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PUBLIC WORSHIP

A Study in the Psychology of Religion

BY
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JOHN P. HYLAN
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PREFACE.

The present study belongs to a somewhat distinct type of psychological investigation. Not being a laboratory study in the narrower sense of the term, it has not the restricted area and exactitude which laboratory studies usually lay claim to. In a search after scientific stability, the psychology of our present time is inclined to ignore the deeper interests and broader bearing that characterized the "science of the soul." It is said of the older psychology, which was designed for the senior class in educational institutions, that its study marked a very noticeable attainment in mental development and moral insight on the part of the students. A statement which would have to be made with many qualifications if applied to the experimental psychology of to-day. No one who appreciates the demands placed upon modern psychology is likely to ignore the scientific accuracy for which it hungers and thirsts as no other branch of knowledge with which I am acquainted. But while this accuracy is very admirable in itself, it has been applied to but a very small region of the subject as a whole, and the effort to do this has caused the rest of the field to be neglected.

It may be that a considerable portion of psychology will refuse practicable treatment by laboratory methods, and that, for this reason, a new method will need to be developed. This need not lack in scientific accuracy, although not expressible in diagrams of brain

tracks or mathematical formulas. Its first aim should be to remain true to the inspiration expressed in "the science of the soul," and then to reduce that science to as exact terms as possible.

Unfortunately there is a very large class of people prejudiced against such a treatment of their deeper mental life. They do not object to seeing their sensations and associations, as it were, impaled and dissected. But when it comes to a similar treatment of their beliefs and affections they call a halt, for this admits to their inner sanctuary. In Greece there was a law which made the dissection of the dead a crime, and the discovery of the circulation of the blood caused Harvey to be branded as a heretic. It was believed that the human body was a sanctuary which science should not defile. Unfortunately, this sanctuary was prone to disorder and needed the ministrations of a priest. It came finally to be understood that the best theological preparation for such a priest was a scientific training in medicine, and this accordingly is what they came to have.

In a similar way the mind is subject to thirsts and nauseas, heart-burns, disorders and epidemics. If human happiness is at stake, it is not difficult to see that more is sacrificed through the maladies of the mind than through those of the body; and yet, what can be prescribed for such mental and moral afflictions? Those who know most are hardly advanced beyond the medicine-man who paints his face and performs incantations with a rattlesnake to cure indigestion. It is the need of meeting this grave state of things which will force psychology to expand and deepen to the status of a comprehensive and well-defined applied

science, for not till it reaches this state will it find its proper sphere of influence.

Another disadvantage in the way of attaining this goal is the fact that it is the every-day phenomena which are the most important, because they most concern the questions of practical life; yet it is for this reason that they are the most difficult of observation. It is instructive to note that astronomy was one of the first, and perhaps the first, of the sciences to be developed. It is the things which most readily differentiate themselves from us that require the least effort to observe. Since astronomy received its impetus in the direction of scientific development, other classes of phenomena, physics, zoölogy, physiology, etc., which have approached nearer and nearer the observer have, in their turn, received attention. Similarly, the most of psychology is yet engrossed with the abnormal, the striking, and sensations which are so readily identified with objects apart from ourselves, for the more ordinary phenomena have come to be woven into our habits so early that, like the blind spot in the eye, they are unconsciously allowed for and ignored without further thought. A considerable confidence in the significance of the network of our habitual life thus becomes necessary, so that, like the philosopher's stone, it may be held to the light and gazed at until what at first appears as a tangle of unrelated elements may take the form of a significant and interrelated whole. It is a clarifying process of this kind that the following pages aim to effect.

It is, then, with a feeling of confidence in the aim and nature of the present study that one whose interests

are largely in experimental psychology, launches it upon the graces of the public, and hopes that it will not only accomplish its immediate object, but will also serve as a suggestion towards the attainment of a broader psychology. The study was initiated and largely executed during a period of research at Clark University. Since then it has been completed and revised as opportunity offered. I am especially indebted to President G. Stanley Hall and other members of the University Faculty for material assistance, and to other friends for suggestions and criticisms. Grateful acknowledgments are due the many who have taken the care and trouble to answer the questionnaires.

Harvard University, March, 1901.

Public Worship.

I.

INTRODUCTION.

In the following pages it is my purpose to throw some light upon certain questions which suggest themselves to an observer of public worship. These questions may be enumerated as follows :

I. It is a matter of common observation that the church of to-day exercises less control over the masses of the people than was the case two or three decades ago.¹ There has also been a decline in the increase of church property as compared with the general increase of real and personal property throughout the country since the census of 1870. While this may not be sufficient as independent evidence, yet when considered in connection with the deserted church edifices in many parts of our country, and the apparent growing indifference toward conventional church usages on the part of the larger masses of the people, it is evident that the church does not exert the same influence as formerly.

Besides the ways mentioned in which this shows, there also may be named other obvious features of the same general tendency. Prominent among these is Sabbath desecration. The severity of the Puritan New

¹See Hale, Fairbairn, p. 354; Salmon, p. 331. For titles in full see Appendix.

England Sabbath has gradually relaxed until at present recreation, the visiting of summer resorts, ball games, and the Sunday theater are features that no longer cause surprise and solicit denunciation, except from those of distinctly Puritanic faith. Besides, there is the steady growth of what may be called the indifferent class—people who have largely outgrown the fear so frequently associated with religious devotion, and by some process of reasoning have come to regard religious services largely as a matter of valueless form. There is also the unfortunate “backsliding” class which once having joined some religious organization failed through the reassertion of alien habits or other “weakness of the flesh” to conform to the requirements of church membership, and has so dropped from the church fellowship. It is difficult to secure satisfactory data on this point, but for the Baptist and Congregational churches this class ranges annually from one to two per cent of the entire membership.¹ This first question, then, may be stated thus: *Why are not our churches more efficient?*²

2. The second question is based upon certain marked changes which have appeared in our forms of

¹See the Year Books of these denominations.

²It may be of interest to note that while the value of all public school property in the United States combined with the value of all college and university property in land, buildings, libraries and scientific apparatus (U. S. Commissioners of Education, Report 1891--92) was \$442,829,667.00, the value of the church edifices, sites, and furnishing was (1890) \$679,630,139.00. These edifices, together with other buildings used for the purpose, furnished a seating capacity of sixty-nine per cent of the total population, while less than thirty-three per cent were regular members.

worship during the last thirty years.¹ The bare order of service which characterized the Puritan worship has disappeared with the Puritan Sabbath. Various forms of music, the elaboration of ritual, church decorations and church architecture have been introduced to change the service of worship from its earlier simplicity to one of elaborate æsthetic import. In localities where the concentration of wealth makes it possible, no expense is too great to lavish upon imposing edifices. In the one hundred and twenty-four cities of the United States which have a population of 25,000 and upward, the number of communicants constitutes 25.72 per cent of the total for the whole country, while the church property is 46.13 per cent of the whole. These edifices are but 6.82 per cent of all in the United States.² While these figures show indisputably the strong tendency to erect expensive churches where it is possible, they show hardly less clearly the bare simplicity of thousands of rural churches. As one passes from the costly city edifice with its expensive art and luxurious appointments to the country "meeting house" with its æsthetic bareness, the question which appeals with striking force is, *What is the significance and value of this modern type of worship?*

3. The transitions of the present time, however, are not covered entirely by the growth of indifference toward church influences and change in church ceremonial. There is yet a more vital aspect of these religious changes. The older theological conceptions which inspired the stern rigidity of the Puritan belief

¹See Diman; Cox, G. W.; Pratt; Dole.

²U. S. Census for 1890.

have now largely faded away. In their place have come sufficient philosophy and modern science to show the incongruity of some older religious ideas, but not enough to furnish a substantial basis for independent thinking. As a result there is the frequent pathetic effort to reconcile science and religion by compromising the latter to the sphere of the "unknowable" or regarding it as a disease of the imagination which has little or no teleological significance. Such a compromise can hardly be expected to promote religious interests, and it is largely, no doubt, this coupled with the conviction that religion has value, although one which lacks scientific demonstration, that has given rise to its popularization, which to many eyes deprives it of all dignity.¹ It is the germination of the power and will to reason about religious matters which finds its evident expression in the growth of such organizations as that of Spiritualism, Christian Science and Theosophy,² and we may even be justified in placing Socialism and Nihilism with these, since, for most people, they embody new religious conceptions.

Since religious expression and religious belief are so closely related, we cannot expect to treat one satisfactorily without taking careful account of the other. *A question, therefore, of central importance for our study will be regarding the significance of these changes of religious conception.*

¹See Hale.

²The church property of the Spiritualists was valued at \$7,500 in 1860; \$100,150 in 1870, and \$573,050 in 1890.

In 1890 there were six hundred ninety-five Theosophists in the United States, while in 1895 there were two thousand five hundred.

4. Our final problem, and one which really includes the others, concerns the psychological nature and significance of worship itself. We here have a phenomenon which has existed almost, if not quite, from the earliest religious conceptions. Hardly a religious belief has existed without it.¹ Its forms have varied with times, religions, peoples, and climates, and at present the question of its significance is thrust upon us by the important relation which its present time changes seem to have to our social, moral, and religious life. May it not be possible to indicate the position which public worship has in the economy of human life as a whole by means of an analysis of the experience of the individual worshiper, and by uniting this with the broader range of facts from a study of biology and comparative religion? This more inclusive question may be briefly stated thus: *What is the psychology of Public Worship?* To answer this question exhaustively, in the different aspects in which it has been stated, is a greater task than I have anticipated accomplishing. *It is rather my purpose to ascertain as exactly as possible the essential mental processes involved in worship, and see what meaning they have for these questions.* To assist in this, I have solicited answers to two lists of questions. The first was as follows:

State age, sex, nationality and occupation, and your religious creed, or no creed.

I. How differently do you feel Sunday mornings from other mornings, before rising, dressing, breakfasting, before church: or is there a Sunday feeling or

¹ See Brinton (1), p. 50.

rhythm, and if so, can you describe, account for, or define it?

II. How much of this feeling is due to each of the following elements? (a) quiet on the street, (b) cessation from ordinary duties and pursuits, (c) later hours for rising or breakfasting, (d) distinctive toilet and bath, (e) Sunday clothes, (f) different food for breakfast, (g) reading Sunday papers, (h) other books, (i) Bible, (j) special devotions, personal and impersonal, or (k) any other miscellaneous things that distinguish the day before church. Will you consider carefully and write not only your own habits, but see if you can describe the effects of each of the above elements, state your ideals, etc.? How would you prepare for church, or if you do not go, how would you spend the morning?

III. (a) How do church bells affect you and do you enjoy chimes? (b) How do you like to see people dress going to church, and why? (c) If both were practicable, would you walk or ride to and from church and why? (d) Do you enjoy going to church, *per se*, and would you go in company, enjoy nature, meditate, etc.?

IV. (1) What is your ideal of the location of a church (a) in the country, on a hill, in the village, trees, etc., (b) in the city? (2) Have you a distinct taste concerning external church architecture? (a) material, (b) color, (c) spire, (d) belfry, (e) style and form, etc., and if so, why and how do these things affect your ideal? (3) The same concerning (a) internal form, (b) color, (c) decorations, (d) mottoes, (e) open roof and rafters or closed ceiling, (f) stained glass windows, (g) degree of light and shadow, (h)

aisles, (i) seats, (j) chancel, (k) pulpit, (l) its decorations, flowers, etc., (m) vestry rooms, (n) club parlors, (o) church kitchen.

V. What are your ideas of the regimen of a church as to (a) heating, (b) ventilation, (c) light, (d) greeting friends and social intercourse, (e) function of ushers, (f) seating strangers, *i. e.*, they in your church and you in a strange church, (g) collections and contributions?

VI. How do you feel toward church service as a whole, and do you regard it as a harmonious and connected whole? What are your feelings and ideals as to (a) the organ voluntary before and after service, (b) the Scripture reading or responses, (c) the prayer, (d) singing, (e) litany and ritual, (f) the sacraments, (g) any other parts of it?

VII. Do you really desire to go to church and heartily enjoy it, or feel it a normal function, *i. e.*, do you go (a) for the personal good you get, or (b) as a duty, or (c) to set a good example, or (d) from habit, or (e) as a penance, or why? Please be frank here.

VIII. If you do not go, or go rarely, why do you stay away? (a) Because there is something that offends your religious sense or conviction, and if so, what, and how would you change it, or (b) have you some substitute, as the enjoyment of nature, of your family and friends, reading or study, art, science, music, recreation, or complete rest? Please be full and explicit here. Can you find religious elements in these substitutes? And if so describe them.

IX. (1) What is your idea of a midday and evening meal on Sunday, *i. e.*, would you fast a little and have

but two meals on Sunday, or banquet, have guests, etc.? (2) How would you spend Sunday afternoon in different seasons and weathers, in city and country, etc.? (3) How would you spend Sunday evening?

In reply to this list, two hundred three answers were received, and these were tabulated. The ages of those answering were as follows: From 16 to 20, 118; 20 to 30, 60; 30 to 40, 19; 50 to 60, 1; 70 to 80, 1; not given, 4. Of these 181 were females and 22 males. The nationality was as follows: American, 178; English, 4; German, 3; Irish, 3; Scotch-American, 2; colored, 2; German-American, 2; Scotch, 1; Scotch-English, 1; Italian, 1; Jewish, 1; Spanish-American, 1; French-English, 1; German-English, 1; not given, 2. Following are the occupations: Normal school students, 160; teachers, 20; university students, 9¹; private school, 5; college, 4; housekeepers, 3; clergymen, 1; not given, 1. The creeds as given were: Presbyterians, 52; Methodists, 52; Baptists, 26; Episcopalians, 24; Congregationalists, 10; Roman Catholics, 9; no creed, 8; Dutch Reformed, 6; "Protestant," 4; Universalists, 3; Christian, 2; Lutheran, 1; not decided, 1; not given, 5.

The second list of questions was as follows:

I. State name, address, age, sex, nationality, occupation, and church preferences, if any.

II. (a) What kinds of religious services do you enjoy most: such as preaching, song, communion, prayer services, etc.? (b) If you are used to singing in a choir, does this seem like worship?

