp. 89-100.
98. **Denoel et Epinoux** L'éducation sociale dans les écoles primaires de filles. Manuel général de l'instruction primaire, 5 Juillet, 1902. Vol. 38, pp. 417-419.
99. **Denoy, E.** Descendons-nous du singe? Schleicher, Paris, 1902.
100. **Deroy, F. C.** Psychoses post-typhiques chez les enfants. Thèse mèd., Lille, 1902, pp. 46.
101. **Dewey, John** Interpretation of the savage mind. *Psy. Rev.*, May, 1902. Vol. 9, pp. 217-230.
102. **Dexter, Edwin G.** A study of calms. *Pop. Sci. Mo.*, April, 1902. Vol. 60, pp. 521-528.
103. — — The survival of the fittest in motor training. *Ed. Rev.*, Jan., 1902. Vol. 23, pp. 81-91.
104. **Dismorr, Blanche** Ought children to be paid for domestic services? *Barnes' Studies in Education*, April, 1902. Vol. 2, pp. 62-70.
105. **Doll, L.** Aertzliche Untersuchungen aus der Hilfsschule für schwachsinnige Kinder zu Karlsruhe. Macklot, Karlsruhe, 1902, pp. 62.
106. **Drouot, —** État intellectuel du sourd muet. *Rev. Philanthr.*, 1902. Vol. 8, pp. 436-471.
107. **Dunton, Wm. Rush** Some points in the diagnosis of dementia præcox. *Proc. Am. Medico-Psy. Ass'n*, 1902, pp. 147-155.
108. **Eichholz, A.** The treatment of feeble-minded children. *Brit. Med. Jour.*, 1902. Vol. 2, pp. 683-687.
109. **Eigenmann, Carl H.** Physical basis of heredity. *Pop. Sci. Mo.*, May, 1902. Vol. 61, pp. 32-44.
110. **Ellis, G. Harold** Fetichism in children. *Ped. Sem.*, June, 1902. Vol. 9, pp. 205-220.
Suggestive and interesting parallelism between the growth of the individual child and the race.
111. — — The pedagogy of Jesus. *Ped. Sem.*, Dec., 1902. Vol. 9, pp. 441-459.
112. **Ellis, Havelock** -The criminal. W. Scott, London, 1901, pp. 419.
113. — — Studies in the psychology of sex. 2 vols. Watford, Lond., and F. A. Davis Co., Phila., 1900-1902, pp. 204 and 314.
The author places the cause of sincerity against that of reticence in matters of sex. One vol. deals with sexual inversion.

- Epinoux.** See **Denoel et Epinoux.**
114. **Everett, R.** Educating the deaf-blind. *Am. Review of Reviews*, 1902. Vol. 35, pp. 435-442.
115. **Ewing, A. E.** Visual tests for children. *Am. Jour. of Ophthal.*, 1902. Vol. 19, pp. 33-37.
116. **Fairweather, Elizabeth K.** The psychological and ethical value of music. *Proc. N. E. A.*, 1902, pp. 621-625.
117. **Ferriani, L.** I drammi dei fanciulli. Como, Ormarini, 1902, pp. 312.
Treats of child-labor, child-suicides and school-martyrdom.
118. **Féré, Charles** L'influence du rythme sur le travail. *L'Année Psychologique*, Paris, 1902. Vol. 9, pp. 49-106.
119. **Fernald, Walter E.** The Massachusetts farm colony for the feeble-minded. *Nat. Conf. Char. and Corr.*, Boston, 1902, pp. 487-490.
120. **Ferrari, Giulio C.** Oral method and its fitness for the deaf. *Ass'n Rev.*, Oct., 1902. Vol. 4, pp. 344-356.
The superiority of articulate language to the mimic system in the education of deaf children.
121. ———— Psychic development and pedagogical treatment of children who are hard of hearing. *Ass'n Rev.*, June, 1902. Vol. 4, pp. 232-239.
Pedagogic suggestions for the treatment of the semi-deaf child.
122. **Finck, Henry T.** Evolution of girlhood. *Harper's Magazine*, Jan., 1902. Vol. 104, pp. 235-238.
123. **Fischer, Heinrich** Geographische Spaziergänge. *Zeits. für Päd. Psy.*, Dec., 1902. Vol. 4, pp. 442-452.
Discusses home geography and school excursions.
124. **Folks, Homer** The care of destitute, neglected, and delinquent children. Macmillan Co., N. Y., 1902, pp. 251.
An excellent treatment of the institutional aspects of juvenile pauperism and delinquency.
125. **France, J. Clemence** The gambling impulse. *Am. Jour. of Psy.*, July, 1902. Vol. 13, pp. 364-407.
126. **French, F. C.** The mental imagery of students. *Psy. Rev.*, Jan., 1902. Vol. 9, pp. 40-56.
- Frenkel.** See **Lafon and Frenkel.**
127. **Von Gabnay, F.** Ungarische Puppen., *Globus*, Braunschweig, 1902. Vol. 80, pp. 205-208.
Describes Hungarian dolls. Báitsa in the country of Sáros is the Hungarian Nürnberg.
128. **Gale, H. and M. C.** Children's vocabularies. *Pop. Sci. Mo.*, May, 1902. Vol. 61, pp. 45-51.
129. ———— The vocabularies of three children in one family at two and three years of age. *Ped. Sem.*, Dec., 1902. Vol. 9, pp. 422-435.
Full of suggestion to teachers of modern languages on the natural method.

