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# THE PRINCIPLES OF KNOWLEDGE

WITH REMARKS ON THE NATURE  
OF REALITY

BY

REV JOHNSTON ESTEP WALTER

Author of "The Perception of Space and Matter"

VOLUME I

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## NOTE.

The whole of this work was ready for the press several years ago. After some recent revision, Volume I. is now offered to the public. Volume II., which completes the work, and which may soon follow in publication, contains Books III. and IV. Of these books, the former treats of the Knowledge of the Extra-Mental or External. The chief topics are the perception of matter, of space, of objective time and causation; the cognition of finite spirits, and of God. Book IV. treats of the Extremes of Knowledge. The notions of infinity and perfection, the necessity and universality of knowledge, the certainty and criterion of knowledge, are the principal themes.



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#### COGNITION OF THE MENTAL STATES.

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## INTRODUCTION.

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All knowledge is in and by the modes of the mind. The facts of the individual's consciousness form the beginning and basis of all knowledge. Things are known, therefore, only as we are capable of knowing them, or according to the grasp and nature of the faculties of our mind; and there is no ground for affirming the existence of anything which is not revealed immediately in the mental modes, or mediately by them, through their correspondence to or representation of it.

The science of knowledge has for its great aim to discuss the origin, extent, and certainty of human knowledge. It considers the basis and beginning of knowledge; the nature and extent of immediate knowledge; the nature and extent of mediate knowledge; every cognitive movement, in its origin and reach, in its correctness and worth, from the basis of knowledge, by way of perception, imagination, inference, surmise, belief, and by every other mode of procedure, if there be others; in short, it seeks to explain the whole structure of knowledge, as to its origin, its progressive formation, its trustworthiness in each step and part.

The important relation between knowledge or thought and being implies a corresponding relation between the science of thought and the science of being.

Philosophers fall, as to the science of knowledge,

into the two grand divisions of Monists and Dualists. Both divisions recognize the question of the relation which thought holds existentially to being, and the relation which the science of thought holds to the science of being, as of primary importance; and derive their names from the answers they give to this question.

The most thorough-going class of Monists affirm that thought and being are the same. Starting from what must be granted by all parties as a true principle, namely, that our only immediate knowledge is in the modes of the mind, and that all knowledge is through these modes, they leap to the conclusion that there is nothing existentially distinct from or beyond the pure mental modes or pure thought; that thought contains in itself all so-called substance and attributes of substance, which are by many erroneously supposed to be distinct from or outside of thought; that the real being of things is in the thought of them. Of course, on this view, the science of thought and the science of being are inseparable, are the same. The Monists in general regard dualism depreciatingly as the first philosophy of man, or the philosophy of the "uncritical many"; but their own, as the philosophy reached from this primitive one by the critical and cultivated mind advanced in history.

The apparent tendency of the present time towards idealism and monism receives its strongest impulse from the teachings of Kant. The great author of *Die Kritik der reinen Vernunft* held that the human mind knows and can know only phenomena — that is, pure mental affections and forms; and that nature, or the apparent universe, is "made" out of these affections and forms by the synthetic power of

the mind. He admits, at least generally, the existence of noumena, things-in-themselves, real mind and real matter; but emphatically contends that they are unknown and unknowable. He never successfully answers, however, the pertinent question, how anything can be said both to exist and to be unknowable. The natural results of his teaching were not long in following. Noumena, things-in-themselves, said to be unknowable, and so loosely and distantly related to the only things that could be known — phenomena, were, regarded as having being distinct from thought, gradually let go, by the strictly logical reasoning, that what is unknowable can not be said to be; and this movement from Kant has reached the most elaborate and thorough-going form of idealism and monism known to the history of philosophy, namely, the theory of Dialectic evolution.

Some earnest inquirers, repelled by the extremes of the later idealistic theories, have raised the cry, Back to Kant! But a return to Kant will not bring them to solid ground and rest; because the conclusions of the extreme and absolute idealists have been drawn too logically from Kant's principles and skepticism, to admit of quitting those and holding on only to these. Kant was a man of extraordinary analytic and critical acumen; but his positive contributions to the science of knowledge, and we might add ethics and the doctrine of freedom, have been, by many, vastly overrated. Through the accidents of philosophical development and controversy, his artificial system of intellection has risen to a remarkable prominence; and we must write with more reference to it than its positive and real merits can require.

The monistic philosophy of knowledge and being is the result, for the most part, of the effort of men to understand and explain the First and the unity of all things. The impulse of the human mind to discover the First Principle of the universe, or to embrace all things in a single system, having a single general law or principle of existence and activity binding all parts together and holding all apparent differences and oppositions in subjection, — one of the most significant and noble impulses, when in its normal strength and action, — has been the occasion of some of the most extraordinary theories of knowledge and being. Part of these theories entirely reverse the order of rank between God and man, give to human thought and consciousness the supremacy that belongs only to the divine. They force the plurality and extent of existence into a fictitious unity, and sometimes, in effect, into the narrow comprehension of the human mind.

In opposition to Monists, Dualists or Realists or Dualistic Realists (these three terms I shall hereafter use as synonymous) hold that thought and being, thinking and creating, are not the same, or absolutely the same; and that the science of thought and the science of being, though to an extent inseparable, are not the same. As to the relation of thought and being, they maintain that thought and thinker are to be distinguished; that, in the words of Locke, "thinking is the action and not the essence of the soul," and much less is it the essence of things external to the soul (*esse* is not *percipi*); or, that the Monists affirm of the relation between thought and all being what can be true, at the most, in a sense, only of the relation between thought and mental being. They maintain.



moreover, the existence of very important differences within being; first, the existence of distinct and independent individual minds, and the distinct existence of finite minds and the Divine Mind; and, secondly, the existence of diverse substances, as mind and matter. Regarding the fundamental question of the relation of the individual human mind to the universe, they hold that it has a certain place in the time of the universe, and a certain position in its space. As the individual awakens to full consciousness, he discovers that the beginnings of his knowledge or thinking are not the beginnings of things; that the world existed a long time before he began to think, and will very probably continue to exist after his cognitive faculties have closed upon it. He likewise discovers, as Copernicus discovered of the earth on which he is placed, that he is not the spatial center of creation; but that, though he is the center of thought in all its extent, he holds a definite place manifestly very far from the real center of the realm of being. He perceives, in general, as to his place and relative importance, that he is a very small and short-lived creature, compared with the vast, mighty, and long-standing frame of the world. As to being, we must begin, it seems, with the first cause, God; being is theocentric, not anthropocentric. But as to knowledge, we must begin with the ego; for all things, the material world, our fellow-beings, and God himself (though he is infinitely greater in knowledge, power, immensity, than the ego), are known only through the affections of the ego.