III. (a) State frankly your reasons for going to church in the order of their effectiveness. (b) If you

¹Post-graduate.

do not attend church regularly, give the reasons, and tell what you find, if anything, which satisfactorily takes the place of it.

IV. (a) What is there in God's nature which makes you want to worship him; such as might, justice, love, etc.? (b) Are you conscious of these qualities when in a devotional spirit?

V. What aids have you found that help bring you to the right mood for worship; such as Sabbath quiet, church bells, nice clothes, association with others of similar belief, church decorations, a love of the beautiful and sublime, prayer, singing, feeling of dependence, etc.? Tell how much is due to each.

VI. What do you find in religious services which meets in you a felt need; is it the music, the sermon, prayer, responses, or something else? Tell how differently you feel after enjoying these than just before.

VII. Tell what kind of response you feel like making in a service which you enjoy; as kneeling, singing, shouting, being kind to others, adoration of God, etc.

VIII. Do you think the general effect of church-going is to make you better, to give you a better idea as to how you should live, or does it simply make you feel easier, as when a duty is performed?

Answers to this list were received from seventy-five persons, with ages as follows: From 20 to 30 years, 26; 30 to 40, 17; 40 to 50, 7; 50 to 60, 8; 60 to 70, 3; 70 to 80, 4; not given, 9. There were 44 males and 31 females. The nationality was as follows: American, 64; English, 4; Scotch-Irish, 1; Scotch, 1; German, 1; not given, 4. There was the following denominational representation: Baptist, 22; Society of

Friends, 16; Congregational, 12; Episcopal, 8; Presbyterian, 4; Unitarian, 3; Lutheran, 1; Universalist, 1; Christian Scientist, 1; no creed, 7. There were the following occupations: Study of theology, 11; house-keeping, 11; college students, 8; teaching, 5; clerical, 5; farming, 4; preaching, 3; physicians, 2; university students, 2; each of the following, 1: Shoemaking, carpentering, building, mechanic, government official, manufacturing, literature, librarian, college president, business, conveyancer, banking, art student, music teacher, child nurse, artist; not given, 8.

The other sources of material for the study will be given in the appendix.

II.

THE SABBATH.

The observation of the Sabbath first demands our attention, since from time immemorial this has been the setting for observances of public worship. Let us first enquire into the nature and occasion of its origin, and then the motives that have influenced the nature of its celebration.

The seventh day rest is believed to have its origin in lunar feasts, the rest first being incidental to the feast, and then coming to be the essential feature.¹ The sacredness of these celebrations is well established, and in the case of the Hebrews "the new moon festival anciently stood at least on a level with that of the Sabbath."² In the older parts of the Hebrew Scriptures the new moon and the Sabbath are almost invariably mentioned together. That full moon as well as new moon had a religious significance seems to follow from the fact that when the great agricultural feasts were fixed to set days, the full moon was chosen. "In older times these feast days appear to have been Sabbaths."³ Renan believes the Hebrews got the seventh day rest from the Assyrians, who had previously divided the month into groups of seven days, although its observation as a day of rest did not appear until the prac-

¹See Wellhausen, pp. 112-114.

²Ibid., p. 113.

³Smith, W. Robertson (1).

tical need of rest resulted from enforced labor.¹ Smith states that the Assyrians gave the seventh, fourteenth, nineteenth, twenty-first and twenty-eighth days of the month a peculiar character, but they were different from the Hebrew Sabbaths.² The older Hindus chose the new and the full moon as days of sacrifice. The practice of abstaining from various sorts of labor upon days consecrated by religious observances was familiar to the Roman world before the introduction of Christianity. Virgil enumerates the rural labors that might be carried on on festal days. These were not of the nature of new undertakings, and were often protective.³

It would thus seem first, that the Sabbath originated very anciently at a time of primitive nature-worship, and, second, that its origin was purely religious, *i. e.*, brought about through religious observances. Let us examine briefly into the motives of this primitive worship as we find it now.

“The Diyeris of Australia believe that man and all other beings were created by the moon. In many American languages the moon is regarded as male and the sun is referred to as his ‘companion.’ The Ipurinas, a Brazilian tribe, address the orb as ‘Our Father,’ and imagine him a little old man who was their ancestor and still watches over their prosperity. In like manner the eastern Eskimos say that their ancestors came from the moon to the earth. With the rude tribes of southern Borneo it is stated that the veneration of the moon

¹Renan, Vol I., pp. 57 and 74.

²Loc. cit.

³See Neal, Edward V., pp. 86, 87.

forms the chief basis of their worship and myths."¹ The time of full moon was chosen both in Mexico and Peru to celebrate the festival of the deities of water, the patrons of agriculture, and very generally the ceremonies connected with the crops were regulated by her phases. Among the Guaycurus of Paraguay the women only, the tillers of the fields, performed the rites to the lunar deity, whose favor they asked as the giver of increase and the harvest.² While it is impossible to determine just what the attitude of the originators of the Sabbath was toward the moon, it is quite evident that other peoples of a similar state of development have regarded it with veneration, attributed to it personality, and performed sacrificial rites to secure its favor. We may naturally regard this state of things as preceding the first records of the Hebrew Sabbath, and then merging into it as the features of nature-worship became lost in the higher monotheistic conception. What survived from these lunar feasts, as the feature suitable to accompany this higher conception, was the bodily rest enforced by the influence of religious authority.

It would be instructive to know whether the primitive ideas of the Sabbath, as such, involved anything but physical rest. The day was known to the Accado-Sumerians, the aboriginal inhabitants of Chaldea, and their equivalent term for it is explained to mean "a day of completion of labor."³ This is certainly the idea expressed with its first appearance in the Bible, the

¹Brinton (1), p. 140.

²Brinton (2), p. 154.

³See Atterbury.

rest after the creation, a passage which forms the close of what is regarded as the earliest records of Mosaic history. Among the Semitic Assyrians and Babylonians the name *Sabattu* is found in the inscriptions where it is defined as "a day of rest for the heart." This may have implied special rites of worship, social intercourse, or some other occupations not of an everyday kind. The first suggestion of this in sacred history is where the Shunamite woman proposes to visit Elisha (II Kings iv; 23). In Hosea ii: 11, the Sabbath is spoken of as sharing the happy joyousness impossible in the exile. In Deuteronomy, besides being a day of rest for man and beast, it is an opportunity for social intercourse. In the later developed Priestly Code, however, the rest is not of the nature of a joyous festival, but is a thing for itself, and separates itself as well from the festival as from the laboring days. It is a rest not merely from ordinary duties, but rest absolute, and one which must be prepared for.²

The strict observance of the Jewish Sabbath at the beginning of the Christian era is too well known to require comment. The observance of Sunday, or the first day of the week, by Christians was the natural result of the incidental features of the establishment of the new religion, *i. e.*, the resurrection, and the outpouring of the Spirit. There is no intimation in the New Testament that the observance of the Jewish Sabbath was transferred to the first day of the week. Rest was the chief thought connected with the one;

¹Atterbury.

²See Wellhausen, p. 115.

joyous activity and glad worship with the other. Sunday came to be hallowed from a natural fitness of things and not by formal apostolic enactment.¹ There is good reason for believing that the early Christians did not abstain from work on the first day.² Tertullian recommended, however, that slaves be given leisure on the Sabbath and the Lord's day to go to church for instruction in religious truth.³ Thus appears a motive apart from the primary one of commemorating the resurrection. The first law respecting abstinence from work was made by Constantine (A. D. 321). Here respect for church days seems to be the main object. In the third Council of Orleans (538) agricultural labor is discriminated against in order that "the people may the more readily come to the churches and have leisure for prayer."⁴

In the third century the observance of Sunday had approximated the Jewish Sabbath in strictness, in order to check the pagan tendencies of the Christians.⁵ There is a suggestion of penance in the commands of the second Council of Macon (585), since by self-denial on that day we may be "raised to heaven" by "trampling on earthly things." Again, in 797, Theodulphus, Bishop of Orleans, urged observance through respect for the day in which "God created the lights," "rained down manna in the wilderness," the day in which the "Redeemer of the human race" rose from the dead,

¹See Barry; and Neal, E. V., p. 90.

²Neal, E. V., p. 88.

³De Orat., I., vii. c. 33.

⁴Neal, E. V., p. 91.

⁵Bennett, p. 496.

and when the Holy Spirit was poured out. The Synod of Exeter, 1287, declared that "we * * * keep the Lord's day free from manual works, that the Christian people, assembling in the churches, may both hear the divine commands and learn the rule of life."¹ Near the close of Edward the Sixth's reign the same list of holidays was appointed as is found in the Prayer Book, including Sundays. The avowed reason for these days was again worship, for since men are not sufficiently mindful to praise God, to hear his word, and attend the rites of the church, certain days were appointed in which other labor should cease, and so leisure gained for religious purposes.²

In Luther's "Larger Catechism" both the need of a weekly rest and leisure to worship and to "hear and handle the Word of God" are mentioned as the motive for the weekly observance. Calvin's idea was practically the same.³ Tyndale, the first translator of the scriptures into modern English, believed that "neither need we any holy day at all, if the people might be taught without it."⁴ In Puritan New England the effort was made to copy the letter and spirit of the biblical injunctions regarding the Sabbath as closely as possible. Here the Sabbath began on Saturday evening, since in Scripture is found these words: "The evening and the morning were the first day."⁵ The motive for this is well expressed in the instructions

¹ Neal, E. V., p. 119.

² Ibid, p. 184.

³ Hesse, p. 171.

⁴ Answer to Sir Thomas More, p. 287.

⁵ Earle, p. 256.

given to Governor Endicott by the New England Plantation Company. They ran: "And to the end that the Sabeth day may be celebrated in a religious manner wee appoint that all may surcease their labor every Satterday throughout the yeare at three of the clock in the afternoone, and that they spend the rest of the day in chatechizing and preparaceon for the Sabeth as the ministers shall direct."¹

With so much about rest, self-improvement, worship, and respect for the day, but little has been said about recreation and amusement. This, however, was included in the primitive Jewish conception of the Sabbath, and practiced, at least during the earlier portion of the Christian Era. St. Augustine, Ruffinus, and Chrysostom charged the Jews with improper indulgences—laziness, dancing, singing, "lascivious banqueting," drunkenness.² All examples derived from the Greek and Roman regulations show that "if business was suspended and labor ceased on days of religious solemnity, those solemnities were themselves attended by whatever exhilarates the bodily senses; music and dancing, feasting and libations were their regular accompaniments."³ Although the early Christians lived in a rarified ascetic atmosphere, the prosperity of the church brought with it alien tendencies which were not long in being embraced. As a result, frequent and continued edicts have been published to prohibit Sunday sports⁴ from Theodosius I. to the present time.⁵

¹Ibid., p. 253.

²Neal, E. V., p. 206.

³Ibid.

⁴Ibid., p. 212, *et seq.*

⁵See Report of the New York Sabbath Committee, 1897.

We thus see¹ two very different conceptions of the Sabbath between which our Sabbath of to-day is a compromise.² The one is illustrated by the early Jews, the Greeks and Romans, the Jews in the early part of the Christian era, and the anti-Christian tendencies since. The other is found in the Priestly Code, the early Christians, the orthodox Christian tendencies since and the Puritan Sabbath. The former takes physical rest as the starting point and adds to it whatever pleases and exhilarates. The latter also takes physical rest as its starting point, but adds to it the moral effort of self-correction. We thus have for these a certain amount of common ground which centers around the nature of the rhythm of physical rest and fatigue. Let us examine this ground more carefully.

Every one is familiar with the phenomena of fatigue and exhaustion on the one hand, and recuperation on the other. Muscular contraction, *e. g.*, cannot continue indefinitely, but every period of contraction must be followed by a similar period of relaxation. This is illustrated by the intermittent contraction of the muscles of the heart, and of those employed in respiration. Experimentally it is studied with the ergograph employed by Mosso,³ Lombard,⁴ and others, with which the amount of work performed by a muscle before exhaustion sets in can be measured. When the effects of activity overbalance the factors of recuperation, the

¹The above references have been selected from a large number as being typical. A complete account of Sunday legislation would be too cumbersome for our present purpose.

²Neal, E. V., p. 209, *et seq.*

³La Fatica.

⁴See Appendix.

activity gradually ceases, and with a rapidity proportional to the preponderance of those effects; otherwise activity may continue indefinitely.¹ The effects of fatigue consist of two factors; one, the using up of necessary substances termed exhaustion, and the other, the accumulation of decomposition products and the resultant poisoning by them.² The circulation of the blood, however, carries away the injurious matter, brings nutriment to the muscle, and the power of activity is again acquired. All activity, whether found in a part, *e. g.*, the muscles of a highly evolved organism, or in the unicellular type, is dependent upon these processes of the using up and restoration of living tissue.³

All animal life is surrounded by certain conditions necessary for its existence, such as oxygen, moisture, food supply, etc. All of these appeal to the organism as stimuli which solicit a responsive activity; and since they embrace all the possible influencing conditions of life, they are called the vital conditions of the organism. Nearly all of these stimuli which influence the organism vary so much in intensity that there is a high intensity which is destructive of life, and also a low one which has an equally injurious effect. Thus, when heat reaches a too great intensity, it causes death; and, likewise, a too low intensity, or cold, when becoming extreme, is also fatal. Life, then, is possible only between certain limits of stimulation. When the upper limit is approached, over-stimulation causes a decrease

¹See Hylan, p. 4, *et seq.*

²Verworn, p. 469.

³See Davenport, I., p. 277.

of activity, while the passing of it causes death. When the lower limit is approached, a decrease of activity is also produced; while the passing of it likewise causes death. Between these limits lies a point most favorable to life, the *optimum*.

Now, so far as we are acquainted with life, it consists of responses to these vital conditions; so that states of excitation on the one hand, and states of depression or effects of over-stimulation on the other, are merely different degrees of life; excitation being an increase and depression a decrease of the normal intensity of vital phenomena.¹ Fatigue, moreover, is but a single example of the widespread relation of a high to a low state of activity brought about by stimulation. Its universal meaning for living organisms is thus a decrease of life, which, if continued by the over-stimulating conditions, passes readily into the fatal stage of extinguished life. As these considerations apply as fully to human beings as to other forms of animal life, it is but natural that precautions should be taken against excessive fatigue, and that a universal instinctive appreciation of them should find protection in religious custom.