130. **Galton, Francis** The possible improvement of the human breed under existing conditions of law and sentiment. *Pop. Sci. Mo.*, 1902. Vol. 60, pp. 218-233; *Man*, 1901, 161-164.
131. **Garber, John P.** Co-education. *Education*, Dec., 1902. Vol. 23, pp. 235-241.
132. **Garnier, P.** La criminalité juvenile. *Rev. Scient.*, 1902. Vol. 17, pp. 449-455.
133. **Gerard-Varet, L.** Le jeu chez l'homme et chez les animaux. *Rev. Scient.*, 1902. Vol. 17, pp. 485-491.
134. **Giessler, C. M.** Die Gerüche vom psychogenetischen Standpunkte aus. *Vtljsch. f. wiss. Philos. u. Sociol.*, 1902. Vol. 26, pp. 49-76.
135. **Goddard, Henry H.** Negative ideals. *Barnes' Studies in Education*, Dec., 1902. Vol. 2, pp. 392-398.
A statistical study of the people whom children would not wish to be like.
136. **Gordon, A.** A note on some psychoses of early puberty with report of a case in a boy, 12 years old. *Phila. Med. Jour.*, 1902. Vol. 10, pp. 332-335.
137. **Gregor, K.** Untersuchungen über der Athmungsgrösse des Kindes. *Arch. f. Anat. u. Physiol., Physiol. Abth.*, 1902, Suppl. Bd., pp. 59-118, *Arch. f. Kinderhik.*, 1902. Vol. 35, pp. 272-304.
138. **Griggs, Edward Howard** Influence of parent and teacher in moral education. *Kindergarten Mag.*, May, 1902. Vol. 14, pp. 553-556.
139. **Groszmann, M. P. E.** The treatment of defectives. *N. Y. Med. Jour.*, 1902. Vol. 75, pp. 187-193.
140. **Guimaraens, F. da C.** Le besoin de prier et ses conditions psychologiques. *Rev. Philos.*, 1902. Vol. 54, pp. 391-412.
141. **Gulick, L.** Interest in relation to muscular exercise. *Am. Phys., Ed. Rev.*, 1902. Vol. 7, pp. 57-65.
142. **Gutzmann, Albert** Care of the speech of children in the family and in the school. *Ass'n Review*, April, 1902. Vol. 4, pp. 107-112.
143. **Gutzmann, H.** Ueber die Sprache der Schwerhörigen und Ertaubten. *Deutsche med. Wochensch.*, 1902. Vol. 28, pp. 18-19.
144. ——— Ueber die Stummheit der Kinder. *Fortsch. d. Med.*, 1902. Vol. 20, pp. 601-606.
145. **Hall, Frank H.** Transition in mental training from the spoken to the written symbol. *Jour. of Ped.*, March, 1902. Vol. 14, pp. 214-223.
146. **Hall, G. Stanley** Adolescents and high school English, Latin, and algebra. *Ped. Sem.*, March, 1902. Vol. 9, pp. 92-105.
A discussion of the logical and genetic order in the approach to secondary school studies.

147. **Hall, G. Stanley** Ausgewählte Beiträge zur Kinderpsychologie und Pädagogik. Aus dem Englischen uebersetzt von Joseph Stimpfl, Altenburg, 1902, pp. 454.
A translation of 13 valuable papers on the psychology of childhood.
148. — — The ideal school as based on child study. *Paidologist*, April, 1902. Vol. 4, pp. 32-38.
149. — — Some social aspects of education. *Ped. Sem.*, March, 1902. Vol. 9, pp. 81-91.
150. **Hall, G. Stanley and Wallin, J. E. W.** How children and youth think and feel about clouds. *Ped. Sem.*, Dec., 1902. Vol. 9, pp. 460-506.
Sheds light upon the position of sentiment in nature teaching.
151. **Hamilton, Samuel** The teacher's work. *Rev. of Ed.*, May, 1902. Vol. 11, pp. 378-380.
152. **Harrison, Elizabeth** How the mastery of language is aided by the kindergarten. *Kindergarten Rev.*, Sept., 1902. Vol. 13, pp. 42-44.
153. **Hattie W. H.** The role of education in the development of self-control. *Proc. Am. Medico-Psy. Ass'n*, 1902, pp. 252-260.
154. **Hefferan, Mrs. Helen M.** The organization of the associations of parents of deaf children as an aid to schools. *Proc. N. E. A.*, 1902, pp. 848-850.
155. **Henri, Victor** Education de la mémoire. *L'Année Psychologique*, Paris, 1902. Vol. 8, pp. 1-48.
An experimental study of the memory span.
156. **Hermann, A.** Ueber Kopfschmerzen bei Schulkindern und ihre Beeinflussung durch suggestive Behandlung. (Inaug. Diss.) Breslau, 1902, pp. 28.
157. **Hill, Patty S.** Punishment. *Kindergarten Rev.*, Sept., 1902. Vol. 13, pp. 11-17.
158. **Hill, Walter B.** Psychology and ethics of fun. *Kindergarten Mag.*, April and May, 1902. Vol. 14, pp. 451-458; 521-528.
Also *Proc. N. E. A.*, 1902, pp. 286-297.
159. **Hines, Jessie Scott** The middle ground in gift work. *Kindergarten Mag.*, Nov., 1902. Vol. 15, pp. 152-161.
160. **Hirschlaff, L.** Ueber die Furcht der Kinder, II and III. *Zeit. für Päd. Psy.*, 1902. Vol. 4, pp. 39-56; 141-156.
161. **Hitz, John** (Editor) International reports of schools for the deaf made to the Volta Bureau. Washington, 1902, pp. 56.
This report furnishes conclusive proof of the growth of oral schools for the deaf in the different countries of the world.
162. **Hoche, A.** Ueber Dementia præcox. *Deutsche Klinik*, 1902. Vol. 6, pp. 207-224.
163. **Hoeve, J. van der** Beiträge zur Lehre vom Schielen. *Arch. f. Augenhk.*, 1902. Vol. 46, pp. 172-183; 185-231.

164. **Hoffman, H.** Construction and activity of the brain with special regard to speaking and speech. *Ass'n Review*, Oct., 1902. Vol. 4, pp. 313-322.
Discusses the relation of mental efficiency to speech.
165. **Holman, H.** The philosophy of play. *Paidologist*, July, 1902. Vol. 4, pp. 92-97.
166. — — Principles and practices in education. *Paidologist*, Nov., 1902. Vol. 4, pp. 170-173.
167. **Howerth, I. W.** Education and social progress. *Ed. Rev.*, April, 1902. Vol. 23, pp. 355-370.
168. — — Education and the individual. *Jour. of Ped.*, June, 1902. Vol. 14, pp. 321-324.
169. **Hughes, James L.** Art as an educational factor. *School Journal*, July 19, 1902. Vol. 45, pp. 68-71.
170. **Hylan, J. P., and Kraepelin, Emil** Ueber die Wirkung kurzer Arbeitszeiten. *Psychologische Arbeiten*, 1902. Vol. 4, pp. 454-494.
171. **Jessen, Peter** Die Erziehung zur bildenden Kunst. *Zeits. für Päd. Psy.*, Feb., 1902. Vol. 4, pp. 1-10.
172. **Johnson, W. S.** Experiments on motor education. *Studies from the Yale Psy. Lab.*, 1902. Vol. 10, pp. 81-93.
173. **Jordan, W. R.** Heredity. *Paidologist*, April, 1902. Vol. 4, pp. 8-19.
174. **Judd, C. H.** Action as a condition of mental growth. *Am. Phys. Ed. Rev.*, 1901. Vol. 6, pp. 199-203.
175. — — Anexperimental study in writing movements. *Wundt's Philos. Studien*, 1902. Vol. 19, pp. 243-259.
176. — — Practice and its effects on the perception of illusions. *Psy. Rev.*, Jan., 1902. Vol. 9, pp. 27-39.
177. **Keasbey, L. M.** The descent of man. *Pop. Sci. Mo.*, Feb., 1902. Vol. 60, pp. 365-376.
178. **Kielhorn, H.** Die Fürsorge für geistig minderwerthige. *Jugendfürsorge*, 1901. Heft. 7, pp. 18.
179. **Kimmins, C. W.** Child study in relation to the house. *Paidologist*, Nov., 1902. Vol. 4, pp. 141-143.
180. **Kirkpatrick, E. A.** Physiology of the nervous system in childhood as applied to education. *Education*, Dec., 1902. Vol. 23, pp. 193-203.
181. **Körte, Oswald** Gedanken und Erfahrungen über musikalische Erziehung. *Zeits. für Päd. Psy.*, Feb., 1902. Vol. 4, pp. 11-39.
182. **Kovalcheff, N.** Les paralysies chez l'enfant. *Toulouse*, 1902, pp. 103.