But while Dualists maintain these important differences between thought and being and within being, they at the same time hold that unity pervades all

differences. Thought and thinker should be distinguished, but they are yet inseparable; and all things, mind and matter, all the individuals of both, have proceeded from the same Maker, and constitute but one general system. Among different objects, as also between mind and matter, there are many important interactions and relations. Things, though distinct, are yet radiations from the same creative Power; and have many relations with one another which were antecedently implied in their primal coexistence in the center of origins. Moreover, the Deity, having created all things, preserves and sustains them by his immanence, while he is at the same time also transcendent. The doctrine of Dualists thus holds a place between the doctrine of absolute separateness and that of absolute identity. The great mystery, however, implied in the fact of the same realities being both distinct and united, both independent and dependent, created and free, is not ignored.

We may say the deepest question between monists and dualists, the deepest question of the science of thought and of being, of all science, concerns the degree of closeness, so to speak, of the relation that the Supreme Being holds to things — to finite minds, to matter and its motions, and to space; and philosophic theories for the solution of this question range from the most close-bound pantheism and monism to the loosest dualism — the dualism that, for example, regards space, matter, moral law, as, in origin, independent of, and coeternal with, God.

Locke may be taken as a principal representative of dualism in modern times. As is well known, he held to the distinction between mind and matter, and mind and mind; first, that the Divine Mind, though

the creator and supporter of all species of spiritual and material being, is yet distinct from them or transcendent to them; secondly, that the ego is distinct from other finite minds and objective being, though they have all proceeded from and are sustained by the same creative Power. Further, he held that thought and the mind are different; that sensations, and the "operations of the mind" included under "reflection," are to be distinguished from the mind, or, as already observed, that "thinking is the action and not the essence of the soul."<sup>1</sup> He taught that our sensations or perceptions give us a representation of the external world, in respect to certain qualities, as it really is. It may be added that the progress or growth of knowledge, in Locke's view, is from the single sensations and mental operations, by combination, etc., to the complete structure or full body of our knowledge; and not, contrariwise, from the indefinite and general to the particular.

It must yet be acknowledged that, notwithstanding the general dualistic character of Locke's philosophy, the most celebrated and conspicuous idealistic and monistic theories of modern times have taken their departure from it. This has resulted, in part, from two chief defects of Locke's philosophy, namely, his obscure and imperfect views regarding the relation of ideas or thought, on the one side, to the *mind*, and, on the other side, to *extra-mental objects*, — defects which, clear to students of philosophy two centuries after Locke wrote, are not to be spoken of in special disparagement of him. Holding that thought is the action and not essence of mind, he yet, by implica-

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(1) *Essay*. Book II., Ch. xix., Sect. 4.

tion at least, severs thought and mind too far, putting a sort of gulf between them; and from his indeterminate teaching, in the second place, regarding the relation of ideas to external objects, combined with this previous error, there issued, first in order, the immaterialism of Berkeley, and, afterwards, the nihilism or absolute idealism of Hume.

The relation, however, of the speculations of Berkeley and Hume to those of Locke must be considered with more critical attention and penetration than it has been usually considered, if these two philosophers are to get nothing more than what they really merit and Locke nothing less. Their philosophy proceeds not from the principles, but the defects of Locke's; not in the line of its general tendency, but contrariwise; more by way of mere skepticism, than by way of just criticism and logical development; and is therefore in relation to Locke's, rather a *post hoc* than a *propter hoc*.

Berkeley, starting from Locke's indefinite and imperfectly developed doctrine of the relation and correspondence of ideas to external realities, unfolded his peculiar system of idealism or immaterialism, denying wholly the existence of matter. He assumes as fundamental that no class of ideas, of sensations and perceptions, can be said truly to represent material objects in any particular, and that therefore no such objects can be said to exist: that the so-called material world has no existence independent of and distinct from the mind or its ideas, and that all being consists of spirits and ideas. Berkeley, however, after all, never showed that his idealism was a legitimate departure from Locke's philosophy, by showing that the principles and realistic tendency of the latter were

wrong and wrong-going, were not only not confirmed by proof, but could not be. He simply made contradictory assumptions. A skeptic was not bound, we suppose, to do more than this; and in relation to Locke, Berkeley is mainly a skeptic, not a thorough critic and logical successor and supplanter. Berkeley, accordingly, proceeded on his own line of speculation; but as far as anything which was done by him is concerned, there was left fully open the possibility of a legitimate development from Locke in the direction of his leading tendencies, in which his realism might be maintained, clarified, and established, by the rectification, extension, and establishment of his main theoretic principles; and, consequently, the possibility also of the refutation of the Berkeleian principles by the establishment of the Lockian.

Hume, under the stimulus of Berkeley, proceeding from Locke's defective view of the relation especially of ideas to the mind, as Berkeley had proceeded from his defective view of the relation of ideas to extra-mental things, developed his theory of nihilism, which, in accordance with Berkeley, denies the existence of material substance, and, beyond Berkeley, denies the existence of spiritual substance; and leaves nothing in being but ideas floating in the void, having no relation with one another except what they have externally. But what was just said of Berkeley's relation to Locke, is true also of Hume's; and what is true of the idealism of these two celebrated men, may be said, in general, of all forms of materialism that have ever claimed descent and respectability from Locke.

The history of Locke's philosophy, among the people of his own land and language, is curious, both

with regard to those who have opposed it, and those who have taken more or less from it. Within the last century there have been very few apparently of the philosophic who have accepted it fully, both as to its matter and method or theory of knowledge, both as to its realistic principles and its view of the origin and architectonic of knowledge. Those who have adopted his *a posteriori* method have rejected his realism, as, for example, the present school of Hartley and Hume; and those who, like the school of Reid, have accepted fully his realism, have rejected his method. In the latter division is found the great body of Christian thinkers. The method of Christian thought has been for a long time chiefly the *a priori*; and it has been maintained as the true one with the usual fervor and tenacity of religious convictions, and with powerful attacks upon sensationalism and monism. Owing to the strong tendency of those who adopted Locke's method to run into theories of monism, both idealistic and materialistic, it has long been common among theologians to denounce his method as the antecedent of modern materialistic and idealistic systems, and of the atheism and heterodox ethics that often accompany those systems,—results so unpalatable, so antagonistic to the common dualistic view of the world and the strong religious convictions of the English mind. Honoring Locke as a patriot and a man of pure and exalted religious and moral principles and practice, they have condemned him or apologized for him as a philosopher and as the real though unwilling and innocent cause of the many evils in theory and practice which they suppose have sprung from his method of philosophizing.

The most popular and generally accepted form of

philosophy for a considerable time has been a mixture of Lockian and Kantian elements; but, at the same time, the depreciation of Locke, as a philosopher, in comparison with Kant, has been with many a commonplace of philosophic criticism. Latterly there has been a revived inclination towards the suppression of the realism of Locke, and towards the fuller acceptance of the philosophy of Kant, with its monistic implications. This inclination is in part due to powerful foreign influences, — to the increased and deeper study of the works of leading German philosophers, and to the residence of philosophic youth at German universities, where some of them too readily learn to depreciate many of the great leaders of English thought, especially to disparage Locke in comparison with Kant.