The phenomena of fatigue, as we experience them, are almost too well known to require mention. After strong muscular effort the temperature often rises, and a certain increase in irritability of the central nervous system is noticeable. Among the subjective symptoms the best known are excitement, sleeplessness, lack of appetite and intense muscle pains, which appear usually upon the next day or even later.² Dr.

¹Ibid.

²Ibid., p. 467.

Tissié¹ finds that with sane and robust persons extreme fatigue, as that caused by a long march or bicycle trip, excites distinct temporary psychoses which have the same outer manifestations as the pathological psychoses of morbid subjects. The symptoms of mental fatigue are hardly less striking. The first evidence of this is inequality in the amount and quality of mental work performed. This is followed by a feeling of aversion for the cause of fatigue, and if effort still continues, the milder forms of mental aberration are likely to set in. Over-exertion of the brain may lead to acute mania, melancholia, dementia, "*folie circulaire*," and general paralysis.²

Considering, then, the pronounced and varied symptoms of over-exertion and the serious results which come from it, it is a matter of unquestionable importance to know not only the ground for the institution of measures of prevention in the past, but also the reasons for embodying such measures in our present day customs. We may ask, why should one day in seven be taken for rest rather than sufficient rest for each day, or why not take the eighth, ninth or tenth day instead? Pillerkofer and Voit³ have shown by the analysis of the blood that the nightly rest after the day's work does not offer complete recuperation of the vital forces, and is insufficient to keep the mind and body in tone; so that if this reparation is not supplemented by an occasional longer period of rest the system is subjected to a gradual falling of pitch. Also

¹See appendix.

²See Tuke, J. Batty.

³Quoted by Lyon.

a study of the observations taken for a succession of weeks of continual labor, with no Sunday rest, demonstrated that a progressive decline in strength had taken place from the beginning to the end of the series of instrumental observations.¹ In speaking of the effect of rest upon those whose occupations cause disease, Camille and Édouard Rabaud say: "It permits the elimination of fatal and deleterious substances absorbed by the organs; it prevents their accumulation to a poisonous degree; it compensates for the insufficient respiration, circulation, etc., due to the sojourn in damp rooms, bad air, exposure to infection, etc., and for the constrained attitude in which the workman is sometimes obliged to remain during ten, twelve, or fourteen hours."

As our occupations are now carried on, it is impossible to balance the processes of fatigue and recuperation daily, although this would be necessary if perfect health were to be secured.² It is also true that time taken from the labor of working days cannot be a time of rest in the fullest sense, because of the working-day environment. The sights and sounds around us are continually suggesting our routine of labor and keeping the mind in a constantly stimulated condition. Hence the importance of having a day on which all agree to put by habitual occupations, adopt a changed environment and assume new habits of thought. The question now comes as to how frequently this should be done. France substituted the tenth day for the seventh as a day of rest, and this was found to be insufficient.

¹Lyon, Samuel B., pp. 25, 26.

²See Dr. N. S. Davis as quoted by Lyon, p. 38.

"Inquiries instituted by a commission of the British Parliament in 1832, the testimony of 641 medical men of London in a petition to Parliament in 1853, and of a great number of medical societies, physicians, physiologists, political economists, and managers of industrial establishments, go to prove that in the case of men engaged in ordinary bodily or mental labor . . . to maintain a condition of vigor a supplementary rest of about one day in seven" is needed in addition to the rest of the night.¹

There is, therefore, no reason for regarding a mystical relation as existing between the seventh-day rest and human hygiene. On the one hand, the habit of rest has been preserved from the ancient lunar feasts; while, on the other, the variety and intensity of application on the part of man for the other six days have been such as to secure self-preservation when the recuperation of the seventh-day observance is secured. With the adoption of the fifth or the tenth day in place of the seventh, the habitual intensity of application would naturally continue the same; hence in the one case the rest would come more often than necessary, while in the other it would not come often enough.

We thus see of what vital importance is the common ground of Sabbath observance held by both the ancient Roman and the Christian tendencies of the present time, and also that this rest is occasioned by the physiological necessities of all animal life. Let us now turn to the psychoses of the Sabbath rest, or the way in which this appeals to the average person.

In the answers to the lists of questions already re-

¹Atterbury.

ferred to, rest appeared most prominently in producing a Sunday feeling which figures in characterizing the day. Ninety-five per cent of those answering the first questionnaire reported as having it. It begins early in the day, many say before rising. One is pervaded with a restful quiet feeling, and this is frequently accompanied by a devotional spirit. It is likened to the sun's coming out after a storm. There is freedom from care and no need of hurrying to do ordinary duties. More attention is given to dressing neatly and tastefully. There is a feeling of anticipation that something pleasant is going to happen. There is enjoyment in feeling that one can do all day as he pleases. Nature is more attractive than on other days, and a sunset never looks so beautiful as on Sunday. If ordinary work is done, it detracts just so much from the beauty of the day.

Usually several causes were given for the Sunday feeling. Of the 203 who answered the first list of questions, 154 mentioned the cessation of ordinary duties and pursuits, 125 quiet on the street, 118 later hours for rising and breakfast, 72 Sunday clothes, 54 reading Bible, 48 other books, 48 special devotions, 37 distinctive toilet, 34 different food for breakfast, 25 Sunday papers, 14 religious papers, 10 music, 7 all the family being at home, 5 anticipation of religious services, 5 religious services, and so on, several other reasons numbering from three down. It should be noted that the first three causes which lead the list are the direct result of Sunday rest, while the other varied and less prominent features are associated with the day, and imply generally some new sort of activity. But it is the general tone and nature of the feeling which has

for us the greatest significance. It is a feeling of quiet exaltation, and has for its associations religious devotion, emancipation from annoyances, æsthetic enjoyment, pleasant anticipation—experiences which it would be hard to over-estimate in their elevating and humanizing influences. Yet, when we have learned the significance of rest in relation to our well-being, it is not surprising to find it associated with these elevated experiences of life.

Turning from the common ground of the Christian and the Roman types of celebration, let us now endeavor to explain the occasion of the ground of difference between these, for it is a matter of no slight significance.

It will be remembered that the Roman type added to the feature of rest that of physical exhilaration and enjoyment, while the Christian type in place of this added the moral effort of self-correction—moral instruction, self-abnegation and worship. It should also be noted that while rest is a state of suspended activity, both of these added features necessitate reinstated activity, though of a different kind from that which made the rest necessary. It is the monotonous everyday bread-winning toil which necessitates rest, while these seventh-day activities constitute a change—effort in a new direction. Let us first study the Roman, or recreation type.

We have already seen that the living organism is suspended in the midst of opposing forces, the stimuli of the environment, and that a state of equilibrium in which these forces are balanced coincides with the optimum conditions. "Every change in the external vital conditions of an organism constitutes a stimu-

lus."¹ The withdrawal of food or oxygen acts as a stimulus as much as the application of chemical agents or heat. In the case of organisms which are not surrounded by a uniform nutrient medium, food must be sought, and this can be found only at irregular intervals. Hence periods of want and abundance alternate with each other. Here food is a stimulus, since it does not form a constant optimum condition; it is a condition which from the nature of things must remain inconstant. Light is also a necessary vital condition for green plants, yet daylight alternates with darkness, hence light acts as a stimulus. In organisms formed of many different cells stimulation is also a vital condition. A muscle, *e. g.*, contracts only when it is stimulated by a nervous impulse. If the nerve is cut the muscle loses the power to contract and, after a time, atrophies. It is then evident that some of the vital conditions of an organism must act intermittently, and although these may approach as near the optimum as circumstances will permit, yet must from their intermittent nature act as stimuli.²

This general physiological principle loses none of its importance when applied to human beings. It is said that "more evil arises from the non-use, or inadequate use, of certain organs during our various duties and labors, than from the over-exercise or wear of those we are using."³ Dr. Lyon remarks that "there are no occupations in which some portions of the body or mind are not over-taxed, while other organs, or sides

¹Verworn, p. 357.

²Ibid., pp. 352, 353.

³Davis, *loc. cit.*

of the mind, lack the proper functional activity." Accordingly, if we were to map out a thoroughly hygienic Sabbath it would consist of such necessary physical and mental activities as are not exercised through the week, so far as these are compatible with the needed rest. These activities, it should be noted, figure as vital conditions of our organism, and when lacking introduce a condition which acts as an impelling stimulus which demands recognition. Unfortunately, we have no adequate scientific means for determining what these activities should be. Yet there is a guide to this which has always been used with a greater or less degree of success. Lack of exercise, whether of a physical or a mental organ, causes discomfort.² Its activity is anticipated with enjoyment. True, it is not always known just what function it is that has been slighted,³ but when any activity is anticipated with pleasure, it is sure to meet the whole or a part of the demand. Hence the significance of the command in Deuteronomy to "rejoice before the Lord,"⁴ and the fact that "the ancient offerings were wholly of a joyous nature—a merrymaking before Jehovah with music and song, timbrels, flutes and stringed instruments."⁵ To-day we see an application of the same principle in Sunday recreations, and in the popularization of worship and religious discourses. The aim is to exercise

¹Loc. cit., p. 30.

²Marshall (1), pp. 213, 272, *et seq.*

³Ibid., p. 214.

⁴Deut. xvi. :11-14.

⁵Wellhausen, p. 81.

established functions, and so bring back mind and body to a healthy state of equilibrium.

I may here refer to an aspect of the æsthetic development of our church worship which makes it accord with this. The view of æsthetics which Mr. Marshall advances,¹ and the one which appears the most comprehensive, regards pleasure as dependent upon the functioning of organs which have at their disposal a surplus of stored energy.² This energy has accumulated through nutritive processes as a result of previous exercise, and is liberated when the appropriate stimulus appears. Since this is the basis of all æsthetic enjoyment, it is only applying the hypothesis to regard church architecture, church decorations, the music and all similar features which make the service pleasing as intermittent stimuli which supply vital conditions to the organism, in the same way that food serves as a necessary stimulus to many animals, light to plants and recreation to the weekly laborer. And lest this view seem to debase our most cherished emotions, let us remember that on the one hand all mental activity is, according to our psycho-physics, inseparably connected with the discharge of nerve force, while on the other, our most vital and common interests are centered in well-being, to which in some direct or indirect way we regard the service of worship as contributing.

In this connection, let us turn to our questionnaire answers for the mental side of Sabbath day activities.

¹Pleasure, Pain and Aesthetics, by Henry Rutgers Marshall, M. A.

²Op. cit., p. 324.

It will be remembered that these were prominent in producing the Sunday feeling. Of special interest is the influence of church bells, since they often carry the feeling to a high pitch of exaltation. One hundred sixty-four liked them, fourteen disliked them, while nine were indifferent. Of one hundred seventy-seven answering, one hundred seventy liked chimes, while seven disliked them. On some, bells produce a solemnizing effect, although this need not prevent their being enjoyed, while they make some vivacious and happy. They may inspire reverence, give a deep, earnest feeling, or a feeling of mystery and fear. They exalt one to almost seeing Heaven, or seem like sweet toned voices; they awaken the conscience, recall early memories, and seem to call people to church. It would hardly seem out of place to regard the more vague æsthetic stimulations of church bells as one of the agencies which arouse and germinate into significant form those slumbering activities of the mind which tend to higher moral and intellectual development, but which are suppressed through the narrowness and pressure of the weekly occupation.

A large majority preferred walking to riding to church, since it saves labor on the part of servants, street car employees and horses. Exercise and the enjoyment of nature were also mentioned by some as a reason for this. As to dress, the great majority chose to dress well and neatly without special show, some even simply and plainly, but a few would put on the best they have. The prevailing reasons given for these different tastes were that people should dress well and neatly, but not gaudily, since otherwise the attention would be distracted from worship; that gaudy dress is

not appropriate for worship, and would also keep those away who could not dress in the same manner. People should dress in the best they have, others say, out of respect to the house of worship. The advocates for simple dress say it is most appropriate and keeps others from being envious.

Sunday meals are also significant. A plenty of good food, and, if possible, special dishes, but with as little work as possible, suits the taste of the majority: banqueting would be indulged in by but a few.

Perhaps of more significance are the substitutes for public worship, and these result, no doubt, more from the religious impulse than merely from a reaction from the habitual vocation: they illustrate the typical Christian tendency when translated from its conventional form. Of those who attended church regularly, seventy gave the following substitutes for church-going: Good books, 27; reading, 20; Bible, 18; religious papers, 14; nature, 8; sacred music, 7; letter-writing, 7; friends, 6; sleeping, 6; walking, 5; complete rest, 5; Sunday-school lesson, 4; music, 4; family, 3; study, 3; religious devotions, 2; meditation, 2; no substitutes, 2; prayer, 2; poetry, 1; self-examination, 1; riding, 1; visiting sick, 1; poor, 1.

Of those who attended irregularly twenty-seven gave the following substitutes: Reading, 13; nature, 11; music, 9; sleeping, 4; odd jobs, 3; rest, 3; writing, 3; study, 3; friends, 3; family, 3; reading sermons, 2; driving, 1; meditation, 1; Emerson, 1; Ben Hur, 1; Bible, 1; special devotions, 1; reading letters, 1; some worthy action, 1.

With the regular attendants religious elements were found in the following: Music, 2; nature, 2; complete

rest, 2; friends, 1; family, 1; writing letters, 1; reading letters, 1. With the irregular attendants religious elements were found as follows: Nature, 11; reading, 5; music, 5; friends, 2; art, 1; recreation, 1; good people, 1; writing, 1; sleep, 1; odd jobs, 1; family, 1. Considering the greater number of regular attendants compared with the irregular, seventy to twenty-seven, a much larger number of religious elements outside of the church service are found by the irregular.