183. **Kozlovski**, — La psychogénèse de l'étendue. *Rev. Philos.*, 1902. Vol. 54, pp. 570-594.
184. **Kraepelin, Emile** Die Arbeitscurve. *Wundt's Philos. Studien*, 1902. Vol. 19, pp. 458-507.
A summary of the valuable researches made by Professor Kraepelin and his students on the problem of fatigue.
— — — See **Hylan and Kraepelin**.
185. **Krauss, W. C.** Heredity—with a study of the statistics of the New York State Hospital. *Am. Jour. of Insanity*, 1902. Vol. 58, pp. 607-624.
186. **Kreidle, A., and Alexander G.** Entwurf zu einer Statistik der körperlichen und geistigen Entwicklung Taubstummer in Oesterreich während der ersten Lebensjahre. *Wien. klin. Wochensch.*, 1902. Vol. 15, pp. 418-420.
187. **Krenn, Regine** Das schwachbegabte Kind und dessen Unterricht im Elternhause und in der Schule. *Zeits. für Schulgesundheitspflege*, 1902. Vol. 15, pp. 93-100.
188. **Kropotkin, P.** Mutual aid: A factor of evolution. London, 1902, pp. 368.
189. **Lafon, G. and Frenkel** Etude graphique des oscillations rythmiques de la tête chez les sujets sains. *C. R. Soc. de Biol.*, 1902. Vol. 54, pp. 660-661.
190. **Landau, Richard** Zur geschichtlichen Entwicklung Schulhygiene. *Zeits. für Schulgesundheitspflege*, No. 10, 1902. Vol. 15, pp. 576-578.
191. **Laprade, A.** Contributions à l'étude de l'écriture en miroir. Paris, 1902, pp. 58.
192. **Largnier des Bancels, J.** Les méthodes de mémorisation. *L'Année Psychologique*, 1901. Vol. 8, pp. 184-204
193. — — — Sur la Mémorisation. *Bull. Soc. Étude Psy. de l'Enfant*, 1902, pp. 137-139.
194. **Léfevre, G.** Notes d'écoliers: leurs relations avec l'âge, le sexe, et la couleur des cheveux. *Revue Pédagogique*, Sept., 1902. Vol. 41, pp. 201-220.
A statistical study of the relation of the color of hair to mental efficiency of 22,000 French children.
195. **Lehne, G.** Wie kann der Lehrer die Lügenhaftigkeit der Jugend bekämpfen, *Kinderfehler*, 1902. Vol. 7, pp. 58-74.
196. **Leiteisen, G.** Rôle du surmenage physique dans l'éclosion des psychoses de puberté. Thèse med., Paris, 1902, pp. 54.
197. **Lemâitre, A.** Le langage interieur chez les enfants. *Viret-Genton*, Lausanne, 1902.
198. **Liebmann, A.** Die Sprache schwerhöriger Kinder. *Bresgen's Samml. Zwangl. Abhandl.*, 1901. Vol. 5.

199. **Liebmann, A.** Die sprachliche Entwicklung und Behandlung geistig zurückgebliebener Kinder. *Zeits. für Päd. Psy.*, April, 1902. Vol. 4, pp. 97-120.
Discusses the speech defects of mentally deficient children.
200. **Lobsien, Marx** Schwankungen der psychischen Kapazität. (Sammlung von Abh. a. d. Gebiete d. Päd. Psy. u. Physiol.) Berlin, 1902. Vol. 5, pp. 110.
201. **Loesch Angeline** The child study department of the Chicago public schools. *School Journal*, Aug. 30, 1902. Vol. 45, pp. 164-165. Also in *Proc. N. E. A.*, 1902, pp. 710-716.
202. **Loeschhorn, Karl** Einige Worte über die gemeinsame Erziehung der beiden Geschlechter. *Zeits. für Päd. Psy.*, June, 1902. Vol. 4, pp. 223-228.
203. — — Ueber Kompensationen bei der Beurteilung der Schüler. *Zeits. für Päd. Psy.*, April, 1902. Vol. 4, pp. 135-140.
204. **Lombroso, C.** Puberty and genius. *Alienist and Neurologist*, April and July, 1902. Vol. 23, pp. 176-182; 257-265.
205. — — Why criminals of genius have no type. *International Quart.*, Dec., 1902. Vol. 6, pp. 229-240.
206. **Louch, Mary** Some common objections to child study. *Paidologist*, Nov., 1902. Vol. 4, pp. 137-141.
207. **MacDonell, W. R.** On criminal anthropology and the identification of criminals. *Biometrika*, 1902. Vol. 1, pp. 177-227.
208. **MacDougall, Robert** Relation of auditory rhythm to nervous discharge. *Psy. Rev.*, Sept., 1902. Vol. 9, pp. 460-480.
209. — — Rhythm, time and number. *Am. Jour. of Psy.*, Jan., 1902. Vol. 13, pp. 88-97.
210. **MacEacharn, Madeline** Domestic authority. *Child Life* (London), July, 1902. Vol. 4, pp. 137-139.
211. — — Education of the sense of humor. *Child Life* (London), Oct., 1902. Vol. 4, pp. 222-224.
212. **McKendrick, John G.** Experimental phonetics. *Ass'n Review*, Oct., 1902. Vol. 4, pp. 327-343.
An excellent brief statement of researches in the field of experimental phonetics.
213. **Maknen, G. Hudson** Speech as a factor in the diagnosis and prognosis of backwardness in children. *Jour. of Psycho-Asthenics*, March, June, 1902. Vol. 6, pp. 80-83.
It is the belief of the author that the best method of arriving at a proximately correct prognosis in cases of backward children is the speech-test.
214. **Malapert, —** Une enquête sur la colère. *Bull. Soc. Étude Psychol. de l'Enfant*, 1902, pp. 241-244.
- Manny.** See **Bishop and Manny.**