It is an assumption of the present work that, since the idealistic diversion from Locke, led by Berkeley and Hume, there has remained an unfilled space for a consistent and adequate theory of a *posteriori* dualistic realism; and the work may be regarded as, in part, an attempt to supply the proper theory. That diversion the author must regard as a grave departure from the true course of philosophy. The true course of philosophy, as it appears to him, was directly onward to the rectification and completion of the Lockian *a posteriori* dualism, shunning idealism and monism, on the one hand, and apriorism, on the other. How far the author has succeeded in this attempt, or in making any contribution towards the success of such an attempt, his readers must be left to decide for themselves.

In the controversy between Monists and Dualists

there has been on both sides some lack of entire submission to the strictly scientific spirit, which deserves some consideration here. The only opinions and principles worthy of regard and acceptance in philosophy are those which, no matter where they have come from or first appeared, can maintain themselves under the close and long inspection and trial of minds seeking only to reach truth and to avoid error.

The Monists depart somewhat from this rule through the disposition, prevalent with them, to depreciate "common" thought, consciousness, or sense, the thinking of the "uncritical," the "many," or the "vulgar," and to insist on the absolute necessity of "rationalizing" it. The earnestness and not infrequent dogmatism with which this is done can be understood in part from the fact that "common" thought is most decidedly dualistic, and has always stubbornly resisted every effort of Monists to explain or convert it into something else.

On the other hand, because of this very distinct dualistic character, many Dualists have greatly exalted "common" thought, and have held that, in the "primitive," "native" and "spontaneous" notions of the human mind, their philosophy has a remarkable and sufficient confirmation.

Both these views are extreme. Common or unlearned thought neither deserves the reproaches of Monists, nor merits the unmeasured exaltation of Dualists. The Monists have in their favor the difficulty, which all who are conversant with the problems and progress of knowledge will admit, of getting through first appearances down to realities. This difficulty occurs more manifestly, perhaps, in external perception than in any other cognition. All philo-



sophical thinkers will grant, at least, that external things are not precisely what they appear to be; and that it has been no brief and easy problem to tell just what is appearance and what reality. But while this is true of knowledge, there are no sufficient grounds for the wholesale disparagement by Monists of unlearned thinking and its "rude unities." The mistakes and errors which can be charged against it are not so great as to warrant their assertions of its great need of "rationalization." Common thought to some extent, no doubt, needs scientific elucidation and supervision. These philosophers, however, are to be understood by the "rationalization" of common thought to mean, not simply elucidation, just interpretation, and removal of imperfections, while its essential constitution remained; but the changing of its character wholly, interpreting it into the very opposite of itself, into some form of monism or identity.

No one would wish to be thought to disregard the disparity in general between disciplined and undisciplined thinking and the value of learning; but the history of the human mind shows with a good deal of plainness that the learned mind may be exalted too high in comparison with the unlearned. Instances are not infrequent in history of unlearned thinkers, in questions even of speculation, and in great moral, social, and political questions and movements, getting nearer the truth, either in independent action or in deciding between conflicting leaders, than learned and disciplined. Things seem to have been hidden from the wise and prudent and revealed unto babes. The unlearned many doubtless need the guidance of the learned and disciplined few, and under such guidance

have in many instances been brought on to the acceptance and enjoyment of most valuable truth, and in cases, too, where the truth at first seemed to them absurd and met with their vehement opposition; but, on the other hand, the leaders themselves have been at times directed by the impartial, unbiased, and realistic thought of the unlearned, or have been held back by their opposition or inertia, more or less self-conscious, from going into no one knows what extremes and extravagances. Ordinary consciousness must be led by the cultivated; but undoubtedly the best interests of science and humanity have sometimes been served by its resistance to leadership and assumption of some independence; and it has brought back to itself many flights of speculative thought. *Interdum vulgus rectum videt.*<sup>1</sup> The decided and persistent antagonism of ordinary thought to monistic theories will not turn, I believe, in the end, to the discredit of ordinary thought or to the disadvantage of philosophy.

Minds that have the advantages of discipline and great erudition are not free from the liability of having their originality hampered by an overload of learning; of being shackled by prejudices and preconceptions, or beguiled by the conceit of knowledge and of discovery or innovation; and of being set in grooves. How these causes have operated in the minds of the learned to the rejection and perversion of facts and principles is a well-taught lesson of the history of science. On the other hand, with the disadvantage of small learning and little culture, there may be at times deep and true insight and comprehension, and

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(1) Horace, Lib. II., Ep. 1. 63.

power and freedom to go farther with safety than cultivated and artificial minds. Common sense, or the thought of the many, may therefore be well contrasted sometimes with the speculations and spirit of the philosophic few.

In what has just been said, I trust that no grounds have been afforded for the charge of having put too high a value upon uncritical thought, and too low upon critical; of favoring the old fashion of referring metaphysical and ethical questions in a manner to the decision of savages or the lowest tribes of men, or of showing undue deference to the convictions, native notions, or instincts of the unsophisticated mind; and not duly favoring the application of scientific methods and canons. What I would maintain is, simply, that ordinary thought may be undervalued and may be overvalued; that both have been done, the one with as much pretension and dogmatism as the other; and that doing the one is fraught with as much evil to science as doing the other. The test of principles and theories is not to be placed in the minds where they originated or first find reception: neither in the fact that they are the product of the free, spontaneous, and fortunate insight and action of the uncultivated intellect, or are supported by the intense convictions of the many; nor in the fact that they are the product of the more regular operations of the cultivated and brilliant intellect; but first and above all in their power to endure the close and continued consideration of earnest, impartial, and truth-seeking minds.

The order of discussion in this work will be determined by the fundamental distinction of immediate

and mediate knowledge, and by the natural order of knowledge.

In Book I. we shall consider the cognition of the modes of the mind and real mind, this being especially the sphere of immediate knowledge.

In Book II. we shall treat of the synthetic or constructive operations of knowledge, the operations of sense-perception, imagination, and the logical faculties; but of them only in their pure subjective character, without any regard, or special regard, to their relations to external things, — thus still keeping within the region of immediate knowledge.

In Book III. we shall pass beyond the region of immediate knowledge, to the knowledge of the external — of matter, spirits, and outer relations.

Book IV., the last, will be devoted to the extremes of knowledge, — to its farthest reaches and comprehension regarding space, time, and causation; to its highest certainty, and the criterion of it; and, in general, to the peculiarities of knowledge in its most advanced stages and on its boundaries.

**BOOK I.**  
COGNITION OF THE MENTAL STATES  
AND OF REAL MIND.<sup>1</sup>

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**PART I.**  
COGNITION OF THE MENTAL STATES.

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(1) The term *mind* is here used in the widest sense, as denoting the whole spiritual nature of man.



# COGNITION OF THE MENTAL STATES.

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## CHAPTER I.

### COGNITION OF PRESENT MENTAL STATES. OR CONSCIOUSNESS.

We have no knowledge earlier, more direct, or more certain, than that of the modes of the mind. Moreover, the knowledge of all else is in and through these modes; and, therefore, our knowledge of them properly comes to be considered first of all.