The manner of spending Sunday afternoon and evening is also of interest. Of 183, 96 would go to Sunday-school, 95 read, 92 walk, 27 enjoy music, 24 "good" reading, 19 conversation, 18 ride, 16 sleep, 16 call or entertain, 14 enjoy nature, 11 write letters, 10 rest, 8 attend church, 7 engage in philanthropic work, 4 in recreation, 3 study, 2 boating, 2 study Bible, 2 meditate, 1 bicycling, 1 skating, 1 devotional exercises. Sunday evening occupations were given by 172. One hundred and forty would attend some evening service, 52 read, 39 converse, 38 enjoy music, 17 call or entertain, 17 enjoy good reading, 7 write letters, 5 walk, 5 family worship, 4 retire early, 3 rest, 2 study, 2 "with the one I love best," 2 stay out of doors, 2 drive, 2 read Bible, 1 do philanthropic work, 1 amusement, 1 meditation, 1 household duties. I give these in full since they show almost better than anything else the nature of the reaction from the weekly occupation. There is almost no tendency to resume the six-day's work, while public worship appears most prominent in both afternoon and evening. In the evening there is less tendency to read and take out-of-door exercise, but an increased tendency to attend church and enjoy music and conversation. We thus see how the Sunday feeling influences

the reactionary occupations of the day. To some the conventionality of these answers might seem to detract from their value. I believe, however, that quite the opposite is true, for the fact of conventionality indicates common experience.

Let us now turn to the typical Christian Sunday celebration and examine the difference between this and the recreation type.

The feeling embodied in the early Christian religion was very different from this latter. Though its joys were genuine, they were not bodily. They were not of the feast, and dance, and song, but of the penitent who had found peace when he was "weary and heavy laden," of the meek and the oppressed. The Christians, believing that their leader would presently return and close this earthly scene, had no place for bodily indulgences, and could hardly become at home upon the earth.¹ Hence, the motive which influenced the Christian's conduct was not to lay up treasures of an earthly kind, even so far as they might consist in physical comfort or hygienic practices. It was rather to conform to an ideal of character to a greater or less extent exemplified in the life of Christ; and this has been the aim of Christian motive ever since, the Sunday pause in the routine of labor serving as an opportunity for the cultivation of Christian character.

Let us consider briefly the significance of this ideal.

If we trace back the Christian conception in Jewish history, we see that Christ was the last of a series of prophets,² and that Christianity was the culmination

¹Neal, E. V., pp. 207, 208.

²See Renan, I., p. 148.

of a moral culture which had been fostered and developed for many centuries under the guidance of prophetic influences.¹ It will be remembered that the early Jewish celebrations of the Sabbath belonged to the recreative type, and that their worship was the occasion for joyous feasting and merrymaking. A very different kind of worship is presented to us by the Priestly Code which came into full force after the Babylonian captivity. Here sacrifice came to have the one purpose of being a means of worship. A manifoldness of rites took the place of the individuality of the occasion; technique was the main thing, with strict fidelity to rubric. There came in the one uniform and universal occasion of sacrifice, that of sin; and one uniform purpose, that of propitiation.²

What was the occasion of this change?

Beginning with the conquest of the tribes of Canaan there came to the Jews a period of brilliant military and civil prosperity which lasted until the death of Solomon and the separation of the tribes. Agriculture had been learned from the older inhabitants of the land, the wars of David had extended the national boundaries, and the reign of Solomon gave to the nation the glamour of wealth and renown. This was the period in which worship was so joyous and unrestrained. But reverses came. The disasters, constant jeopardy, and captivities which fell to the lot of this people were agonizing in the extreme. Conquest after conquest reduced their numbers, laid waste their country and leveled their cities. Placed as they were

¹Ibid., II., p. 354. III., pp. 31-35.

²Wellhausen, p. 78, *et seq.*

between greater contending powers, their territory was repeatedly seized, not only for the sake of plunder, but as well to gain debated ground from a rival foe. Oppression, torture, suspense came to be the controlling condition of Jewish life. Its effect was that of a pronounced and almost absolute check placed upon all sorts of worldly prosperity.

The prophets had for a long time exerted a conservative and humanizing influence upon the Jewish people, and this influence reached its high-water mark with Isaiah and Micah, when the nation was in the grip of Assyria. It is in the ecstatic doctrine and highly wrought demonstrations of the prophets that we see the national ferment due to the oppression which Israel passed through. If God is all powerful and holds the destiny of nations in his hands, why is this permitted? asks the mind of the prophet, for are not we his chosen people? It is because we have sinned, is the invariable answer of their logic. It therefore became the prime end of the people of Israel to learn how to please God. The effect of this effort on the part of the priests was to elaborate a system of worship; its effect on the prophets was to elaborate a theocratic democracy, a religion residing nearly altogether in social questions, and of which Christianity was but the full development and application.¹

Stated broadly, this moral evolution consisted in a retraction from the harsh and painful conditions of the physical and political environment, and an adaptation to the spiritual environment, Jehovah. The question of the personality of Jehovah, aside from the at-

¹ See Renan, III., p. 35.

tributes which the religious Jews ascribed to him, does not concern us here, since it was their conception of deity rather than any final features of deity in itself which influenced them.

We thus see that the Christian ideal was the climax of a racial tendency, and one which had been brought about by an effort of moral readjustment. Let us now see if there are any analogies of this in the broader field of biology.

We seem to have here a case of variation in response to changed conditions of the environment. Experiments along this line have been made on both plants and animals. Nearly all organisms living in water have been found able to acclimate themselves to gradually increasing solutions of salts.¹ Experiments in acclimatization to heat upon protista and tadpoles show that "individual organisms have the capacity of becoming adapted to a high degree of temperature, so that a temperature which normally is fatal may be withstood." Also the effect of the elevated temperature persists a considerable time after the individual has been restored to a lower temperature.² Bending in plants may be caused by light, contact-stimulus, or heat, and is usually associated with an advantage to the part that bends.³ Continued contact-stimulus applied to the tendril of some plants "produces such a modification of the protoplasm that it eventually fails to respond," as at first, by bending.⁴ Also the protoplasmic

¹Davenport, I., p. 86.

²Ibid., p. 251, *et seq.*

³Ibid., II., p. 484.

⁴Ibid., II., p. 383.

structure which is produced in plants and animals by acclimatization may be inherited,¹ and produce a more marked degree of change in the species.²

Apart from mere evolutionary theory, then, we see that a change in the vital conditions of living organisms produces a stimulus which, if continued, causes a variation to accord with the changed environment, and that this may take place in the individual and to a more marked degree in the race. It may seem fanciful to argue from physiological data of this kind to the psychological phenomena of a despondent renunciation of worldly interests by the Hebrews, and a turning to the "loving-kindness" of an anthropomorphic deity. Yet we know that mental adaptation goes on continually around us and in us. What appears at first as an odd custom, a peculiar people, a strange language, or a strange country, before long becomes familiar and ordinary. What I wish to emphasize is, first, that adaptation is a function of all life, whether physical or psychic; and, second, that this adaptation involves a true evolution in the sense of modified structure.

There are certain philosophical considerations which support this bridging of the gulf between the mental and physical. We must suppose that at bottom the same fundamental laws control both kinds of phenomena: *e. g.*, "the synthetic 'principle' " of the one, as Lloyd Morgan says, "is strictly analogous to the synthetic 'principle' " of the other.³ We know that a stimulus which produces a physiological effect, pro-

¹Ibid., II., p. 488; also Verworn, p. 184.

²See Davenport on Acclimatization to Heat, I., p. 252.

³Page 220.

duces as a sensation a much greater psychological effect. "Vital sensibility," says Ribot, "is to conscious feeling what organic memory is to memory in the ordinary sense of the word."¹ This relation of the physical and the psychic is also well illustrated in the use of anæsthetics. The first effect of morphine is always a stage of excitation, in which the patients are restless and excited, are not able to sleep and are haunted by all sorts of illusions. But if the dose given be greater, and the stage of excitation be passed, deep sleep comes with total absence of motion and sensation.² It seems only natural to conclude from data of this kind that consciousness is an index of the vital processes going on in the organism—a kind of magnified and illuminated scale on which is registered the varying effects of our environing influences. In the same way that in psychophysics we regard mental phenomena as the parallel accompaniment of nervous functioning, so, according to this hypothesis, we may regard mental evolution as a sensitively constituted indicator of organic evolution as it occurs universally in all living forms.

On a pleasure-pain basis we have even more tangible reasons for relating mental and physiological evolution. Activities associated with painful results tend to become inhibited, while those associated with pleasurable results tend to become habitual.³

According to the theory of æsthetics above referred

¹Page 3.

²Verworn, p. 470.

³Admirably illustrated in the ingenious experiments on *Animal Intelligence*, by Dr. Thorndike.

to,¹ the painfulness or pleasurable-ness of an act depends upon the amount of stored nerve force used in connection with it. An act which gives pleasure is repeated again and again. This repetition increases the supply of force, and hence an adaptation takes place which is primarily dependent upon the psychic experience of the organism. In the nervous system this adaptation consists of changed tendencies of metabolism and concomitant effects upon nerve cells and processes.

It is, then, a thoroughly tenable position to regard mental adaptation as governed by the laws that control adaptation in general,² and that the Jews, as a result of the depressing features of their environment, went through such adaptation. The bearing of this upon our problem is obvious. It shows that the Christian type of Sabbath grew out of the recreative type as the result of a mental evolution based upon the adaptation to a changed environment.

This result is supported by an additional line of data. According to the results of experimental morphology, an impulse towards a new adaptation is caused by stimuli, and these, we have before seen, depend upon the variation of some one or more of the vital conditions of the organism. The effect of a variation of one of these conditions away from the optimum intensity is, if long continued, to produce a decrease of metabolism and "metabolism is life."³ If these conditions are kept up, and the processes of metabolism are to

¹Marshall.

²See Wundt, p. 385.

³Davenport, I., p. 275.

regain their normal intensity, it must naturally result from a removal of the stimulus by means of a variation in the optimum conditions, and this means a new adaptation. Also, a new adaptation means, on the one hand, either the loss or decrease of the functional response to the decreased stimulus, or else, on the other, the acquisition of a new function or the increase of an old one to respond to a new stimulus. In either case a change takes place in the direction of vital responses, and this is preceded by a stage of depression brought about by over-stimulation.

It is easy to produce experimentally by fatigue a state of mental aversion which undoubtedly is the forerunner of mental depression.¹ Still more striking illustrations are the cases of melancholia, dementia, etc., which show the extreme effects of over-stimulation of the brain. In these cases of abnormal mental life, evidently the normal metabolic conditions after over-stimulation have not been reinstated, hence adaptation has not taken place.

If the vital relation between mental adaptation and adaptation in general exists as I have maintained, we should expect symptoms of mental depression to precede the adaptation on the part of the Jews and other similar instances; and this is what we do find. Yet the evidences of mental pathology do not always associate over-stimulation simply with melancholia. Over-stimulation may as well cause mania;² and even without marked intellectual or moral weakness, even

¹Unfortunately I can refer, as an illustration, only to my own very limited experiments; see Exp. E., p. 34, of work named in appendix.

²See Tuke, D. Hack, p. 899.

in brilliant mental accomplishments, says Professor Flechsig, many persons show brain weakness in the nature or inequality of their behavior.¹ Tendencies in these directions are certainly obvious in the moods and highly wrought demonstrations of Jeremiah and Isaiah. Jeremiah tells of his great sadness and of his disgust for his refractory people,² while the writer of Ecclesiastes shows profound pessimism.³ But oppressing conditions did not in the Hebrew race tend entirely to despair,⁴ as the later Isaiah well illustrates, for "the highest strains of Jewish prophecy, the tenderest utterances of Jewish piety, were just those occasioned by the defeating and prostrating of an unquenchable hope," a fact which furnishes good evidence of an adaptation which, at least to an extent, was already accomplished.

We also have from another source an illustration of how a lack of adaptation produces over-stimulation and depression. In speaking of the civilization and resulting philosophy of the Hindus, Professor Huxley says: "that very sharpening of the sense and that subtle refinement of emotion, which brought such a wealth of pleasures, were fatally attended by a proportional enlargement of the capacity for suffering. . . . Finally, the inevitable penalty of over-stimulation, exhaustion, opened the gates of civilization to its great enemy, ennui."⁵

¹See appendix, *Op cit.*, p. 32.

²Jeremiah ix :1-2.

³Ecclesiastes seems to have been written later, but not under more favorable conditions.

⁴Caird II., p. 40.

⁵Page 9.

No less striking is the mental depression incident to Christian culture; and this would be expected from the great effort necessary to conform to the Christian ideal. The mind, shut off from the world around, employed itself in a morbid introspection. Hence, from St. Augustine¹ down, we have portrayed in Christian art and Christian literature a world-weariness, self-exaltation, and self-contempt, from which the modern world is only gradually recovering.²

Here, then, from the psychoses of over-stimulation and its illustration found among the Jews, we gain additional evidence of the parallel relations between mental and physical adaptation, and more proof that the difference between the Christian and recreative types of Sabbath is one incident to their difference of utility, the latter serving primarily in a hygienic capacity in that it aims to rebalance established functions through the exercise of some and the rest of others, while the former aims at a readjustment through the establishment of new functions.

Let us now turn to those psychological aspects of the Sabbath which accompany this effort of readjustment.

¹See Caird, II., p. 288.

²Ibid., p. 306.

III. WORSHIP.

With those who answered the questionnaire, worship figured the most prominently as the distinguishing feature of the Sabbath. We saw that it was the emphasis laid upon worship which distinguished the Christian type of Sabbath, and that this type resulted from an intellectual and moral evolution on the part of the Jews. From these data it is logical to infer that the Sabbath may be intimately associated with this kind of development, and that worship is the most essential element in this relationship. Hence it is the aim of the present section to ascertain the mental processes involved in worship to see what significance they may have for intellectual and moral development.