215. **Marage**, — Phonation et audition d'après les travaux récents publiés en France. *L'Année Psychologique*, Paris, 1902. Vol. 8, pp. 257-298.
A valuable résumé of recent experimental studies in phonetics.
216. **Marsden, R. E.** Records from a parent's note book. *Paedologist*, July and Nov., 1902. Vol. 4, pp. 97-100; 155-159.
217. **Marsh, Mabel A.** Children and animals. *Barnes' Studies in Education*, May, 1902. Vol. 2, pp. 83-99.
218. **Masselon, R.** Psychologie des déments précoces. Thèse mèd., Paris, 1902, pp. 265.
219. **Maupate**, — Du langage chez les idiots. *Ann. Medico-Psychol.*, 1901. Vol. 15, pp. 37-49; 230-239; 401-413.
220. **Meeus, F.** De la démence précoce. *Jour. de Neurol.*, 1902. Vol. 7, pp. 449-467.
221. **Milligen, M.** Schools for invalid children. *Child Life* (London), July, 1902. Vol. 4, pp. 140-144.
An account of the London settlement movement to provide children who are incapacitated from attending the ordinary schools a means of obtaining an elementary education.
222. **Monroe, Will S.** Elective system and its limits. Rep. of the Board of Regents of the Univ. of the State of N. Y., 1902, pp. 209-212.
Maintains that the course of study must take into account the interests of the child.
223. **Morgan, C. L.** The beginnings of mind. *Internat. Qt.*, Dec., 1902. Vol. 6, pp. 330-352.
224. **Moses, J.** Schulhygienische Betrachtungen über Gliederung und Organisation der deutschen Volksschule. *Zeits. für Schulgesundheitspflege*, No. 8, 1902. Vol. 15, pp. 427-434.
225. **Mouribal, A.** Contribution à l'étude de l'enfantilisme. Thèse méd., Toulouse, 1902, pp. 89.
226. **Müller, J.** Das sexuelle Leben der Naturvölker. Das sexuelle Leben der alten Kulturvölker. Th. Grieben, Leipzig, 1902.
227. **Murray, G.** The report of an examination of the ears of 400 school children. *J. of Laryngol., Rhinol. and Otol.*, 1902. Vol. 17, pp. 293-294.
228. **Myers, C. S.** A study of Papuan Hearing. *Arch. of Otol.*, 1902. Vol. 31, pp. 283-288.
229. — — The visual acuity of the natives of Sarawak. *Jour. of Physiology*, 1902. Vol. 28, pp. 316-318.
230. **Nandy**, — L'éducation des enfants arriérés. *Manuel général de l'instruction primaire*, 2 Août, 1902. Vol. 38, pp. 481-483.
231. **Netschajeff, C.** Über Memorieren. *Samml. von Abhand. a. d. Gebiete der Päd. Psy. u. Physiol.*, Berlin, 1902. Vol. 5, pp. 39.
An excellent statistical study of the memory of Russian school children.

232. **Newell, W. W.** Fairy lore and primitive religion. *Internat. Monthly*, Mar., 1902. Vol. 5, pp. 316-337.
233. **Nibecker, F. H.** Punishments. *Nat. Conf. Char. and Corr.*, Boston, 1902, pp. 427-431.
234. **Noss, Theodore B.** What our schools owe to child study. *Proc. N. E. A.*, 1902, pp. 716-719.
The author maintains that the aim of education, course of study, and methods of teaching must be based upon child study.
235. **O'Shea, M. V.** Educational and social aspects of pictorial art. *School Journal*, Nov. 29, 1902. Vol. 65, pp. 531-533.
236. — — Work and play in adjustment to the school environment. Notes on Groos' *The Play of Man*. *Am. Jour. of Sociology*, Nov., 1902. Vol. 8, pp. 382-389.
237. **Oldys, H. W.** Parallel growth of bird and human music. *Harper's Mag.*, Aug., 1902. Vol. 105, pp. 474-478.
238. **Oppenheim, Nathan** Mental growth and control. New York, 1902, pp. 296.
Contents: Character, the mind, attention, association, instinct, memory, habit, hypnotism and suggestion, imagination, emotions, reasoning, the will.
239. **Partridge, Geo. E.** Studies of individual children. *Ped. Sem.*, Dec., 1902. Vol. 9, pp. 436-440.
240. **Partridge, Lena** Children's drawings of men and women. *Barnes' Studies in Education*, July, 1902. Vol. 2, pp. 163-179.
241. **Payton, C. L.** Feelings as factor in school training. *N. Y., School Jour.*, May 24 and 31, 1902. Vol. 64, pp. 594-595; 615.
242. **Peabody, Endicott** The relation of the home to the preparatory school. *Rev. of Ed.*, Feb., 1902. Vol. 8, pp. 260-263.
243. **Pearson, K.** On the correlation of intellectual ability with the size and shape of the head. *Proc. Roy. Soc.*, 1902. Vol. 69, pp. 333-342.
244. **Platt, W.** Children and disobedience. *Paidologist*, Nov., 1902. Vol. 4, pp. 164-166.
245. — — Children's tunes. *Paidologist*, April, 1902. Vol. 4, pp. 2-7.
246. **Poetter, A.** Die Schulärzte in Leipzig und ihre bisherige Thätigkeit mit besonderer Berücksichtigung der Untersuchung der in die Schule neu eingetretenen Kinder. *Zeits. für Schulgesundheitspflege*, No. 5, 1902. Vol. 15, pp. 214-259.
247. **Prentice, May H.** Myth and history in the elementary schools; the use and limits of each. *Kindergarten Mag.*, Sept., 1902. Vol. 15, pp. 6-13. Also *Proc. N. E. A.*, 1902, pp. 447-453.
248. **Putnam, Alice H.** How Froebel planned to foster the child's powers in language. *Kindergarten Mag.*, Sept., 1902. Vol. 15, pp. 14-19. Also *Proc. N. E. A.*, 1902, pp. 417-421.