The cognition of the mental modes is commonly assigned to the faculty Consciousness. By some, consciousness has been regarded as a faculty distinct from other faculties of the mind, — for example, those of volition and emotion, just as the latter are from one another; and as standing in a manner apart from them and taking cognizance of their operations. The more common and correct view, however, is, that consciousness is not a distinct faculty of mind, but rather a common property of all known faculties, or the general faculty of which all special faculties, as they are known, are but modes, the genus of which they are the species. “Consciousness,” says Sir W. Hamilton well, in general, “is not to be considered merely as a separate and specific faculty of self-knowledge, — as that power which is conversant about the other intellectual operations and passions, from which it is distinguished, as about its peculiar objects; but, on the contrary, it is to be regarded as a general expression

for the primary and fundamental condition of all the energies and affections of our mind, inasmuch as these are known to exist. For while knowledge, feeling, and desire, in all their various modifications, can only exist as the knowledge, feeling, and desire of some determined subject, and as this subject can only know, feel, desire, inasmuch as he is conscious that he knows, feels, and desires, it is therefore manifest that all the acts and passions of the intellectual self involve Consciousness as their generic and essential quality. . . . While Consciousness, in reference to the subaltern capacities of the intellectual subject, may be considered as their absolute and universal form, so these subordinate capacities, in reference to this universal concomitant of their existence, may with propriety be regarded as the relative and special modifications of Consciousness.”<sup>1</sup>

But contrary to the apparent import of the above extract, Sir W. Hamilton, at times, and some other writers, are inclined to regard consciousness as having a peculiar relation to the so-called faculties of knowledge or cognition, as these are distinguished from the faculties of emotion and volition. They make consciousness in a special sense intellectual. This view has been thus stated: “Consciousness is an act of knowledge, and is therefore an act purely and simply intellectual — an exercise of the intellect only. The states observed may be psychological, *i. e.*, indifferently states of intellect, sensibility, or will, but the act by which they are known is intellectual only.”<sup>2</sup>

A fundamental assumption apparently made here

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(1) Edition of Reid's *Works*, p. 929.

(2) Porter, *The Human Intellect*, p. 88.



is, that the intellect, or the function or faculty of knowledge, is a faculty coordinate with the faculties of sensibility and volition: or is as independent of, or distinct from, these two faculties, as either of them is from the other. This doctrine, the occasion of great confusion, and not in regard to consciousness only, is, I conceive, a fundamental error. The consciousness of any modification of mind, a sensation, emotion, or volition, belongs to the modification itself, is in and of it, is implied in it as a constituent element, or is identical with it. Consciousness is not something distinct from the modification, is not, especially, in any sense or manner, the act of a faculty, as the intellect, considered as different from and coordinate with the faculties of sensibility and volition, but is truly generic or universal. An act of sense-perception, or any other so-called cognitive or intellectual act, is a pure mode of mind and a mode of consciousness. An emotion, or any other affection of the sensibility, is a pure mode of mind and a mode of consciousness. The sense-perception has, indeed, a reference to an external reality: but in itself, with this reference, it is still only a pure modification of mind and of consciousness like emotion. The emotion is no more and no less a modification of consciousness than the sense-perception. It is as truly an act of knowledge. It is an act of presentative or internal knowledge. There is no pure act of consciousness apart from and above a special affection of mind. The remark is well made: "Consciousness seems indeed to be badly described when it is restricted to simple recognition or knowledge of mental modifications: as such it is not convertible with every mental modification experienced, and yet we can not throw out of consciousness either

the distinctive element of feeling, desire, or volition." <sup>1</sup> Consciousness, in brief, is the fundamental form of all classes of mental affections and acts — sensations, emotions, volitions. It is not "intellectual only," but is sensational, emotional, or volitional, according as we are conscious of a sensation, emotion, or volition; and it is also of these affections as they are combined in complex modes.

Consciousness is immediate knowledge, and embraces, therefore, present modes of mind only, not past modes of mind, and less qualities of extra-mental things. The cognition of present modes of mind should hence be considered by itself, as being distinguished by important differences from the cognition of past modes and of external qualities. It should be emphasized that the knowledge of the present modes of mind is of perfect immediacy. There is no separation as to time, space or material between the knowing and the thing known; there is no manner of interval, gulf or break; in other words, the knowing and the thing known are one and the same — in this case thought and thing are identical. It is this identity, or perfect immediacy, which makes the knowledge of the mental modes the highest order of certainty. Doubt can not enter consciousness and negative a present state of mind. Every conscious present state absolutely excludes doubt of itself as light excludes darkness. The certainty, then, of our knowledge of the mental modifications is of the first order, — there can be no greater; and the certainty of the existence of other things may be said to vary with the degree of their respective remoteness from the

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(1) Veitch, *Hamilton* (Phil. Classics), p. 97.

mental states or the mind, or with the number of media between them and the mind.

Views much opposed, however, to the above doctrine of immediacy and identity have been earnestly maintained. Some regard it is impossible that knowing and the thing known should be absolutely immediate to one another and the same; they assume that "a thing can not at the same instant be both subject and object of thought," and that we can more easily understand the cognition of something which precedes, or is in some way different from, the knowing act itself. This assumption is more plausible than true. No doubt we are much indebted for our knowledge of the mental modes to the representations of them afforded us by memory when they are past; but, on the other hand, conscious or, as we say, self-knowing states of mind are very generally the conditions of memories; we recollect what we were previously conscious or immediately cognizant of, and the vividness of recollection is proportional to the vividness of the previous consciousness. The identity in consciousness of the knowing and the affection known we seem to be required to accept as a primordial and fundamental fact in which a mind differs from everything else.

Our knowledge in consciousness of the mental modes has been unfavorably contrasted, on account of their subtilty, interrelations, evanescence, with the knowledge of permanent, palpable, easily distinguished and manipulated material objects. For instance, it has been said: "Mental states are not abiding and steady objects like those which form the subject-matter of physical observation. . . . What passes within us, in our thoughts and feelings, is

unstable and changing. The botanist, when he spreads out a plant in front of him, or the chemist, when he conveys a substance into his retort, can observe at leisure the appearance of the objects under certain quite definite conditions." <sup>1</sup> There is truth in such statements as this, but there is also often misunderstanding and exaggeration. When a botanist is observing a plant which he holds in his hand, he is really conscious or immediately cognizant only of the percept of the plant, which percept is a pure complex mode of his own mind. The permanent and extended plant has its own existence external to and independent of the mind; but it is known, not immediately, but only mediately, through the pure subjective percept. The percept is indeed phenomenally projected, and peculiarly interpreted; none the less, in itself, it is a pure mode of mind. Then, while the botanist is examining a plant, the only immediate object of his examination is his own percept, which endures or is constantly renewed through the constant excitation of his mind by the plant. In a case of this kind, therefore, it is wrong and unreasonable to affirm that, during the act of observation, the mental state or the percept and the extra-mental object differ greatly as to uniformity and steadiness, or that the knowledge of the percept is inferior to that of the external object. On the contrary, the knowledge of the percept is in every respect superior to that of the object. Certainly all the steadiness directly known is the steadiness of the subjective percept rather than that of the external object.