Evidently the first step in the conscious process of worship is the motive which leads one to attend. I say conscious process, because there are strong evidences that habit and convention are potent influences which are more or less unconscious, and hence difficult to translate into terms of motive. In the first questionnaire, answering as to whether they really desired to go to church, 176 replied; 130 gave an affirmative answer, though many seemed mechanical; also 33 enjoyed it sometimes, while 12 did not enjoy it. Five enjoyed it heartily, 4 only when the sermon was good, 1 a little, 1 did not know. Combining the answers to both questionnaires, the reasons for going were as follows: Personal good was mentioned 173 times; duty,

140; example, 77; habit, 67¹; because of enjoyment, 30; church society, 14; because normal function, 10; for the music, 10; fellowship, 8; to keep alive religiously, 5; rest, 4; because it is the proper thing, 4; for variety, 4; to learn, 3; love of God, 3; expected to go, 3; opportunity for service, 2. The following were also mentioned once: Feeling of dependence, self-respect, soul-hunger, feeling of happiness, superstition, æsthetic value of service, like the preacher, feel better after it, privilege rather than duty, go to please mother, to worship, love to go better than anywhere else, to be respectable, to help a good thing along, for new ideas, hope for congenial atmosphere. These figures show the number of times each reason was mentioned, one person often mentioning several.

If we combine the numbers for "duty" and "example" as representing a similar motive, we see that this would distinctly take the lead, with "personal good" coming next, and "habit" following. Many of the other answers could, from their general tenor, be grouped with these. It would be safe, therefore, to say that, according to these answers the feeling of moral responsibility gives the strongest impulse to worship, and that the hope of resulting good to one's self or others is the most tangible reason. Evidently, habit is not a primary reason, but simply the result of the working of more or less unconscious motives. It should be observed that these results tally well with what we have found in regard to the nature and origin of the Christian type of Sabbath. In the same way

¹The order up to this point, including "habit," was the same in both sets of answers.

that such institutions as marriages and sovereignty have been protected by a feeling of sanctity, we should expect worship, if it has had a developmental value for the race, to be protected by a similar feeling and interwoven with instinct and habit.

These motives show the mental attitude which we may assume the average worshiper to have in approaching the place of worship. The fact of a place of worship is also of special significance. The temple primarily was not a meeting place for worshipers, but a dwelling house for the deity. A sacred tree, stone, or altar would mark a holy place where the worshiper could meet his god and present his offering, although no temple be attached. "In the oldest and most primitive forms of religion the sacred stone is at once the place where gifts are offered and the material sign of the presence of the deity; thus the temple with the image belongs to a later development, in which the significance of the sacred stone is divided between the altar outside the door and the idol, or its equivalent, within."¹

When Israel took Canaan, the high places for worship were retained. As late as the time of Saul, the people had liberty to sacrifice anywhere, though no king after Solomon was left uncensured for having tolerated the high places.² Gradually worship became centralized at the temple,³ as a result of the effort to purify the national religion, at the same time that the marked religious development was going on which pro-

¹Smith, W. Robertson (2).

²Wellhausen, pp. 17, 18.

³See Renan, II., 197; III., 155-157.

duced such a change in the Sabbath observance. Centralization seems to have been a part of the mechanics to produce this change, and this was effective, no doubt, through the uniformity with which all classes were repeatedly impressed with the ritual and holy emblems. Aside from the Holy of Holies, the altar, and the ark, the chief motives in the internal decoration of Solomon's temple were the palm tree, the symbol of triumph, and the cherub, the symbol of the power and immediate presence of Jehovah.¹ In estimating the conditions which precede and prepare for the act of worship, we must, then, add to the initial mental attitude of the worshiper what has from time immemorial enhanced its effect, namely, the symbolic significance of the place of worship.

There appears also a feeling of propriety about certain locations and surroundings of a church. In the answers to the question regarding these, 144 out of 191 answering the question, wished trees about it, 92 would locate it on a hill, 52 in a village, 29 conveniently, 27 with a lawn about it, 20 apart from houses, 16 with ivy growing over it, 15 close by a cemetery, etc. Perhaps the same feeling of appropriateness² which caused primitive worshipers to select groves and high places for sacrifice also shows its influence in these answers. Probably many of these could, however, be explained from early associations. In early times in America, churches were used as garrison houses, and were frequently placed upon a hill, since this location facilitated defense. This, no doubt, has done more to form

¹Smith, W. Robertson (2).

²See Réville, p. 75.

the taste of those here represented than any natural association between hill-tops and heaven. Stone was the almost universal choice for building material, and brown and gray the more common colors. The stone church should be massive, because it looks powerful. Small things carry the idea of wickedness. Yet to some a small church seems more in keeping with simple, unaffected worship. A white church suggests purity, and light material inspires prayer. A spire seems the distinctive feature of a church; it suggests superiority, rising to higher things, pointing to heaven.

The answers concerning internal colors showed preference for quiet, soft, or neutral colors, while these were followed by various light ones. Of 142 giving preference for amount of light, 57 preferred a medium amount, 49 a large amount, 21 a small amount, and 15 a soft light. Stained glass windows were preferred by 149 of 175 who answered the question. Of these 19 wished pictures in them. Stained glass windows "keep out worldly things," "they make the service more solemn." "Subdued light is restful," "it makes the service more impressive," "when it is dim we can better feel His presence," etc.

In Egypt, among the Semites, and also among the Greeks and Romans, was a type of a sanctuary, says Dr. Robertson Smith, in which was a dark and mysterious inner room, an *adytum* or Holy of Holies. He says this is no doubt a relic of the cave temple, which it seems not unreasonable to suppose dates back to the time when caves were used as human habitations. Whether we call this modern taste for a dim light a reverberation from the time when the worshiper ap-

proached the sacred cave-dwelling of the deity with holy fear, or simply a desire for the senses to rest¹ that the mind may be more free, it is important to note that this is frequently used as an effective influence in producing the mental attitude of worship. Dr. Bennett states that the problem of sacred architecture was "to effect a harmony between the containing material and the contained and inspiring spirit. . . . The spiritual significance of the interior of the Christian basilica is in strong contrast with the imposing grandeur of the exterior of the Greek temple."² Most preference in the answers was shown for Gothic architecture. It is impressive, suggests a soaring upward, is mystical and spiritual with terraces and spires.

In the internal decorations, there was great divergency and variety of taste. In the choice of internal shape of the church, 29 preferred the amphitheater form and 28 oblong and rectangular. Of 122 who answered regarding mottoes, 51 wished none, 24 few, 17 over the pulpit, etc. Among the favorite ones given were: "Worship the Lord in the beauty of holiness," "God so loved the world," etc., "The love of Christ constraineth us," "The Lord is in his holy temple," the Lord's prayer, and Apostle's Creed. It would seem from these answers that symbolic decorations are of but slight importance, or have very much declined in value. According to Professor Haddon, the pictorial symbol has the following life-history:³

First, it is simply a representation of an object or a

¹ See Münsterberg, p. 73.

² Page 205.

³ Haddon, p. 275.

phenomenon; that is, a pictograph. Thus the zigzag was the mark or sign of lightning.

Secondly, the sign of the concrete grew to be the symbol of the abstract. The zigzag of the lightning, for example, became the emblem of power, as in the thunderbolts grasped by Jupiter; or it stood alone for the supreme God; and thus the sign developed into the ideograph.

Thirdly, retrogression set in when new religions and new ideas had sapped the vitality of the old conceptions, and the ideograph came to have no more than a mystical meaning. A religious or sacred savor, so to speak, still clung about it, but it had not a living force; "the difference is as great as between the dried petals of a rose and the blooming flower itself. 'The zigzag, for instance, was no longer used as a symbol of the deity, but was applied auspiciously, or, as we should say, for luck.'"

The last stage is reached when a sign ceases to have a mystical or auspicious meaning, and is applied to an object as a mere ornamental device.

In Christian symbolism we find all these stages represented by a mass of usages which range from the marble representations of Christ upon the cross to the signs of the zodiac frequently found on European cathedrals. The significance of this for our present purpose is to show that conventionalized symbols lose their previous vigor and living significance, and hence come to have little or no value for purposes of worship. It should also be noted that this process is based upon a change of religious conception.

In answering question V. of the second questionnaire, 39 gave Sabbath quiet as an aid to the right

mood for worship, 35 prayer, 33 association with others of similar belief, 29 feeling of dependence, 28 singing, 18 beautiful church or church decorations, 15 church bells, 12 meditation, 10 love of the beautiful and sublime, 9 good clothes, 7 devotional readings, 7 leisure, 7 music, 5 nature, etc.

The most of our churches inheriting, as they do, so much of the Puritanic plainness, are much poorer in symbolic decorations than those of many other religions, and especially so as compared with the Catholic and Episcopal churches. Take, for instance, the significance of the decorations of the Jewish Tabernacle. Of the voluminous symbolism of this let us note as an illustration the meaning of the nature and character of the cloths with which the sanctuary was covered. The white color of the lyssus, of which the curtains round the court were made, indicated that the tent was intended as a sanctuary. The four colors blended together in the curtains over the entrance to the court and in the veils and lowermost roof covering of the dwelling place indicated that it represented the kingdom of God. Of these four colors, hyacinth indicated the heavenly origin of the sanctuary; purple, its royal glory; crimson, the color of flesh and blood, indicated life, while white was a type of holiness. The figures of the cherubim woven upon the undermost roof covering represented the supermundane and spiritual, and indicated that the dwelling place of the divine King was a place from which emanated the life and salvation of man.¹—"It is sentiment," says Count Goblet d'Alviella, "and above all, religious sentiment, that

¹Keil, I., p. 130.

resorts largely to symbolism; and in order to place itself in more intimate communication with the being, or abstraction, it desires to approach."¹ So it appears that symbolism in the architecture and decorations of a place of worship universally assists the distinguishing features of the day, and the somewhat complicated mental attitude involved in the motive for worship in bringing the individual into an intellectual and emotional condition best suited for worship itself.

With our present comparative indifference to the value of symbolism, it is difficult to appreciate its significance as a factor leading up to our present culture, for its value now as compared with the past is hardly greater than the rudimentary appendages which the anatomist discovers, which testify to the former presence of a useful organ. The history of Christian symbolism shows it to have been so prominent a factor in religious culture that our present interest in it requires more than a passing glance.

The reason which Tylor gives for the apparent lack of the moral element in primitive religions is that "the conjunction of ethics and animistic philosophy, so intimate and powerful in the higher culture, seems scarcely to have begun in the lower."² Lecky says the ethics of paganism was unable to exert any direct influence upon the masses of mankind, while the ethics of Christianity was indissolubly connected with the worship, hopes, and fears of a vast religious system that acts at least as powerfully on the most ignorant as on the most educated. One of the most important

¹ (1), p. 3.

² I., p. 427.

achievements of Christianity was to amalgamate moral culture with religion, and thus to enlist in behalf of the former the passion for entering into communication with Heaven by means of ceremonial observances. This could not have been done, he continues, if it had not been for the new motive founded by the doctrine of a future life.¹ The teaching of this doctrine by means of symbols was a practice resorted to by the early church, and this method was traced back to Christ.² On the coins and other monuments of the Roman Empire since the time of Hadrian the figure of the phoenix was the symbol of the returning golden age, of the apotheosis and immortality of the rulers, and of the eternal duration of the Roman government. The Christian fathers illustrated by means of this the doctrine of the resurrection. The artistic representation of this fable is sometimes met on the coins of Christian emperors and on other relics. It is associated with the palm tree or the palm branch on sarcophagi of Christian origin, in mural paintings, and in church mosaics of later origin. In nearly all these examples the same ruling thought is recognized; namely, the resurrection from the dead and a life beyond the grave.³

Mariott says, the frescos, and especially the elaborate mosaics, seem to be "little less than embodied creeds, reflecting from century to century the prevailing tone of opinion on the part of those of highest authority in the church."⁴ "Painting," said Gregory II., "is em-

¹II., pp. 1, 2.

²Bennett, p. 55.

³Ibid., pp. 70, 71.

⁴Page 34.

ployed in churches for this reason, that those who are ignorant of the Scriptures may at least see on the walls what they are unable to read in the books." From the time of St. Nilus (A. D. 450), says Woltmann, "church pictures become no longer purely decorative; they serve for edification, for instruction, for devotion. With this object Christian art makes the great step from mere symbolic suggestion to real representation."

We thus get some idea of the influence symbolism has exerted, and the motives that have prompted its use. It evidently serves, more or less articulately, to instruct the worshiper concerning the great truths of life, and towards which he is required to have a definite attitude. This and that ideal that has come from art, or nature, or torturing experience come to be represented by a cross, a crown, by solar radiance, a leading star, the helpless lamb, and the guarding shepherd, etc., and form an ensemble to impress the worshiper with corresponding conceptions of character. Art and religion have this in common, says Dr. Brinton, that they make a study of perfection, and aim to embody it in actuality.² The laws of suggestion show how this embodiment takes place. Every intelligible object, every mandate, or otherwise communicated idea, infringes for a certain time upon the field of consciousness, and during this period tends to exert complete control over the ideational and motor centers. The duration of this period depends upon the lack of distracting ideas, on the one hand, and

¹Woltmann, I. p. 167.

²(1). p. 234.

upon the attractiveness of the idea on the other. The first of these conditions is supplied by the restful seclusion which the church affords from disturbing sensations and the week-day interests, and this is no doubt assisted by habit, according to which certain surroundings and motions tend strongly to produce the states of mind with which they have been associated. The second condition is supplied in various ways. The art and music, associated with the service as a whole, lend naturally a part of their own attractiveness to whatever becomes related with them, and the moral and religious conceptions impressed in the service would be no exception to the general rule. Here also may be placed many modern efforts to make public worship attractive.

There is also the influence which a developed mental function has in controlling the attention. A desire for almost any mental activity may be developed by continued application. I have questioned a number of people regarding the effect upon the enjoyment of the service of depriving themselves for a time of it, and found that with church members at least it is almost always true that this results in a hunger or craving for the service. The natural exercise of this function is also indicated by a "felt need" for the sermon experienced by the majority of those answering the second list, and the amount of nervous energy, to be mentioned later, expended in the service; while such expressions as "feel peaceful," "quiet," "satisfied," etc., following the service indicate the ebb of this emotional force. There is hardly any evidence of this function being over-exhausted by the service, except a dislike occasionally expressed for too long sermons

and prayers, which would naturally show itself by a feeling of aversion afterwards. On the other hand, it seems most frequently to have reached only the invigorating stage, since the service is often spoken of as giving strength for the coming week.