249. **Putnam, Alice H.** Work and play. Rev. of Ed., April, 1902. Vol. 10, pp. 356.
250. **Queyrat, F.** La logique chez l'enfant et sa culture. Paris, 1902, pp. 158.
251. **Randall, C. D.** The progress of State care of dependent children in the United States. Nat. Conf. Char. and Corr., Boston, 1902, pp. 243-249.
252. **Rheinhard, W.** Der Mensch als Thierrasse und seine Triebe. Beiträge zu Darwin und Nietzsche, Leipzig, 1902, pp. 235.
253. **Rhoades, Lillian Ione** Bibliography of child study. Board of Education, Phila., 1902, pp. 128.
A list of 1,000 book and periodical references on child study in the pedagogical library of the Board of Education of Philadelphia.
254. **Rivers, W. H. R.** The color vision of the natives of Upper Egypt. Jour. of Anthropological Inst., N. S., 1901, July to Dec. Vol. 4, pp. 229-247.
255. **Robin, F. R.** Surdi-cécité et moyens pour communiquer avec les sourds-aveugles. (Thèse méd.), Bordeaux, 1902, pp. 76.
256. **Robinson, George B.** The distinction between destitute and delinquent children. Nat. Conf. Char. and Corr., Boston, 1902, pp. 440-443.
257. **Rodiet, A.** Les enfants alcooliques. Rev. Philanthr., Oct., 1902, pp. 654-673; Nov., pp. 48-61.
258. **Rogers, A. C.** What Minnesota is doing for her feeble-minded and epileptics. Proc. N. E. A., 1902, pp. 845-846.
259. **Rose, H. A.** Unlucky children. Folk-Lore, London, 1902. Vol. 13, pp. 63-68.
Customs and superstitions in India concerning the order of birth.
260. **Rowe, Stuart H.** School game for girls. Education, Nov., 1902. Vol. 23, pp. 155-160.
261. **Russell F.** Know, then, thyself. Science, N. S., 1902. Vol. 15, pp. 561-571. Jour. of Am. Folk-Lore, 1902. Vol. 15, pp. 1-13.
Treats of educational value of anthropology.
262. **Saenger, A.** Neurasthenie und Hysterie bei Kindern. Berlin, 1902, pp. 32.
263. **Sanford, Edmund C.** Illustrations of the application of psychological principles to ethical problems. Ped. Sem., March, 1902. Vol. 9, pp. 18-27.
The author contends that psychology has generalizations that throw light on spiritual experiences.
264. — — Mental growth and decay. Am. Jour. of Psy., July, 1902. Vol. 13, pp. 426-449.
A comprehensive and scientific statement of the laws of growth with special reference to adolescence and senescence.
265. **Saunders, Una M.** Student life in India. Child Life (London), July, 1902. Vol. 4, pp. 147.
Gives an account of the education of girls in India.

266. **Scherer, H.** Der Werkunterricht in seiner soziologischen und physiologisch-pädagogischen Begründung. (Samml. von Abhand. a. d. Gebiete d. Päd. Psy. Physiol.) Berlin, 1902. Vol. 6, pp. 50.
267. **Schiller, Hermann** Der Aufsatz in der Muttersprache. (Samml. von Abhand. a. d. Gebiete d. Päd. Psy. u. Physiol.) Berlin, 1902. Vol. 5, pp. 61.
268. **Schlesinger, —** Ueber die Beziehungen zwischen Schädelgrösse und Sprachentwicklung. (Diss. med.) Breslau, 1902, pp. 29.
269. **Schulthess, Wilhelm** Schule und Rückgratsverkrümmung. Zeits. für Schulgesundheitspflege, No. 1, 1902. Vol. 15, pp. 11-26; 91-93.
270. **Schurtz, H.** Altersklassen und Männerbünde. Reimer, Berlin, 1902.
271. **Schuyten, M. C.** Over Geheugenvariatie bij Schoolkinderen. Paedol. Jaarb., 1902-3. Vols. 3-4, pp. 240-256.
272. **Sears, Charles H.** The psychology of rhythm. Am. Jour. of Psy., Jan., 1902. Vol. 13, pp. 28-61.
An exhaustive study of the rhythmical sense in children and the utility of rhythm in instruction.
273. **Seashore, C. E.** A method of measuring mental work. (Univ. of Iowa Studies in Psy.), Iowa City, 1902. Vol. 3, pp. 1-17.
274. **Seglas, J.** Démence précoce et catatonie. Nouv. Icon. Salpêtrière, 1902. Vol. 15, pp. 330-346.
275. **Seligmann, C. G.** Sexual inversion among primitive races. Alienist and Neurologist, 1902. Vol. 23, pp. 11-15.
276. **Sérieux and Masselon** Troubles psychiques chez les déments précoces. An. Medico-Psychol., 1902. Vol. 16, pp. 449-463.
277. **Sherrington** Child study and physiology. Paidologist, July, 1902. Vol. 4, pp. 75-84.
278. **Slaughter, J. W.** The moon in childhood and folk lore. Am. Jour. of Psy., April, 1902. Vol. 13, pp. 294-318.
279. **Smith, Anna Tolman** The recent reaction in France against Rousseau's negation of society in education. Proc. N. E. A., 1902, pp. 383-386.
280. **Snider, D. J.** Social institutions: In their origin, growth, and interconnection, psychologically treated. Sigma Pub. Co., St. Louis, Mo., 1901, pp. 615.
281. **Steiger, Adolf** Einige Bemerkungen über Methode und Resultate der Augenuntersuchungen in den Volksschulen der Stadt Zürich. Zeits. für Schulgesundheitspflege, No. 3 and 4. Vol. 15, pp. 123-141.