As has been already observed above, the only facts

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(1) Hoeffding, *Psychology* (I.owndes tr.), p. 16.

of consciousness are the present mental modes. Past mental modes, and, more emphatically, extra-mental objects or properties, never enter the sphere of consciousness. In opposition to this, however, even some dualistic writers, though admitting that we are not conscious of past modes of mind, vigorously contend that we are conscious of external or material realities or qualities; that, for instance, the act of perception requires the presence in consciousness of the material object perceived. It is held that sensations and sense-perceptions are complex phenomena, in the sense of being modes of both mind and body as these are united; and that, in these complex modes, attributes of body or matter come within the sphere of consciousness. Says Sir W. Hamilton: "I hold that Sensation proper being the consciousness of an affection, not of the mind alone, but of the mind as it is united with the body, that in the consciousness of sensations relatively localized and reciprocally external, we have a veritable apprehension, and, consequently, an immediate perception of the affected organism, as extended, divided, figured, etc." <sup>1</sup> The same writer sometimes asserts that it is "impossible that we can be conscious of an act without being conscious of the object to which that act is relative." <sup>2</sup> In the term "object" is included material object. But the doctrine, taught also in substance by many Monists, is untenable. It denies what is a primary fact of knowledge. The perceptive act and the material object to which that act is "relative" are perfectly separated just in this manner, that the former is in

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(1) Edition of *Reid's Works*, p. 884.

(2) *Metaphysics*, p. 147.

consciousness and the latter wholly outside. No motion or property of even the cerebral elements, which are supposed to be in proximate relation to mind, ever enters the illuminated sphere of consciousness. The inclusion of the mental modes in consciousness, and the absolute exclusion of every physical property, is one of the most noteworthy and important facts pertaining to human knowledge. As only the mental modes appear in consciousness, the most general problem of knowledge may be said to be, to understand how we ever cognize anything besides or beyond a present mode of mind, as a past occurrence, the permanent mind, an extra-mental object.

A significant fact regarding consciousness is its dependence upon change, contrast, discrimination. We are never conscious of a mental affection by itself alone, out of relation to others; but only in our discrimination of it from another or others antecedent or simultaneous. All consciousness involves the consciousness of difference and resemblance. The mind is excited to consciousness by discriminable affections. It has been held that temporal change or memory is necessary to consciousness. Sir W. Hamilton declares that memory is an "undeniable condition of consciousness."<sup>1</sup> He holds that, discrimination being a condition of consciousness, memory is also; for without memory there could be no contrasting of a present with a past state of mind. "Change," he says again, "is necessary to consciousness, and change is only to be apprehended through the faculty of remembrance."<sup>2</sup> But it should be borne in mind that contrast or discrimination is not possible

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(1) *Metaphysics*, p. 141. (2) *Ib.*, p. 679.

only between a present and a past, or the remembrance of a past, state of mind, or between successive diverse states. There are contrasts between simultaneous mental affections; there are simultaneous sensations that are different in quality and separate in space; and, so far as contrast makes consciousness possible, these contrasts make it possible, they may "start" or "shock" the mind into momentary consciousness, even without change or real transition. We are conscious of different visual impressions or perceptions in an instantaneous light, as an electric flash, and it is not probable that the change from the mental state preceding the flash, or the remembrance of that state, is necessary to the consciousness of the simultaneous different impressions. But we must at the same time admit that there is seldom or never a state of consciousness exclusive of remembrance. Consciousness always or almost always combines the consciousness of an original affection or affections with the consciousness of the remembrance of a past affection. Still, this association with the consciousness of remembrance, even if it be quite invariable, does not seem to be indispensable to momentary consciousness. Such consciousness is possible in the discrimination of simultaneous original mental affections or presentations. To say the least, discriminable presentations often help to consciousness; they contribute to the vividness, the grade, intensity, matter, of consciousness.

We have been concerned heretofore exclusively with conscious states of mind. It has long been a question of importance in mental philosophy, whether there are unconscious states or activities of mind; and the question deserves brief attention here. Psy-

chologists have been much divided on this question; and this has been the result chiefly of preceding variance respecting the nature or permanency of the mind. Spiritualistic psychologists generally admit unconscious or latent mental modifications; but they differ as to their extent. Some assume them as conditions or causes of conscious effects, where others reject them. What some regard as the effect of unconscious mental activity, others regard as the effect of conscious mental activity which was immediately forgotten. Materialistic psychologists, of course, deny unconscious activity of mind; and ascribe to "unconscious cerebration" what the spiritualists ascribe to unconscious mentality.

First, as to the first rise or origin of consciousness. It would seem that consciousness must originate from a preceding unconscious mental energy or basis. It is not probable that it is generated by pure physical causes, as by the association or motion of the cerebral elements. The rise of consciousness has no doubt an important physical condition; but this condition can not be taken as its real cause. It is very improbable that such heterogeneous things as the union or motion of material elements and consciousness should be related to each other as real cause and effect. There is no equivalency between them. It must therefore be presumed that mind precedes consciousness. Consciousness rises in the mind as, so to speak, self-illumination. It is a potentiality or possibility of pre-existing mind. It has its primary ground in mind. But, none the less, the passing of mind from unconsciousness to consciousness must be admitted to be one of the deepest mysteries. We can only suppose that it is not a creation, but a devel-



opment from preceding adequate mental condition and cause. Sir W. Hamilton appears to regard conscious mental movement as the higher intensity of a movement which in lower intensity is unconscious. "Consciousness," he says, "is not to be regarded as aught different from the mental modes or movements themselves"; it "is just the movements themselves rising above a certain degree of intensity." <sup>1</sup>

Secondly, we must presuppose not only that there is an unconscious mental energy or basis for the first rise of consciousness; but also that there always remain unconscious mental modes or activities which are the ground of conscious effects. It seems impossible, for example, to give a reasonable account of the great functions of memory, retention and reproduction, without supposing an unconscious permanent mental basis. Just as unconscious mental energy precedes and is the ground of the first appearance of consciousness, so persistent after-effects in mind of prior conscious states are the necessary ground of the memories of those states. It has been well contended, in discussions of memory, that sensations, passions, volitions, do not sink as such into unconsciousness, or that there are no unconscious sensations, etc.: for these and all other classified mental modes never exist out of consciousness; but we seem required to suppose that conscious mental modes leave in the mind some sort of persistent traces, vestiges, after-effects, which are the ground of the recollection of them.

Materialistic psychologists deny permanent mental after-effects as the ground of memories, and hold

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(1) Edition of *Reid's Works*, p. 932.

that permanent cerebral changes or paths are the sole ground of memories. The term "unconscious cerebration" is by some employed to express this view. This term, however, is really as objectionable as the term "unconscious sensation"; for as there is never unconscious sensation, so there is never cerebration that is not unconscious. There can be no division of cerebration into conscious and unconscious, because all cerebration is absolutely unconscious. What is often meant by this inappropriate term is probably simply, that what some impute to unconscious mental modes or operations is due solely to cerebration. Some affirm the general proposition that "matter and the unconscious are identical." Against the above doctrine of memory, however, stands the same serious objection, in effect, which stands against the doctrine that consciousness has its first origin in a material ground. Because of the marked heterogeneity between brain change and memory, it appears impossible, notwithstanding their manifest close relation, that they should be united in the relation of real cause and effect.