Aside from the church edifice and the nature of the service, public worship evidently differs from private chiefly in the fact of the congregation. The influence of the presence of others of similar belief upon the mood for worship will be recalled. In the early church this bond of fellowship seems to have exercised a strong influence in uniting the different nationalities and strata of society. The writings of this time concur with the testimony of the monuments that the slaves and slave owners of the Christian church were, in matters of church life, on a basis of complete equality.¹ Speaking in our time, Cardinal Gibbons says: "We all have divers pursuits and avocations; we occupy different grades of society, but in the house of God all these distinctions are leveled."² The mutual benefit arising from unity of feeling and motive is described in the New Testament. Two or three gathered together are promised the presence of Christ.³ The Lord harkens to those who speak often to one another;⁴ Paul recommends assembling and mutual exhortation;⁵ continued prayer and supplication with one

¹ See Bennett, pp. 516-524.

² Page 246.

³ Mat. xviii:20.

⁴ Mal. iii:16.

⁵ Heb. x:25.

accord was followed by the Pentecostal outpouring,¹ etc.

The influence of collective suggestion has always been strong in heightening religious emotion. This is especially obvious in primitive religions. The Dakotas and Chipeways of our Western plains will collect by thousands at the annual festivals to unite in common worship and ceremonies. The first missionaries to Mexico report it a common sight to see six or seven thousand natives moving as one man in the swaying figures of the sacred dances.² Sidis describes collective suggestion in the following words: "The given suggestion reverberates from individual to individual, gathers strength, and becomes so overwhelming as to drive the crowd into a fury of activity, into a frenzy of excitement. As the suggestions are taken by the mob and executed, the wave of excitement rises higher and higher. Each fulfilled suggestion increases the emotion of the mob in volume and intensity. . . . In the entranced crowd, in the mob; every one influences and is influenced in his turn; every one suggests and is suggested to, and the surging billow of suggestion swells and rises until it reaches a formidable height."³

When this influence is applied to modern worship its effect is seen in producing increased responsiveness on the part of worshipers, and in an elevation of spirits into an exalted hypersensuous state in which the imagination strengthens, and material things fade. In its extreme form it is seen in the hysterical revival

¹ Acts i-ii.

² See Brinton (1), p. 179.

³ Sidis, Boris, p. 303.

where those affected lose all sense of decorum and pass into an almost maniacal frenzy or a state of catalepsy.¹ These effects are hastened and strengthened by the liturgy, the responsive songs and chants,² encouraging cries and groans, dancing, contortions; in short, bodily manifestations of any kind which are propagated by imitation.³

While the day, the motive in attending church, the architecture and decorations of the building, and the social influences all have a marked effect upon the worshiper, it is yet the service itself and the psychoses that it induces which show most clearly the characteristic nature of worship. Let us take the main features of the service in their usual order, examining the experiences attending each.

Of the 75 who answered the second questionnaire, 28 enjoyed most the usual service of preaching and singing, 24 the prayer meeting (the typical Friends' service being classed with this), 8 communion, 7 song service, 6 no preference.

In the first questionnaire 144 mentioned the voluntary. Of these 49 answered simply in favor of it, while 89 wished a voluntary before service, 81 after it, and 6 none after it. Of those who gave more than a simple affirmative or negative answer, 23 liked it played slowly and softly before service, 17 loudly and rapidly at the close. According to 14 it prepares for what follows, 13 it gives a solemn, quiet feeling, 6 it rounds out the service and relates it to the outside world, 5 did not

¹ See Gasquet, J. R., p. 1090.

² Brinton (1), p. 178.

³ Gasquet, p. 1090.

care for prelude unless especially beautiful and appropriate, 5 thought it a part of worship, 5 it lifts the soul from earthly to spiritual things, 4 it should be of imposing music, 4 it should be solemn and ponderous, 4 important part of service, 3 it stirs the very depths of my being, 2 pleasing if appropriate, 2 should be bright and cheerful, 2 should be impressive, 2 if after service it takes away the solemn feeling. The following one each: It should bring the hearts of the audience into a sympathetic whole, it should be the best, prelude very effective, often more feeling in it than in the preacher's words, makes me feel glad, would like all the service composed of music, etc.

The soothing influence of the voluntary is readily seen here. Its function at the beginning of the service seems to be to attract the attention from irrelevant things, and put the mind into a state of sympathy with the occasion and with others, without stirring any strong emotion. The placid, restful period which it thus ensures no doubt makes possible a greater effect from the more active and exhausting features which follow.

Singing and music of a more animating type is evidently one of these. For some cause, says Dr. Brinton, the natural expression of religious emotion in language is universally metrical. "The rites of every barbarous tribe are conducted in or accompanied by rude chants or songs, which both stimulate the religious feelings and give appropriate vent to them."¹ Instruments of music were first invented to accentuate this metrical

¹Brinton (1), p. 239.

rhythm.¹ It is not peculiar, then, to find Elisha requesting a minstrel to play that he might prophesy, or that when the minstrel played "the hand of the Lord came upon him."² Nor is it surprising to find from the questionnaire returns that none object to singing. Most preference was expressed for singing by choir and also by the congregation. Familiar hymns and those we can "really feel" were mentioned as favorites. Singing should be taken part in earnestly, it has an uplifting effect, most inspiring part of service, it allows one to join in the services, adds to sacredness of service, a soft, sweet solo reminds one of the invocation of the blessing, often has as much influence as the sermon, best and most beneficial part of service, etc. It will also be remembered that singing was given as a prominent aid to the right mood for worship.

It could hardly be expected that litany or ritual would be especially popular with so large a proportion of "evangelical" Protestants represented in the returns. The former was supported by 22 and opposed by 11, while the latter had 11 in favor of it and the same number opposed. Scripture reading by the minister was approved by 102 in the first questionnaire and opposed by 7, while responsive reading was approved by 75 and opposed by 20. The value of responses in stimulating religious emotion thus seems not to be universal. They were sometimes mentioned as impressive, as preparing for the sermon, and as being a suitable way of expressing one's feeling.

Of those answering in regard to prayers, 109 were in

¹Brinton (1), p. 240.

²2 Kings, iii:15.

favor of them, while 1 was not. According to 36 they should be short, 24 medium in length, 11 should be fervent, 8 more to the point, 6 should be extemporaneous, 6 simple, 5 important part of service, 4 solemn feeling for them, 3 they should be read, 3 should be followed by silent prayer, 2 unite all, drawing us close to God, 2 should be said reverently, 2 most sacred part of service, 2 prepare for sermon, 2 should be long, 1 appropriate, 1 uplifting, 1 touching if from the heart, etc.

The sacraments were mentioned by but a few, though they seem to have a strong emotional influence. But 74 of those answering the first list of questions mentioned them, 69 in favor, 5 opposed. Of these, 18 had a "solemn" feeling for sacraments, 13 regarded them as a sacred part of service, 5 they should be made impressive, 5 they draw us close to God, 4 most impressive part of service, 4 it is the most solemn service, 3 they should have special preparation, 3 beautiful, 2 unnecessary forms, 2 encouraged at communion to make a new start, 2 it is the sweetest and most reverent of any service, 1 draws us closer to God than any other service, etc.

I believe that one who has become familiar with the experiences of the communion, either directly or by a sympathetic study of the experiences of others, cannot avoid the conclusion that it is right here, and in other sacraments like baptism, in which we find the most typical and exalted religious emotions. The Lord's Supper has its prototype in the primitive sacrifice in which man sought to commune with God. This

is not only shown by the similarity of the rites,¹ but also by the Pauline theology, which intentionally related the two.² The writings of the first three and a half centuries represent the Lord's Supper as the central act of public worship, around which revolves every minor part, and which gives significance to the whole. The celebration of this sacrament is the supreme object of all public assemblies of the saints.³ If we consider a moment we shall see the reason of this. It is at the communion that the central idea of the Christian religion, redemption, is brought out the most forcibly. The sadness of the last supper, preceding as it did the final act of atonement, is figured in the tone and manner of the officiating clergyman. The scripture reading, the prayer, and the hymn are chosen to remind and impress the listener with the compassion of Christ and his suffering for sinful men. Thus is aroused one of our strongest, deepest, and most humanizing emotions. The place of worship, the sacred symbols, and the assemblage serve to heighten the impression, and, by holding the mind away from distracting ideas, the emotion is allowed to increase to its maximum. The taking of the bread and wine, symbolizing the body and blood of Christ, commits the worshiper to a covenant of devotion to Christian principle, the completeness of which depends upon the intensity of the accompanying emotion. And, finally, the cycle of the process involved in worship is completed by the motor outlet of this emotion provided for

¹See Brinton (1), 189, *et seq.*

²Pfleiderer, IV., p. 191.

³Bennett, p. 483.

by the collection for the needy, and thus a tendency developed towards an habitual response to religious demands.

In this we have a good illustration of what takes place in worship. For convenience we may divide this into (1) the mental content of worship, (2) the emotional accompaniment, and (3) the immediate expression and permanent effect of the first two. Another service highly favored in the questionnaire returns, and in which all these elements are effectively employed, is the prayer meeting, and since prayer services are of much more frequent occurrence than those of the sacraments, we may credit them with a great efficiency in producing the net results of public worship. Here exhortation, singing, and social suggestion are employed to influence the members to take an active part, and thus perform what is often a more or less distasteful duty. The Society of Christian Endeavor, which has spread with such startling rapidity among young people, seems to owe its success to the addition of special social features to the above, and to the insistence upon the taking of an active part by every regular member at every meeting.

It does not appear to matter much what kind of service it is, or the effect of its different parts. Though the amount of the effect may vary, the kind of effect appears substantially the same. Aside from the same general tenor of experience in worship, this is shown by the fact that 119 out of 142 answering the question regarded the services as a harmonious and connected whole, and 6 others thought it was at times. As a rule, it is only those who have the power of mature reflection, or who have reached a critical as

opposed to an emotional attitude towards worship, who see incongruities in it. To the others worship means devotion followed by an accession of moral strength.

Let us consider the three phases of worship above named more in detail.

1. An important comment upon the mental content of worship is supplied by the answers to question VI. of the second list. The sermon was mentioned 52 times as a part which meets a felt need; prayer, 41 times; music, 23; singing, 20; responses, 8; service as a whole, 4; testimonies, 2; silence for meditation, 2; opportunity to draw near to God, 2; silent prayer, 2; meditation, 1; fellowship, 1, etc. Of these only the sermon could be called instructive, and this not unreservedly so on account of the emotional motive which it frequently contains. Yet all the factors employed in worship, whether intellectual or emotional, must have a meaning, and the giving them this employs an important pedagogical factor in worship.

It would, perhaps, not seem unnatural to argue from the universality of religion and of its accompanying ceremonies that certain forms of religious expression are innate. Yet there seems to be no more data to support this than Locke found to support the innateness of ideas in general. Galton notes that deaf mutes who are first taught to communicate freely with others after having passed the period of boyhood are reported to tell the same story, i. e., that the meaning of the church service, of kneeling to pray, etc., had been absolutely unintelligible and a standing puzzle to them. He concludes that "what we fondly look upon as a natural

religious sentiment is purely traditional.”¹ Pfeleiderer² and Brinton³ agree in regarding the most primitive form of the rite as being a mimicry of the supposed doings of the god. Thus, “the Indian rain-maker mounts to the roof of his hut, and rattling vigorously a dry gourd containing pebbles to represent the thunder, scatters water through a reed on the ground beneath, as he imagines up above in the clouds do the spirits of the storm.”⁴ Yet Brinton maintains with reason that even this primitive kind of ritual is based upon myth, since the lowest representatives of the human race have little or no ritual, but a voluminous mythology.⁵ In fact, it would be inconceivable how ritual could be developed without some idea as to how and why it should be effective.

The effective employment of symbolical usages must, then, be preceded by some educative process that shall make them intelligible and meaningful. Many doctrines and usages⁶ in the early church, *e. g.*, baptism,⁷ guardian angels,⁸ and the symbolism of the phoenix,⁹ derived their significance for the gentile mind from pagan mythology. In the Latin church, says Bennett, the entire liturgy centers in one thought, the atoning

¹Galton, pp. 208-9.

²III., pp. 24, 25.

³(1) p. 173.

⁴Brinton (2), p. 17.

⁵Ibid. (1), p. 113.

⁶See Blunt quoting Mosheim on *Ritual*.

⁷Pfeleiderer, IV., p. 88.

⁸Bennett, p. 69.

⁹Ibid., p. 70.

sacrifice of Christ¹ veritably repeated at every mass, a meaning probably communicated by the homily. The first forms of pictorial symbolism, as we have seen, consisted in simple representations of objects or phenomena which explained themselves. When an abstract or mystical meaning has come to be developed, as is natural in the life-history of a symbol,² tradition plays the important part of interpreter. In attempting to solve the problem as to how religious truth can best be communicated—supplying a mental content best suited for worship—those figures and symbols used must be thoroughly explained, or else taken, as in the case of Christ's teaching, from the familiar experiences of life.

The ideals suggested and taught by the sermon are an important part of worship. In the answers to the second list, adorable qualities of God were mentioned as follows: Love 59 times, justice 21, power 18, holiness, perfection or goodness 15, mercy 9, fatherhood 6, omnipotence 5, wisdom 3, omnipresence 3, tender care 3, patience 2, omniscience 2, maker of all 2, beauty 2, forgiveness 1, unchangeableness 1, also redemption, his understanding me, faithfulness, his friendship, tenderness. Consciousness of one or more of these attributes when in a devotional spirit was had by 62 per cent of all. These facts, together with frequent allusions to the ideas and resolves occurring throughout the answers to both lists, show that the suggestions of artistic³ decorations, and the service as a whole assist

¹Ibid., p. 488.

²See Haddon, p. 275.

³See Brinton (1), p. 237.

the imagination to form effective¹ ideals of conduct. The mental processes leading to this seem to form the distinctive mental content of worship.