282. **Stern, L. W.** Ueber Psychologie der individuellen Differenzen. (Schriften der Gesellschaft für psychologische Forschung, Heft., 12.) J. A. Barth, Leipzig, 1900, pp. 146.
Contains bibliography on mental tests, memory types, temperament, etc.
283. **Street, J. R.** Adolescence. *Jour. of Ped.*, 1902. Vol. 15, pp. 93-104.
284. **Stroszner, Edmund** Einiges über den Tabak namentlich mit Bezug auf das Rauchen der Schuljugend. *Zeits. für Schulgesundheitspflege*, No. 8, 1902. Vol. 15, pp. 419-427.
A discussion of the use of tobacco on the mental and physical development of children.
285. **Sully, James** An essay on laughter; its forms, its causes, its development and its value. Longmans, Green & Co., N. Y., 1902, pp. 441.
286. — — Les théories du risible. *Rev. Philos.*, Aug., 1902. Vol. 54, pp. 113-139.
287. **Szeyko, J.** Influence de l'éducation sur le développement de la neurasthénie. Thèse méd., Lyon, 1902, pp. 83.
288. **Talbot, Eugene S.** Juvenile female delinquents. *Alienist and Neurologist*, 1902. Vol. 23, pp. 16-27; 163-175.
289. **Tate, J. N.** What is Minnesota doing for her deaf children? *Proc. N. E. A.*, 1902, pp. 836-840.
290. **Tews, J.** Institutions for the defective in Germany. *Rep. Commissioner of Ed.*, 1900-1901. Vol. 1, pp. 40-48.
291. **Thiemich, M.** Ueber die Funktionsfähigkeit der motorischen Rindenfelder beim Säuglinge. *Ztsch. f. klin. Med.*, 1902. Vol. 45, 226-236.
292. **Tibbey, T. G.** The amateur and child study. *Paidologist*, Nov., 1902. Vol. 4, pp. 144-146.
293. **Titchener, E. B.** Were the earliest organic movements conscious or unconscious? *Pop. Sci. Mo.*, Mar., 1902. Vol. 60, pp. 458-469.
294. **Tredgold, A. F.** Remarks on the subsequent history of children born whilst the mother was insane. *Lancet*, 1902. Vol. 1, pp. 1380-1385.
295. **Triplett, Norman** A contribution to individual psychology. *Am. Jour. of Psy.*, Jan., 1902. Vol. 13, pp. 149-160.
296. **Trueper, J.** Ueber das Zusammenwirken von Medizin und Pädagogik bei Fürsorge für unsere abnormen Kinder. *Kinderfehler*, 1902. Vol. 7, pp. 97-122.
297. **Tschermak, A.** Ueber die absolute Localisation bei Schielenden. *Arch. f. Ophthal. (v. Graefe's)*, 1902. Vol. 55, pp. 1-45.
298. **Upthoff, W.** Ein weiterer Beitrag zur angeborenen totalen Farbenblindheit. *Ztsch. f. Psychol.*, 1902. Vol. 27, pp. 344-360.

299. **Urbantschitsch, V.** Exercices acoustiques méthodiques dans la surdi-mudité. *Parole*, 1902. Vol. 12, pp. 29-56.
300. **Van den Broeck, P., and A. D'Hooge** Kinderspelen uit het Land van Dendermond. Utrecht, Bracckmans, 1902, pp. 102. A good collection of Flemish songs and games of children.
301. **Vanderwalker, Nina G.** Child life as recorded in history, and its place in kindergarten training. *Rev. of Ed.*, May, 1902. Vol. 11, pp. 375-378.
302. **Vergely, P.** Hallucinations diurnes chez les enfants. *Rev. Mens. d. Mal de l'Enfance*, 1902. Vol. 20.
303. **Wade, W.** The deaf-blind. Indianapolis, 1902, pp. 80.
304. **Walker, M. R.** Caution in child study. *Paidologist*, April and July, 1902. Vol. 4, pp. 19-24; 84-92.
- Wallin** See **Hall and Wallin.**
305. **Wegener** Ein Beitrag zur Frage nach den Ursachen der Minderbegabung von Schulkindern. *Zeits. für Schulgesundheitspflege*, No. 11, 1902. Vol. 15, pp. 620-622.
306. **Wegschieder-Ziegler, Hildegard** Erfahrungen im Gymnasialunterricht für Mädchen als Beitrag zur Frage der gemeinschaftlichen Erziehung beider Geschlechter. *Zeits. Päd. Psy.*, June, 1902. Vol. 4, pp. 212-222.
307. **Wetterwald, X.** Sprachstörungen. *Kinderfehler*, 1902. Vol. 7, pp. 145-176.
308. **Williams, Lillie A.** Children's interest in words. *Ped. Sem.*, Sept., 1902. Vol. 9, pp. 274-295.
The immense importance of hearing in the affective side of language clearly shown.
309. **Williams, Mabel Clare** Normal illusions in geometrical forms. (*Univ. of Iowa Studies in Psy.*), Iowa city, 1902. Vol. 3, pp. 38-139.
310. **Wilson, Louis N.** Bibliography of child study for the year 1901. *Ped. Sem.*, Dec., 1902. Vol. 9, pp. 521-542.
Bibliographic references to 307 books and periodical articles on child study.
311. **Wissler, Clark** A review of progress in school tests. *Jour. of Ped.*, March, 1902. Vol. 14, pp. 203-213.
312. **Withers, O.** Children's early drawings. *Paidologist*, April, 1902. Vol. 4, pp. 25-32.
313. **Woods, Frederick Adams** Mental and moral heredity in royalty. *Pop. Sci. Mo.*, Aug. to Dec., 1902. Vol. 61, pp. 369-378; 449-460; 506-513; Vol. 62, pp. 76-84; 167-182.
314. **Woolston, H. B.** Religious emotions. *Am. Jour. of Psy.*, Jan., 1902. Vol. 13, pp. 62-79.
315. **Wray, C.** Civilization and eyesight. *Brit. Med. Jour.*, 1902, pp. 1434-1435.

316. **Wuensch, R.** Aus der Kinderstube. Hessische Blätter für Volkskunde, Leipzig, 1902. Vol. 1, pp. 134-137.
Treats of such relics of exorcism and demonology as the mother's driving away pain by blowing on hurt, etc.
317. **Wylie, Arthur R. T.** On the psychology and pedagogy of the blind. Ped. Sem., June, 1902. Vol. 9, pp. 127-160.
An excellent recent statement of the mental and physical characteristics of blind children.
318. **York, E. E.** The cultivation of individuality. Nat. Conf. Char. and Corr., Boston, 1902, pp. 261-264.
319. **Young, Sarah** Children's travel interests. Barnes' Studies in Education, Nov., 1902. Vol. 2, pp. 338-351.
An account of enjoyable journeys made by 1,280 English children.
320. ——— Delegated authority. Barnes' Studies in Education. Aug., 1902. Vol. 2, pp. 218-226.
With comments by Professor Earl Barnes (pp. 227-230) on the delegation of authority by parents and teachers.
321. ——— School girls' ideas of women's occupations. Barnes' Studies in Education, Sept., 1902. Vol. 2, pp. 259-270.
A study of the motives which influence children with respect to prospective occupations.
322. ——— A study in children's social environment. Barnes' Studies in Education, June, 1902. Vol. 2, pp. 123-140.
A study of the ambitions of English children.
323. ——— The teaching of geography. Barnes' Studies in Education, Dec., 1902. Vol. 2, pp. 373-387.
324. **Ziehen, Th.** Die Geisteskrankheiten des Kindesalters. Samml. von Abhand. a. de Gebiete d. Päd. Psy., u. Physiol., Berlin, 1902. Vol. 5, pp. 79.
A valuable study of the mental diseases of childhood and of school factors inducing mental disease.
325. ——— Ueber die allgemeinen Beziehungen zwischen Gehirn und Seelenleben. Leipzig, 1902, pp. 66.
326. **Zirkle, Homer** Medical inspection of schools. (Investigations of the Dept. of Psychology and Education of the Univ. of Colorado.) Boulder, 1902, pp. 66.
Besides discussing medical inspection and school diseases this monograph has brief but valuable paragraphs on mental and physical defects, eyesight and deafness.
-
327. British child study association: Proceedings of the Hampton Wick Conference. London, 1902, pp. 57.
A souvenir volume containing papers on child study by Dr. Langdon-Down, Sir James Crichton-Browne, Miss Mary Louch, Dr. C. W. Kimmins, Henry Holman, Dr. Geo. E. Shuttleworth, and E. E. Matherson.
328. Child labor in Germany outside of factories. Rep. Commissioner of Ed., 1900-1901. Vol. 1, pp. 54-80.
329. Child study records. N. Y. School Jour., Feb., 15, 1902. Vol. 64, p. 190.