But we shall not pursue the subject of the unconscious further at this place; for, owing to its close relation to the subject of memory, and especially to the fundamental question of the existence and cognition of real mind, additional consideration of it here would require us to anticipate too much the discussion of these latter subjects.

## CHAPTER II.

### COGNITION OF PAST MENTAL STATES, OR MEMORY. — COGNITION OF SUBJECTIVE TIME.

Memory, the faculty of conserving and recalling or reproducing our past mental states or experiences, is commonly treated as one of the so-called cognitive or intellectual faculties, and with more distinctness and positiveness than ever consciousness is so treated. But this view of memory seems to be as partial and defective as the corresponding view regarding consciousness. As to universality, memory and consciousness are almost alike. Consciousness is the immediate knowledge of the present mental modes, simple and complex, of all classes, including, of course, the modes of memory itself as present representations. Memory is the mediate or representative knowledge of the past mental modes, simple and complex, of all classes.

Memory and consciousness being alike in attaching to all classes of mental phenomena, perceptions, emotions, volitions, the grand difference between them regards immediacy or directness of knowledge, or the relation of the act knowing to the act known. In consciousness, the knowing and the act, the sensation or emotion, known, are simultaneous and identical; and there is no question as to the manner of the relation of the two, because of their identity; although, indeed, the fact that the knowing and the known are one remains ultimate and inexplicable. But, in memory, the most important and difficult

questions appear at this point of the relation between the knowing and the act known, or the remembering and the act remembered. Is the act of remembering a literal awakening or revival of the act remembered, or are they numerically and thoroughly distinct? Are they qualitatively the same or different? What is the condition of knowledge considered as stored away in the repertory of the memory, and not actually remembered or thought of? These, and the like, are among the peculiar and most important questions regarding memory.

The common mode of describing remembrance as a reproduction or awakening of past mental phenomena, if taken strictly, implies an identity of remembrance and the phenomenon remembered. Some psychologists expressly teach that no sensation, or conscious phenomenon, ceases to exist. A sensation sinks below the threshold of consciousness, and, after having remained in that state for a time, may rise again into consciousness or be remembered. The sensation and the remembrance of it are regarded as identical, as two states of the same continued mental mode. This view is somewhat favored by the fact that the representation of memory resembles the original phenomenon. But as to this subtle question, it seems the more probable theory that the remembering and the experience remembered, as they are temporally different, are numerically different, like, for example, two successive sensations on the same tactile spot; and that remembering is properly representation.

But if the two phenomena, the remembering and the remembered, are temporally and numerically different, they are, as is commonly supposed, qualita-

tively the same. Memories are fainter or less vivid phenomena of the same character as the originals. Every experience and its memory are generally held to have the same physical seat or tract; and memory is supposed to be the attendant of the weaker excitation, produced by internal causes, of that tract.<sup>1</sup>

The chief functions of memory are Retention or Conservation, and Reproduction or Recollection. Recollection includes representation, and the peculiar conviction that the representation resembles a past affection. When I remember a sensation or perception, I have the conviction that I truly represent a fact of my own past experience.

What account now are we to give or receive of the wonderful fact of the mind's retention of its past knowledge or experience? There are two general theories of this fact, which may be denominated the spiritualistic and materialistic. In the former it is maintained that, though memory has its important physical conditions, it is yet in itself wholly a mental process, that it is the continuous activity of the same unitary agency, that it has its real or fundamental cause solely within mind, that its innermost, its primary, support is mental, not physical. Therefore,

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(1) Professor Bain remarks: "What is the manner of occupation of the brain with a resuscitated feeling of resistance, a smell, or a sound? There is only one answer that seems admissible. *The renewed feeling occupies the very same parts, and in the same manner, as the original feeling, and no other parts, nor in any other assignable manner.*" (*Senses and Intellect*, 3rd Ed., p. 338.) Some psychologists, however, are inclined to the view that the cerebral seats of the two phenomena are partly or wholly different. For instance, Ziehen says that the phenomena of "mental blindness" and "deafness" make it probable that "sensation and idea depend upon different cortical elements." (*Phys. Psychology*, p. 155.)

the original phenomenon, as a sensation, the subsequent recollection, and the intermediate retention, are not to be assigned to different realities or agencies; it can not be said that the extremes, the sensation and its recollection, are mental, and the intermediate retention non-mental; but the three facts are but stages of the continuous activity of the one mind. Though retention is unconscious, it is still within mind, within the total unity of the mind's activity or being. According to the materialistic theory of memory, there are not only physical conditions of retention, but these conditions are the sole cause or ground of retention. There is no permanent and conserving mind; but only a permanent and conserving brain. The present remembering act receives its knowledge and conviction of the past directly from the permanent physical organ alone.

Every theory of memory must leave unsolved mysteries; but the spiritualistic theory seems more consonant with the facts by its presuppositions of a permanent mental life, and of the whole of memory as a unitary activity within that life. On this theory, then, how are we to conceive especially of the relation of the original experience to retention, and of the relation of retention to recollection? What is the character or form of the retention of past experience; what is the form of the basis, in retention, of recollection? It might seem easier to account for the whole process of memory, on the assumption that an original affection of mind does not cease to exist, and that the recollection of it is but a different mode of its own self; that, for example, the same perception sinks into unconsciousness and afterwards emerges. But it is hard to believe in an unconscious perception or sensation;

and we seem to be obliged to hold that a perception and the memory of it are numerically different affections or phenomena of mind. Then the question arises, how can successive different phenomena be held together in the unity of memory? or, how can we account for the fact that the present remembering act embraces the conviction that it resembles a past experience?

If a sensation has no existence beyond our consciousness of it, we must yet suppose that it leaves behind itself in the mind an unconscious vestige or trace. What the particular character of this trace is, or what is its particular difference from the sensation, is entirely beyond the reach of our introspection. We can only name it by the most vague terms, as vestige, residuum. But something of the sort seems indispensable to memory. It is the necessary connecting link between a sensation and the remembrance of it. The transitory sensation must leave a permanent after-effect in mind, which permanent after-effect is the permanent possibility or the ground of the transitory recollection of the sensation. But how such an effect, which is different from the sensation by which it was caused, can be the ground of the conviction that our recollection of the sensation resembles the sensation, it is impossible to tell.