2. Important as the intellectual element may be in religion as forming an intelligent basis² for religious sentiment, and leading to the formation of effective ideals, we must agree with d'Alviella that the feelings play a more primitive rôle,³ and it may be seen that in worship proper they form the necessary motor force which makes the service effective. It is the emotional rather than the intellectual effect of worship that has continually been to the front in our questionnaire returns. This is especially well illustrated in the feelings induced by parts of the service especially enjoyed as shown in the answers to the second part of question VI. of the second list. These were extremely varied, showing much individuality, and can hence be best illustrated by quotations as follows: "Feeling of satisfaction, peace," "reflection and desire to profit by sermon," "makes me kindly towards others, want to do as well as I can, stirs our hearts to love God better," "desire to live in stricter obedience to His will, and gladness to be one of His children," "more thoughtful mood," "deeper reverence for God, greater desire to do His will, greater determination," "liberated, exalted, inspired, "hopeful and trustful," "uplift, a heavenly vision," "more conscious of sinfulness," "thanksgiving, love for others, kindness of spirit," "love, gratitude, joy," "feel like living for others and feel that life is

¹See Lecky, II., p. 99.

²Cf. Ribot, p. 311.

³(3) p. 50.

divinely directed," "sometimes elevated, sometimes depressed," "calm, encouraged, and serious," "a peace in the soul," "spirit of meekness and love," "strengthened," "refreshed and made happy," "sense of expansion, trust, joy, peace."

There is no question but that there is emotion here, strong and of a high moral order. We may ask if this religious emotion has distinct features which especially characterize it as is the case with the emotions of anger, fear, etc.

Ribot ¹ agrees with Réville² that there are two scales of religious feeling, one in the key of fear composed of painful and depressive states, the other in the key of tender emotion, composed of pleasurable and expansive states. It would be safe to add that these two scales cover our emotions as a whole, regardless of the object which excites them. So that while the truth of this confirms the emotional nature of religious feelings, it does not serve to distinguish them from other emotions.

The same persons whom I mentioned as being questioned in regard to the effect of absence from churches as influencing the enjoyment of the service, were also asked if there were any differences between the emotions induced by a religious service and those induced by friendships, music, or anything which was greatly enjoyed. All but three said there was a difference, although music, close friendships, grand scenery, and the inspiration from natural science were named as approaching it, and by some as being the same. The nature of the difference was not explained with general

¹Page 314.

²Page 71.

success, although meditation, elevation of spirits, permanency of effect, and feeling of littleness were mentioned as characterizing religious emotion. It will be remembered that the Sunday feeling served to differentiate the proper from the improper Sunday practices. It was this, apparently, which caused in the answers to the first questionnaire good reading, reading, nature, sacred music, letter-writing and friends to be the most popular substitutes for church, and the same to be mentioned as containing religious elements.

In his interesting descriptions of tramp life, Josiah Flynt tells us that vagabonds feel so sharply the incongruity between their manner of life and the Sunday morning atmosphere that they frequently withdraw to their retreats without a breakfast, and with emotions which on week-days no one would give them credit for.¹ Hardly less striking are the observations of the Sunday celebrations of the metropolitan artisans of England, by Mr. Edward Salmon, who says that while they may not go to church, some musical instrument is requisitioned and hymns are sung with a zest which, if not inspired by religious enthusiasm, can nevertheless hardly fail to exercise an influence in the direction of religion. Half the hymn-book may be gone through, but the bare suggestion of a song, however pure in idea and beautiful in language, is hailed with instinctive disapproval.²

It seems evident from all this that religious emotion has definite characteristics and is distinct from other emotions to a sufficient degree to make many things

¹Notes of an Itinerant Policeman, p. 186.

²Page 331.

strikingly incongruous when brought in contact with it. There remains the question as to whether the manifestations of religious emotion also distinguish it from other emotions.

3. Ribot says ritual is a spontaneous creation of religious emotion. No one would question the expression of this emotion through ritual, but we would ask with Galton how natural this would be without a social and traditional continuity to give meaning to acts of ceremony. Ritual varies according to religion, nationalities, stages of development, etc., but love, anger, jealousy, etc., have the same fundamental features of expression the world over, not excepting even the higher animals. So if the religious feelings form a distinct emotion, we should expect a fair amount of uniformity in their expression. It is true that postures of submission and humility are common to the ritual of many religions, but deaf-mutes do not understand this and it is hardly the attitude in magical rites where both gods and demons are defied.¹ Yet there is good reason to believe that the expression of emotion through ritual has an important value. The symbolic value of the ritual added to the fact that the motor accompaniment of an idea helps to impress the idea and keep it in mind is sufficient explanation of its survival. There is also the fact that the motor expression of an emotion tends to keep it from merely evaporating, perhaps from the organization of brain structure thus occasioned, and the motor habits of the nerve centers thus brought about.

The answers to the questions VII. and VIII. of the

¹See Brinton (1), p. 175.

second list show the kind of expression usual for the emotion we have been considering. They were as follows: Being kind to others, 30; singing, 26; adoration of God, 19; kneeling, 11; prayer, 9; shouting, 7; impulse to lead a better life, 6; testifying to God's goodness, 6; silence, 6; bringing others to Christ, 4; yielding to God, 3; bowing the head, 2; thankfulness, 2; discussion of ideas presented, 1; reverence, 1; also trust, to be alone and think, hand-shaking, obeying and trusting Christ, application of sermon, wish to make restitution for injuries, tolerance for others. Several gave various responses they were liable to make and some who did not give them spoke of them as varying according to circumstances. It should be observed that all these responses are in accord with Christian morals and many of them are the actual carrying out of religious duties. As to the general effect of church-going, 51 stated that it made their lives better, and 35 said it gave them better ideas as to how they should live. Besides these, there were several whose answers were in general accord with this, though phrased differently, and two who did not find it beneficial. Not any simply felt easy as when a duty is performed, though a few gave this as a part of the effect of church-going.

Here, then, are emotional expressions of a definite nature, similar in their moral significance and assisting to a distinct moral end. The question comes as to the terms in which this emotional expression should be formulated. In its diversity there is yet a unity: what is this unity? We have seen that there is a congruity between the emotional elements of the mental content aroused by worship which marks it off from

other feelings and ideas. There is also a congruity between the emotional expressions of this content which marks them off into a no less distinct class, and this congruent feature is their morality. This is testified to in the above returns both by the definite answers to questions and by the spirit which permeates them and gives them their natural vigor and color. The religious emotion, then, is a complete and distinct emotion also in the nature of its expression.

It is true that in identifying morality with the essential features of religious expression as here described, the question must be faced as to whether our modern public worship is different in this respect from religious expression in general. The rites of primitive religions frequently are so brutal that there has been but little in them to suggest morality. The predominance of fear in the earliest forms of religion is very far from the principle of love in Christian ethics, and magical rites hardly indicate an inclusive altruism. Tylor says the moral element is little represented in the religion of the lower races, because ethics has not here been joined by animistic philosophy.¹ Réville says religious and moral development are distinct and are far from always being on an equality.² Ribot agrees with this and says the religious sentiment and the moral sentiment, though having numerous points of contact and moments of fusion, are yet, in their nature, essentially distinct, because answering to two totally distinct tendencies of human nature.³ Accord-

¹I., p. 427.

²Page 84.

³Page 323.

ing to Renan there was no moral sentiment in the conception and worship of Jahveh as understood by David.

According to this philosophy, religion would be a sort of excrescence with little or no value for the broader relations of life. The fatal mistake which all these authors seem to have made is that of regarding moral standards as fixed. Dr. Brinton has aptly pointed out that in the unending conflicts of the savage state the highest moral code would find no place.¹ What would be moral and necessary in a state of barbarism with the conditions and ignorance of barbarism might be immoral and unnecessary with us at the present day. In a state of unsuppressed individualism even magical rites might be a necessary condition of survival. We must not, then, regard our own moral standards as the only ones, or even the best ones under all circumstances.

Pfleiderer says the underlying feeling in both religion and morality was always essentially the same, and therefore the manifestation and development of both in the customs of worship and of society was for a long way inseparably connected and interwoven.² His arguments run as follows: The intimate relations between social and religious life, and the fact that civil and social obligations rested upon a religious basis and were under the sanction and protection of the deity show that the historical beginning of all morality is to be found in religion. With the anthropomorphizing of the nature-powers, the gods were made as lustful as men. With the elaboration of worship which nat-

¹ (1) p. 228.

² IV., p. 228.

urally follows the development of this mythology, religion came to have independent rights which were classed above moral social habits, which themselves depended for support on custom. Thus religion and morality became separated through the abnormal development of the former.¹ As the ideas of liturgical purity degenerated into superstitious practices, they provoked a trenchant opposition to their whole principle on the part of men of deep thought or pure feeling.²

In Rome and in Persia religion referred mainly to civic life. The great defect of all state-religions is that religion is externalized into a legal police institution, made mechanical in priestly ceremonies, perverted to an instrument of political selfishness and deprived of its moralizing influence in proportion as ideal motives give way to those of a more worldly nature in the life of the state. As soon as the end of the state was in the main secure, the rude superstition of religious ceremonial was accompanied by a frivolous unbelief, and by the barbarous inhumanity of a legalized and refined selfishness.³ The ancient Egyptian religion showed an intimate relation between morals and religion. The Brahmanistic legal religion as found expressed in the Law of Manu gives an itemized moral code for every act. Buddhism goes to the extreme of asceticism in its moral effort.⁴ Judaism was notably a moral religion until the minutiae of worship came in

¹Ibid., p. 230.

²Ibid., p. 244.

³Ibid., p. 247.

⁴Ibid., p. 234.

to take its place as shown by the priestly law of Ezra.¹ It was not until Christianity became Romanized that it became separated from morality through penance payments. Protestantism also lost sight of the moral in its doctrinal controversies and placed belief above morality.²

When all these facts have been considered, I believe it is clear that there is nothing in the essential nature of religion which makes it illogical to regard what we found in the questionnaire returns as applying equally well to religion in general, namely, that the natural expression of religious emotion is the moral control of conduct. It would be interesting to know the psychological mechanism by which this control is effected. In his instructive work on "Instinct and Reason," Mr. Marshall reaches the conclusion that "the function of religion which lies back of its ceremonial is the suppression of the tendency to individualistic, elementary impulses, in favor of those which have higher significance."³ He later adds that "this restraint is of the very core and essence of religious functioning."⁴ Dr. Leuba observes that the class of mental processes with which the Moral Imperative is associated is reflective and intellectual rather than emotional;⁵ while those including moral obligation differ from the non-moral ones in that the "reflective process is imperative, which means in physiological terms that

¹We have seen how even this tendency was started by a moral impulse.

²Loc. cit., p. 248.

³(2) p. 297.

⁴Ibid., p. 327.

⁵Leuba (1), p. 538.

its efferent discharge is definitely organized along coordinated motor tracts."¹ No doubt Mr. Marshall is right in crediting to religious habits and practices conditions favorable to self-suppression and the attainment of more distinct moral ends, but we still have to ask how the active positive features of religious life come to be developed which correspond to the functioning of the Moral Imperative; and Dr. Leuba does not tell us how, separated from emotional force—the great coordinator of motor tracts—the moral idea becomes imperative.

Resorting to introspection I find in myself that a process of choice goes on in determining the right course of conduct similar to that preceding any reflective voluntary act, the rightness being the criterion of choice. This can best be a purely intellectual process, although emotional values sometimes vitiate the result. When a conclusion is reached, all alternatives are forced out and kept from the mind by the idea of the chosen act supported by a feeling of "ought" which, in especially imperative cases, becomes one of "must."² This feeling, if strong, acts as an emotional support, and especially so if some one else introduces obstacles in the way of the appropriate motor accomplishment. Here emotion evidently plays an important rôle.

The deprivations and mutilations which the ascetics inflicted upon themselves, the torturing suicide of the Hindus, the joy with which the martyrs looked upon their agonies and ghastly wounds indicate a strong

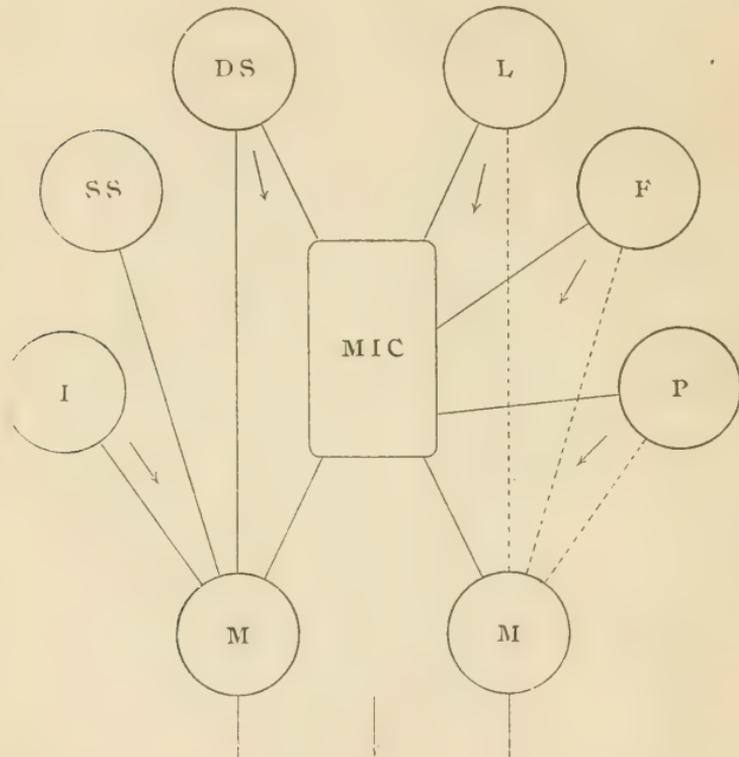
¹Ibid., p. 539.