330. Children's ideals. *Paidologist*, April, 1902. Vol. 4, pp. 40-41.
331. Co-education of the sexes in the United States. Rep. Commissioner of Ed., 1900-1901, Washington, 1902. Vol. 2, pp. 1217-1315.
A valuable and exhaustive discussion with an excellent bibliography appended.
332. Compulsory attendance and child-labor laws. Rep. Commissioner Ed., 1900-1901, Washington, 1902. Vol. 2, pp. 2409-2415.
Contains a résumé of statutory provisions relating to compulsory school attendance and child labor.
333. Educational results of child study. *N. Y. School Jour.*, June 14, 1902. Vol. 64, p. 680.
334. First comprehensive attempts at child study. Rep. Commissioner of Ed., 1900-1901. Vol. 1, pp. 709-729.
An account of the Berlin study of the contents of children's minds upon entering school.
335. First two years at school. *N. Y. School Jour.*, Jan. 25, 1902. Vol. 64, p. 90.
336. Health of school children. *N. Y. School Jour.*, March, 1902. Vol. 64, p. 235.
337. L'enfance abandonné ou coupable. *Rev. Péd.*, 15 Janvier, 1902. Vol. 40, pp. 36-45.
338. Message of the child. *N. Y. School Jour.*, May 17, 1902. Vol. 64, pp. 559-560.
339. New law concerning reformatory education of children in Prussia. Rep. Commissioner of Ed., 1900-1901. Vol. 1, pp. 48-54.
340. Physical exercise in afternoon recess. *N. Y. School Jour.*, Feb. 8, 1902. Vol. 64, p. 175.
341. Sleep of children. *Rev. of Ed.*, Jan., 1902. Vol. 7, pp. 231-232.
342. Training to think. *N. Y. School Jour.*, May 3, 1902. Vol. 64, p. 492.
343. Will-training and school management. *N. Y. School Jour.*, Jan. 25, 1902. Vol. 64, p. 89.
344. Worth of an individual child. *N. Y. School Jour.*, May 10, 1902. Vol. 64, p. 545.

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BOOK NOTES.

THREE RECENT BOOKS ON GENETIC PSYCHOLOGY.

The Psychology of Child Development, by IRVING KING. The University of Chicago Press, 1903, pp. xx + 265.

Fundamentals of Child Study, by EDWIN A. KIRKPATRICK. The Macmillan Co., 1903, pp. 384.

Genetic Psychology for Teachers, by CHARLES HUBBARD JUDD. Appleton and Co. (International Education Series), New York, 1903, pp. xii + 332.

Of these three books, Mr. King's is the only one which offers a systematic treatment of the subject and attempts an organization of the material of child study. In his own words, his aim is "to present a consistent and intelligible outline of the mental development of the child from the standpoint of mental function." The author's point of view is derived from Prof. Dewey, who has also contributed the introduction. With Prof. Dewey's statement that "the true value, scientific and practical, of child psychology is not that we may know this or that fact about children, but that we may know how the growth of a human being proceeds; what helps and what hinders; what furthers and what arrests it, and how these results are brought about," all students of the psychology of childhood will, of course, agree. But from the statement that "what we need for both scientific and educational purposes is to get rid of externality (italics the editor's) in psychology" we must dissent, and it is because Mr. King has so well succeeded in doing this, that he seems in the first half of the book to have lost sight of the real living child. Child Study has, as yet, scarcely reached that stage of development when it can afford to dispense with the externality and collecting of facts with which all sciences have begun, and the more immediate need seems to be *more* and *better* observations and the co-ordination of external facts with internal processes of development. Mr. King rejects all the usual modes of infant observation, inaugurated by Preyer, and holds that neither the time nor order of appearance of activities of the various senses or emotional attitudes is of any importance and, if it were, would be impossible to observe, because the first manifestations of mental processes are entirely undifferentiated. The entire child is essentially in every reaction and it is only to the observer that he seems now in a state of emotion, now in one of cognition, etc.

For Mr. King, the problem is not when nor in what order experiences occur but "*how* does experience differentiate into volition and cognition and under what circumstances does the emotional attitude stand out in experience; and what must such an attitude mean in the undeveloped consciousness?" The time when consciousness appears is considered unimportant, the theory being concerned not with when consciousness appears but what is its character when it does appear. The starting point of mental development lies in the baby's capacity for movement; and, for convenience, Preyer's classification of early movements into instinctive, reflex and impulsive is used. All these movements are alike in being responses to stimuli but differ in the degree of co-ordination that lies back of them. Mental processes

arise in the child as functions of the co-ordination of these imperfectly adjusted movements. This *functional relation of consciousness* to activity is, from Mr. King's point of view, the fundamental principle in child study, and from this principle he develops his system with great logical clearness. But the book leaves us with a stronger impression of its logical development than of its relation to the child. In getting "rid of the externality" it seems to have got rid of the baby also, and we are left with only a schematic concept of a being with three modes of muscular reaction to stimuli and a hypothetical consciousness, developing from one of them, the impulsive, at an uncertain period. Sensations and emotions, as such, do not exist for this little being; and crying, smiling, etc., are not to be interpreted as manifestations of pleasurable or painful states, but merely as reactions to stimuli along the line of the least resistance to the motor discharge, because they are, being instinctive in their first appearance, "purely automatic affairs and do not stand for any conscious evaluation as they do in the adult," and though they may sometimes represent feelings of comfort or discomfort, they also occur where there "can be scarcely any definite feeling tone to consciousness." Granting Mr. King's point of view, his theory is consistently worked out but it does not seem to adequately explain the facts. In the chapters on Inhibition, Imitation, Moral Ideas of Childhood and Children's Interests, Mr. King deals with the material of child study and brings us in contact with the living child who, if not developed from the schematic baby, has, at least, been adopted after he has reached the conscious stage.