In general, it seems clear that we must assume the permanence and identity of the mind as indispensable to memory. If we take a sensation, its after-effect, and the recollection, as different facts, we must hold that memory would be impossible, if these were not the modes of the same permanent mind. We are indeed unable to explain the connection of sensation, after-effect, and remembrance, or to explain the emer-

gence of a remembrance from its mental antecedents; but, none the less, are we compelled to assume the unity of the mind with these differences, and the permanence of the mind with this succession. The permanence of the unitary mind is the fundamental condition of memory. We remember a past experience only because the present act of remembrance and the past experience are modes of the same enduring mind; or because the mind has endured from the past act to the present, bearing in itself a permanent vestige of the past act. Particularly, the special conviction of memory as to the past has its ground in the permanence of the mind; it is a conscious expression of that permanence.

The varying states of the permanent mental after-effects of presentations account for the well-known facts that we have more vivid remembrance of experiences that are recent, that are fully attended to, and that are frequently repeated. A recent after-effect may be reasonably supposed to be more energetic than an old one. Again, an experience which engaged our full attention leaves a stronger after-effect; and repetition of an experience strengthens and confirms its after-effect. Further, associations in our remembrances have their ground in the confirmed associations of the permanent after-effects of experiences.

The materialistic hypothesis of memory rejects permanency of mind; and consequently also persistent mental traces of past experiences, and unconscious mental modes. Retention is made a function especially of the brain. In place of the permanent mind, this hypothesis puts the permanent brain. In place of permanent mental residual effects, it puts perma-



nent cell or structural modifications of the brain. The unconscious is identified with the material. The mind, in general, is described as a pure continuous succession of phenomena, having direct relation to nothing permanent except the permanent brain. According to the logic of some, apparently, the only mind, or the whole of mind, is the present transitory thought.

This hypothesis has its occasion and support, in part, in the manifest facts of the dependence of memory on physical conditions. The dependence of mental action on physical action can not be denied; and in the operations of memory it is perhaps more clear and striking than in any others. Illness, exhaustion, age, enfeeble memory. Drugs, febrile delirium, excitement, awaken long-forgotten events. From such facts as these many psychologists conclude that memories not only are subject to cerebral conditions, but have their real ground or fundamental cause in these conditions.

Retention or conservation of past experiences is especially reckoned to the physical organ alone, no account whatever being taken of the permanent conserving mind or of permanent changes in it. For instance, according to Professor James, "organized neural paths" are the only ground of retention, or simply are retention. The retention of a past event, he says, "is no mysterious storing up of an 'idea' in an unconscious state. It is not a fact of the mental order at all. It is a purely physical phenomenon, a morphological feature, the presence of these 'paths,' namely, in the finest recesses of the brain's tissue. The recall or recollection, on the other hand, is a *psycho-physical* phenomenon, with both a bodily and a

mental side. The bodily side is the functional excitement of the tracts and paths in question; the mental side is the conscious vision of the past occurrence, and the belief that we experienced it before."<sup>1</sup> This statement places retention solely in the physical organ, and seems to set forth the doctrine that there is a commixture, in memory, of permanent retaining brain-paths and the present passing recollecting thought. All retention of past mental experiences is in the brain-tracts, which, as it appears, communicate their stores to the present thought. The latter derives nothing whatever regarding the past from any other source than the brain-tracts. This all can, of course, be put into words; but no human mind can form any consistent conception from the words.

First, as to the doctrine that brain-tracts conserve past knowledges or mental experiences. Even the most enthusiastic cerebralist must admit that there is something quite unintelligible and mysterious in such conservation. The brain may certainly hold its own permanent structural changes (as paper and cloth preserve creases), or fixed lines of molecular motion. A line along which motion occurred concomitantly with a sensation or other presentation, may become a permanent line of motion. But this does not warrant the assumption that, in such lines, the brain conserves, besides its own changes, also the past mental experiences which occurred with the rise of those changes; or in them alone possesses the permanent possibility of the recall of the experiences. Against such an assumption would seem to militate, first, the fact of the constant mutation of the brain substance

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(1) *Psychology*, I., p. 655.

through waste and repair. How can there be any permanent retention of past experiences by the material organ, when it is undergoing continued change in its molecular constituents? To this, however, the reply may be made, that the brain may retain structural forms, or "tendencies," "dispositions," to motion along fixed lines, while the elements of the structures or lines are continually changing; just as a scar retains its form, and the features of the countenance long remain nearly the same. But while this reply may be reasonable, it does not relieve the difficulty. Forms and dispositions may have superiority to the elements, in point of permanency; but this yet does not help us the least towards understanding how cerebral paths and processes can conserve, besides themselves, past mental experiences, or be the sole ground or possibility of recognitive knowledges.

Especially the very great unlikeness between every mental phenomenon, presentation and representation, and any conceivable cerebral form or process, appears to be an insuperable obstacle to any theory of the physical retention of past mental experiences. It seems for this reason impossible that mental experiences should sink or disappear in brain-paths, and have their retention or ground solely in them, whence they revive into the conscious recollections. Other facts, which will be more fully considered hereafter, strengthen the case against the theory that the sole basis of retention is corporeal. Of them is the fact, that our knowledge of the brain is wholly a mode of the mind; and the great probability that the very permanence of the brain itself, which many so unhesitatingly and so fully assume in antagonism to the permanence of the mind, could not possibly be known

otherwise than through the known permanence of the mind. This priority of the mind in knowledge, while of great importance, does not, however, it should be observed, give us sufficient warrant to become spiritualistic unitarians or monists and to hold that the permanent and extended brain is but a mode of our mind or thought; just as, on the other hand, the indubitable physical conditions of memory do not warrant us in becoming materialistic monists and holding that retention has its only ground in the material organ; but it supports the belief that the primary cause or deepest ground of retention is mental.

The physiological theory of memory is closely related to, or appears to be but a phase or part of the general assumption that brain-process generates from itself mental phenomenon: it has no more, and no less, value than that general assumption. We admit that, if a cerebral motion can produce from itself a sensation, then it seems not inconsistent to suppose that a permanent cerebral change resulting from that motion may be the sole seat and origin of the recollection of the sensation. But the marked heterogeneity between every mental phenomenon and cerebral process appears decisively to contradict every form of the materialistic hypothesis. As to memory, there can be no doubt of the close relation of mental phenomenon and brain-change. Injury, disease, exhaustion, of the brain directly affect memory. Special excitements of the brain by fever, drugs, occasion very eccentric phenomena. Memory rises and declines with the progress to maturity, and with the decline, of the body. Such facts require us to admit brain-processes as important conditions or occasions of memories; but they do not require us to admit them as the

real cause or origin of memories. Fever and hash-eesh excite indeed very remarkable resuscitations of past experiences; but still they can not be the only cause, through their effects on the brain, of these phenomena. There is such lack of correspondence or equivalence between the character of the cause and the character of the effect. Furthermore, only reminiscences or modes of mind appear in consciousness, processes or modes of the brain never. This striking difference in relation to consciousness seems to indicate a difference in existence. Finally, a very serious practical conclusion, which deserves notice here, would seem to follow from the identity between brain-process and memory which the materialistic psychologists are so eager to maintain; namely, that memory must share in the ultimate fortunes or disintegration of the brain. If this identity were true, we would seem to be forced to the admission, that the "conscious memory of man dies with his death." <sup>1</sup>