²Unlike Dr. Leuba, I find that with myself the motor expression in speech is only occasional and incidental. See Leuba, page 543.

emotion, which, if not identified with the Moral Imperative itself, was at least closely associated with it. It is my thesis that the processes involved in worship bring to the support of the moral idea a fund of emotional force which gives it its imperative nature, or its controlling influence upon conduct. This emotional force serves to carry out any act which on the conscious side appeals to the conviction of rightness; while on the physiological side this support is brought about by the re-enforcement of the centers involved in the moral judgment by others which, through the processes of worship, come to contribute a reserve from their own native force. When this reserve has been sufficiently developed and coördinated with the motor centers, the work of worship, if it were not necessary, that our lives should continually become adjusted to the changing demands of our surroundings, would be definitely accomplished, and the only value which it would then have for the worshiper would be an æsthetic one, *i. e.*, the exercise of established mental functions.

Perhaps this idea of physiological relations can best be made clear by a diagram, although it be crude and inadequate. In the accompanying figure, let MIC represent the centers for moral judgment or the reserve for the re-enforcement of moral convictions, and MM the motor centers coördinated with it. P, F, L, represent emotions, *e. g.*, pity, fear, and love, which, through the instructive elements in worship become associated with the moral centers, thus coming to contribute to them of their native emotional force. The dotted lines from these indicate the natural efferent processes from these centers, while the solid lines show the paths of discharge which have come to be coördinated with

MIC as a result of the experiences involved in worship, and which thus comes to have a controlling influence upon conduct. DS represents the direct suggestion of the speaker, which may or may not involve the feeling of moral obligation, while SS stands for social suggestion, and I for imitation, which, though not nec-



essarily connected with the idea of duty, assist in the motor discharge of MM downward, and thus assist the moral act.

The formation of new coördinations here represented are according to well-known laws. Suppose I say to

some one, You should love your neighbor. The idea of duty involved here makes of this exhortation something more than a direct suggestion, for it is re-enforced by the reserve force which supports a moral conviction. If, now, as a preparation for this precept, I arouse some strong emotion, as of fear, and associate this with the idea of moral responsibility by picturing the tortures of the immoral, then the re-enforcement of the moral conviction is increased by the emotional force derived from fear ($F+MIC > MIC$). The physiological basis of this depends upon the tendency of simultaneously excited centers to form channels of communication which, if sufficiently used, causes a fusion or alliance between them. This is shown by the dropping out of association links between the corresponding ideas, and the ready emotional support which the one gives the other. In this way the controlling influence of the Moral Imperative comes to be acquired.

But can we expect all kinds of emotion thus to contribute to moral control? A great variety of emotions have been associated with religious ceremonies. Dancing, shouting, responsive songs and chants, music, the intoxicating touch of flesh with flesh and breath with breath, wine, mutilations, flagellations, collective suggestion, revival methods, etc., show that the crudest and most mechanical means have been resorted to for the purpose of exciting emotion; and it may be asked whether it has always been religious emotion induced in this way. Ribot¹ observes that the fervor of the great mystics has called down upon them the reproach

¹Page 326.

from their critics, and even theologians, that they have frequently been mistaken in the nature of their love.

Our diagram will suggest the answer to this, namely, that if the discharge of these emotional centers goes to the motor centers by way of the moral center, they will contribute to its force and influence. But if this is not the case, and the moral idea is not involved, the discharge from these centers would be represented as along their natural efferent processes, away from the moral center. In fact, any religious service which aims to secure an emotional response without involving the idea of personal responsibility, while it may attain the end desired, does not materially improve the worshiper. The habit may be taught of responding to certain ideas in certain fixed ways, and the response may be prompt and emotional, but this does not give the power of moral control. This explains why emotional services, intensified by social suggestion and imitation, leave so little moral improvement in their wakes, and why people of more moral stability are less demonstrative. In the first case, the mental process is direct, while in the second it is indirect and the emotional force is employed in working out new coördinations.

In addition to what has been said, there are two lines of argument which support the idea that worship is a means to the development of the moral control of conduct. They are as follows:

1. Those answering these questions naturally divide themselves into two classes: those who attend worship regularly, and those who go seldom or irregularly. Those who go regularly may be divided into (1) those to whom worship is a vital experience, and (2) those who go impelled by duty or from habit; while those

who go irregularly may be divided into (3) those who have come to find religious elements outside of the church service, and (4) those who feel but little need of worship, and perhaps never have felt it.

From a careful study of these cases, I am convinced that these four types may really be reduced to two, namely, first, those to whom worship is a vital experience, and who may have come to find religious elements outside of the church service. These usually begin by having a vivid religious experience in connection with church life, and then, through continued development, come to find religious elements outside of church observances. We may call this the growing class. It is composed of all those, whether young or old, who, through ethical motives, continue to adapt themselves to the duties of life, with or without the aid of public worship.

The second class is composed of those who have never had a vivid religious awakening, or else having once had it are no longer materially affected by religious influences. To this class belong those who have never cultivated the habit of attending the service of worship and feel but little need of it, and also those who go merely as a matter of form. People of all ages belong here, and both the vicious and many of good moral character and refined tastes, but whose lives have become set and the power of adjusting themselves to the varying moral demands of their environment has been lost. With this class, neither the emblems of worship, the needs of others, nor the beauties of nature have the power of exciting a sufficient emotional support to the moral idea to secure new coördinations of conduct. The nervous system in this respect has set-

tled down to a system of automatic adjustments in which only the requisite amount of nervous force is evolved to meet habitual needs. This class is in a state of arrested moral development, although the arrest has come much earlier with some than with others. It makes a great difference whether the church régime has developed a person's moral control to the point of making a good citizen, even though the power is stopped there, or if the development has not reached even this point.

It thus appears that the transforming influences of worship have reached not only those who are morally growing, but also many in a state of delayed growth. What thus appears as the natural function of public worship may be illustrated in a homely way by an observation made by naturalists. It has been noted that if tadpoles are prevented artificially from crawling upon land when ready to transform into adult frogs, they retain their tail and gills, and the lungs do not develop, even though the animals reach a considerable size. In a similar way the influences of public worship may be said to furnish the stepping stone which the developing mind requires to start it in a moral ascent, in which it finally arrives at the point of appropriating its natural surroundings as means to an expanded and independent moral life.

2. Recent studies of religious conversion also confirm the place we have given to public worship as a means of moral development. Of 137 cases studied by Starbuck, 53 per cent were influenced by revival services and 18 per cent of the remainder took place at regular church services. Yet this is a phenomenon which so far belongs to growth, that 21 per cent took

place independently of immediate external influences. The age of greatest physical growth coincides closely with the age of most frequent conversions.¹ Regarded psychologically, this is "the sudden readjustment to a larger spiritual environment,"² and "is a condensed form of adolescent development,"³ differing from experiences of gradual religious growth only in a few minor details.⁴

We found that over-stimulation which results from a change in the vital conditions of an organism results in a state of depression which precedes an adaptation to those conditions. In man we found this showing in mental depression as instanced by the melancholy utterances of the Hebrew prophets, and in the pessimism of Christian writers. And we are told that experiences preceding conversion make it "evident that depression and dejection are almost always present,"⁵ remorse and conviction for sin, social pressure, response to ideals, fear of death and hell, and imitation being the principal conditions which lead to it.

The characteristics of the new life are found to be conformity to the conventional forms of religious observance, also meditation, private prayer, positive religious effort, performance of duty, and acting from more ideal motives, features which contrast with the life before conversion and which indicate an emphasis placed upon self-surrender or humility. Conversion

¹Starbuck, E. D. (1), pp. 280, 281.

²Ibid., p. 304.

³Ibid., (2), p. 122.

⁴Ibid.; pp. 121, 122.

⁵Ibid., (1), pp. 284, 285.

thus seems to be an intensified form of what normally goes on in public worship.

How does the function of worship differ from that of religion as a whole? The development of an ethical code and the establishment of permanent relations between it and conduct was the kind of religious evolution wrought out by the ancient Jews and the early Christians. From a general biological point of view, as well as from considerations already pointed out, it is evident that this development has been the function of religion in general. We have seen it to be the special aim of worship, some form of which is common to all religions, and it is certain that worship occasions the highest expression of religious sentiment. I believe we may say that worship is simply being religious, but under the favorable influences of a special environment: Between man and his natural environment there is a continual strife—the struggle for survival is nowhere more marked. Man strives to subdue his environment and utilize it for his sustenance and enjoyment, while on the other hand, the conditions of the environment, as it were, strive to annihilate him, or as an alternative to force him into such forms of adaptation as are necessary for his survival. Both sides are to a degree successful. When man confronts an opposing condition which he cannot subdue, he begins to compromise. If he is a polytheist, it is one of various forms of personality that must be appeased. If he is a monotheist, it is a dispensation of God as a punishment for sin. Straightway, as has been the case with dark days, plagues, and other public calamities, the temples of worship are thronged, and the worshiper, through self-examination and penitence, puts himself into a

plastic suggestible condition upon which the influences of worship have a ready effect. If the instructive element in worship is adequate, a new and effective adaptation is initiated which has survival for its aim.

Throughout the animal kingdom the same principle holds, although elsewhere the power of individual adaptation is diminished and the accompanying phenomena correspondingly simplified. Man is the only animal which has places of worship, but wherever new conditions of life require new habits and new adjustments, the fundamental features of the process are the same. Signs of surprise and fear are evident, and these are accompanied by hesitation, excitement and extreme effort. In the nervous system the adaptation which follows works itself out through hyperæmia, the increased or decreased permeability of old nerve paths, and the formation of new ones.

As the knowledge of our environment has come to be more adequate and scientific, instruction has passed more and more from the domain of the sacred to that of the secular, and the instructive element in public worship has come to deal largely with convictions based upon sentiment and instinct, but no less important because not yet reduced to terms of exact science. But however exhaustive may become the domain of science, there will yet remain to worship the function of training the individual to convert his knowledge into action, ethics into morals.

IV. CONCLUSION.

In summarizing our results we may state that public worship is a device for developing the moral control of conduct. Worship was seen to be the distinguishing feature of the Christian Sabbath, and this in turn was found to have been developed from the recreative type as the result of the demand for a readaptation to the environment. It is a series of adaptations of this kind which we recognize as constituting evolution which has both a physical and a mental side. It is the mental side which we have found to be the exponent *par excellence* of this process, and of this it is the moral aspect which constitutes the most important factor.

How, now, shall we apply what has been learned in answering the questions which occasioned our study? The first of these was: *Why are not our churches more efficient?* It will be remembered that this question was raised by the general indifference to church interests.

We have seen that what characterizes the effort on the part of man to adapt himself to otherwise insurmountable obstacles in his environment is the religious consciousness. Without the need of this adaptation it would not be called into being. The great advance of science in late years has allowed us to subdue our environment and adapt it to us. We have brought the mountain to us, hence we have not gone to it. Yet when conditions are sufficiently difficult to humble us to a mighty effort, religious interest revives. The follow-

ing table, which allows a comparison between the increase of church property and that of all property in the United States between the years 1850 to 1890 fur-

PER CENT OF INCREASE IN THE UNITED STATES	1850-60.	1860-70.	1870-90.
Of all Property.....	126	86	116
Of Church Property.....	96	107	92

nishes a good illustration of this. It is seen that in spite of a decreased growth of property as a whole between 1860 and 1870, there is yet a very marked increase of church property, a phenomenon which is easily explained when we recall that this was the period of our Civil War. Since then, as a nation, we have settled down with a comparatively undisturbed serenity to the enjoyment of material prosperity. There has been no general crisis to cause prolonged anxiety and its natural accompaniment of religious enthusiasm.

This explanation also answers our second question, viz.: *What is the significance and value of our modern aesthetic type of worship?* Without the need of making a fundamental reform in ourselves to meet the needs of our environment, we have come to appropriate the environment for our immediate welfare and pleasure. In general, the means of æsthetic enjoyment have been greatly developed. The mood for it has passed to all sides of life, and partly for this reason and partly from a feeling of respect, those forms of worship which from their real use have come to mean pain and anguish of soul have been softened and beautified, like the caskets of the dead which have been heaped with flowers, until nothing is left of their former sternness. But let new crises arise and with them arises the demand for feeling the conditions of the environment through the

forms of worship. A Reformation is initiated. The ceremonies are depleted of their finery, and like combatants in the arena are stripped for the conflict.

At first sight this changeableness may appear like inconsistency, but this is not the case. We have seen what a fundamental feature of the Sabbath is rest and recreation, and that this is based upon the physiological necessities of life. Whatever differentiates the seventh day most from the other six, whether it be out-of-door recreation or indoor æsthetics, if it meet mental and physical needs, the more effective it is in performing its mission. It is only with the greater necessity of readaptation that these features are renounced in favor of the self-abnegating type of worship. This type has its greatest value for us when threatened or oppressed by great misfortune, or when in adolescence there comes to be conscious the demands of a broader environment; it also has a value in giving the adult an intelligent plastic attitude towards the duties of life. This is a fortunate arrangement. It is an example of Nature's economy which prevents a waste of effort. If the transformation which is accompanied by great religious excitement should continue regardless of the demands of the environment, a development would take place which would not only be valueless for survival, but would cause a fatal maladjustment. From the standpoint of biology, the aim of life is not a different life removed from present conditions, but more life in accordance with these conditions, and religion is a means to this end. It is true that religion has not made our life perfect, but this is because of a lack of complete adjustment. An example of this is found in our present social situation. As society becomes more

complicated new conditions become evolved which require recognition and adjustment. The first steps in the accomplishment of this are an adequate appreciation of the conditions, and an adequately formulated response towards them. This is the work of science. The function of worship is employed in furnishing to the individual the wish and the will to act in accord with this knowledge.

Our third question regarding *the influence of science upon religious belief* finds its answer here. As science advances the conceptions which it formerly taught must give way as more adequate ones are arrived at, and this is as true of those which have become woven into religious belief as of those held but tentatively by the scientist. If we describe the essential feature of religion as *a feeling of personal responsibility towards the conditions of the environment*, we shall have a definition supported both by a comparative study of religion and the standpoint of our present study. The environment, the feeling of responsibility, and its appropriate expression epitomize the essential features of human life. A knowledge of the first of these is essential to both the others, and the more adequate or scientific this knowledge becomes, the more efficiently will it be possible for religion and worship to work out the necessary harmony between the environment and conduct.

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