But whether we agree with Mr. King's point of view or not, the book is suggestive and helpful as an attempt to systematize the material of child study, and the chapters dealing directly with this material and the carefully selected bibliography of Children's Interests cannot fail to prove an aid and stimulus to teachers and to those interested in the study of children.

Mr. Kirkpatrick's book, though dealing with the same subject and material as Mr. King's, is entirely different in both purpose and treatment. No original material and no theory of any kind is presented. The book is not a contribution to psychology, but a series of lesson papers designed as a text book for normal schools and colleges, and is based on the author's practical experience in teaching. Each chapter contains a partial summary of the work which has been done on the particular subject under discussion, supplemented by a list of exercises for students, and suggestions for reading from the best literature relating to the topic. The scheme of each chapter, if faithfully carried out, can scarcely fail to give the student an intelligent view of the material and methods of child study. The book contains an introductory chapter on the Nature, Scope and Problems of Child Study, chapters on Physical Growth and Development, Native Motor Activities and general Order of Development. The larger part of the material is grouped under the general heading of Instincts. There are chapters on the individual, parental, social and adaptive instincts, the latter including imitation, play and curiosity; the regulative instinct, under which moral and religious tendencies are discussed; a somewhat mixed chapter, dealing with the constructive, collecting, æsthetic, migratory and rhythmic instincts which are considered as resultant rather than primary instincts, and lastly, the subject of language is considered as the expressive instinct. There is a brief chapter on Heredity and chapters on Individuality, Abnormalities, and the Application of Child Study in Schools. These last are, in accordance with the purpose of the book, pedagogical and of practical value to teachers. As a whole the book will be a helpful text book, because it presents in compact form an

outline of the work which has been accomplished in child study, but it lacks organization and completeness. Its chief defect is that, in following closely the outline of what has been done, it fails to show the scope of the subject and how much yet remains to be done. It ignores the many wide gaps in the field of child study, *e. g.*, problems of will and attention, and needs to be supplemented by a broader view of the subject.

The title of Mr. Judd's book is a misnomer and, for this reason, the book is disappointing to the reader whose expectations have been raised to look for a contribution to genetic psychology. The book deals neither with the material of genetic psychology nor does it, like Mr. King's, offer any system for unifying the material, and the author betrays no knowledge of the literature of the subject. The book should really be entitled *Some Problems in Pedagogy*, and in his treatment of these, Mr. Judd makes some use of the genetic method. The first chapters of the book deal with teacher study, which is considered of much greater importance than child study, and great emphasis is laid on the need of introspective study on the part of teachers as a remedy for the mental stagnation into which they are liable to fall as a result of routine work. The illustrative material for this section is drawn chiefly from the well known diagrams of optical illusions familiar to all laboratory students. There is some discussion of educational ideals and their development, chapters on reading and writing and the idea of number. The chapters on reading and writing are the best in the book, and that on writing is the result of an experimental analysis by the author of the motor factors involved in the process. These experiments have been carefully worked out and are both interesting and suggestive. As a contribution to pedagogical psychology the book will be appreciated by teachers for its practical suggestiveness and clear statement of the principles underlying the experimental part of the work.

THEODATE L. SMITH.

Rousseau and Naturalism in Life and Thought, by WILLIAM HENRY HUDSON. (The World's Epoch-Makers.) Charles Scribner's Sons, New York, 1903, pp. 260.

The first part describes the man, his early life, his relations to Madame de Warens, the hermitage, his persecutions and wanderings and death, and the second part gives a brief epitome of his works, with a final chapter on his significance as epoch-maker.

Life of Robert R. McBurney, by L. L. DOGGETT. F. M. Barton, Cleveland, 1902, pp. 280.

This in some sense supplements Dr. Doggett's first volume of the history of the Young Men's Christian Association, for up to his death, in 1898, he, more than any one else, was the leader of the organization.

The Religious Work of the Young Men's Christian Association. Principles and Methods. New York, 1903, pp. 88.

This is on the whole the best general manual of this association, giving a very brief and concise account of all its many lines of activity—shop meetings, railroad classes, meetings for boys, including the Yoke Fellows' Band, Personal Workers' League, Active Members' Club, Volunteer League, etc.

Poems of Tennyson, edited by Henry Van Dyke and D. Laurance Chambers. Ginn and Co., Boston, 1903, pp. 490.

Tennyson himself seems to be submitting to the inevitable tendency to be furnished with elaborate notes, introduction, etc., which here equal in number of pages and far exceed in matter the rather meagre

selections of text from his poems. The type and page of the text are all that could be desired, but would it not have been better to have omitted all the technique and erudition and to have given the reader twice as many poems in the space and for the same money, especially if the purchaser be, as is evidently intended, a student?

The Modern Age, by PHILIP VAN NESS MYERS. Ginn and Co., Boston, 1903. Part II, pp. 650. Price, \$1.25.

This second and larger volume begins with the discovery of America and comes down to the present time. Unique as it is, the work as a whole is altogether admirable and might well be regarded as indispensable for every high school and college classroom in history.

The History of Mediæval Education, by SAMUEL G. WILLIAMS. C. W. Bardeen, Syracuse, 1903, pp. 195. Price, \$1.12.

This work begins with Mohammedanism and treats the age of Charlemagne, the revival of learning in the ninth century, its relapse in the tenth and eleventh, the new revival in the twelfth, with the rise of the mediæval universities and the studies in them. The pages are interspersed with nearly thirty portraits and various other illustrations. It is a valuable little guide through an obscure period and will be welcomed by every teacher of education. Although the page and type are clear, the make-up of the book is unpleasantly suggestive of cheapness.

Origin and Development of the Common School System of the State of New York, by ANDREW S. DRAPER. C. W. Bardeen, Syracuse, 1903, pp. 107.

An Old English Grammar, by EDWARD SIEVERS. Ginn and Co., Boston, 1903, pp. 422.

La mare au diable, by GEORGE SAND. Ginn and Co., Boston, 1903, pp. 152.

Nietzsche und die deutsche Kultur, von ALBERT LANG. J. P. Bachem, Köln a. Rh., 1903, pp. 59.

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