The extreme unlikeness between any thinkable brain-motions and memories, and the priority of the mind in knowledge, warrant not only the rejection of the doctrine of the materialistic generation of memories, but warrant also the denial of any real commixture of the cerebral and mental in memory; as, that retention is solely a function of the brain, and that recollection is mental, or in part, or on one side, mental. Memory in itself is wholly mental. The retention and the recall of past experience are wholly within mind. As we have already remarked, the original experience, the retention, and the recollection must be supposed to form a unitary continuous men-

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(1) Hering, *On Memory*, p. 27.

tal succession, to be the successive actions of the same identical agency. If there were not this unity, there would be no memory. The original experience has its corresponding physical change; the permanent retaining mental mode has its corresponding permanent physical change; recollection has its corresponding physical re-excitement; but the psychical events are not generated by the physical and are not mingled with them; they constitute a pure mental succession, part conscious, part unconscious. The same undivided agent must have the original experience, must retain it, and must recollect it. We shall hereafter find reason for the belief that the mind is as permanent as the brain, as capable therefore of conserving permanent modes as the brain, and of affording grounds in its permanent modes for recollections. Finally, especially the great unlikeness of cerebral motion and any act of memory favors the practical belief that a change is possible in the human being, by which memory may be wholly or partly liberated from its physical conditions, and to that extent exist and operate independently of them. Death may bring such a change; so that a man's memory perish not necessarily with the inevitable dissolution of his brain.

We now pass to some additional consideration of memory as one mode of knowledge, and comparison of it with other modes. Memory is a mediate or representative, not an immediate knowledge. It is a representative knowledge directly of past mental experiences only, not of events that were external to mind. External events are remembered by means of the remembrance of our perceptions of them. In the memory of a past external event, the remembering act is believed to represent a past knowledge,

which is believed to have represented an external event.

Something has been already said in comparison of consciousness and memory. Consciousness is knowledge of the present phenomena of mind, and is immediate. Memory is the knowledge of the past phenomena, and is mediate; it is a present representation of a past experience. There is no consciousness or immediate knowledge of the past. In memory there is indeed consciousness of the act of representation, but not of the past act represented. The representation is in consciousness, but the object of the representation, the past act, is outside.

It is important to discriminate memory as a mode of representative knowledge. How does it differ from the other primary mode of representative knowledge, namely, the knowledge of extra-mental objects? how, in brief, does the knowledge of the past differ from the knowledge of the external? At this point, before there has been any consideration of the cognition of the extra-mental, we can not go far in comparison of our mediate knowledge of the past with our mediate knowledge of the external. We observe here, especially, that, while memory is representative knowledge, it is not inferential knowledge, like our perception of the external. In the latter knowledge, the representing perception and the external object represented are existentially separate; and the conviction that the perception truly represents the external object is the result of a mode of reasoning or inference. The chasm between the subjective perception and the object is crossed by inference. But in memory, on the other hand, the representation and the past event represented are but successive modes of

the one mind; and stand therefore to each other in a close and peculiar relation. For this reason, the conviction that the representation resembles an event of our own past experience, is no product of reasoning; but arises in consciousness immediately, without the help or occasion of any reasoning whatever, and appears perfect from the first.

Memory as a mode of mediate knowledge is, then, *sui generis*. The interval between our past and present experience is not crossed by inference. Our knowledge or belief of the past, though a representation, is not the effect of any reasoning or synthesis; but is an immediate, spontaneous product, expression, revelation, of the special relation of the present act remembering and the past act remembered to the permanent identical mind, or to each other as its modes. The permanence of the mind, running right through, so to speak, the successive transitory experiences, is the foundation of the recognitive knowledge. Isolated successive experiences, having no relation to a unitary permanent agent, could never be known as successive or afford the knowledge of succession or time. But with all this, memory remains very much a mystery. We have no immediate knowledge of the relation which the present thought holds to the past through the intermediate stage of retention; and our belief of the past must be regarded as a primary and inexplicable fact of mind. There have been many attempts to demonstrate how the present mental mode becomes convinced of its hold upon a past mental mode; but these too often end in an intricate and confusing statement of the simple fact.



## COGNITION OF SUBJECTIVE TIME.

Memory gives directly the knowledge of subjective time, which is our first knowledge of time, and the foundation of all our knowledge of it. In the cognition of subjective time we attend especially to the measure of the remoteness of the past event which in recollection we are convinced we represent. The knowledge of time involves the primary mystery of memory. Cognition of the past is a present cognition: and the great enigma here is to understand how the present has apprehension of the past.

The views of Kant regarding the cognition and existence of time have long had wide influence. Kant holds that time has no existence outside or independent of our mind, but is wholly within mind. "Time . . . in itself, apart from the mind, is nothing."<sup>1</sup> He regards time as he regards space, as a "form" of sense "lying *a priori* in the mind." And he goes much further than this. Time is not only wholly subjective; but, as subjective, it is nothing but a phenomenon or illusion. It is no real property of mind, or real property or relation of the experiences of the mind; it is no ontological fact. As a phenomenon, it does not correspond to, or present, anything real in mind. The mind in itself is timeless. Its affections are not in reality in temporal arrangement; they have no real difference of present and past; they are simultaneous or coexistent or timeless. Accordingly, though time is said to be wholly subjective, it is yet as little a real property of mind, as it is of anything external to or distinct from mind. Kant makes time simply the mode in which the timeless mind arranges

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(1) *Kritik der reinen Vernunft*, Hartenstein, 1867, p. 68.

its timeless affections. Our affections, having in themselves no distinction of present and past, or being only coexistent, the mind causes them to appear in temporal order. In fine, the doctrine comes to this: time is but an appearance or illusion produced or created by the timeless mind; or it is a phenomenal form created by the mind for its affections.

The Kantian hypothesis in general is acceptable to many; but it seems to teach what is unwarrantable and impossible. In the first place, there is no sufficient reason for imputing any creative power to the mind, even as respects only phenomena or appearances. The mind has certainly remarkable and important synthetic or constructive power; but in all its constructive activity there is no proof of the creation of either a real or phenomenal quality or thing. The assumption that the timeless mind creates a phenomenal relation of its experiences, that is, the temporal, which is so contrary to their supposed real relation, which so misrepresents and conceals that relation, we may safely reject, until better evidence is brought to its support than the assertions furnished by the school of Kant. Subjective time, let it be in itself what it may, phenomenal or real, should not be regarded as a product of the mind's own synthesis or creation.

Again, there is no sufficient ground for believing in such a degree of severance or unlikeness and alienation between phenomena or thought and mental reality as is assumed by the Kantian theory of time. Time, duration or succession can not be only a phenomenon detached from mind, a form hovering in a timeless mind. We must assume a much closer rela-

tion and correspondence between the idea of time and the mental reality.

We seem to stand nearer facts and good reasons in holding that time is an original and real property of mind, and relation of its experiences, than in holding it to be only an appearance detached from and contrary to the real character of the mind and created by the mind. It is hard to believe that the idea of time, which is always present, and is so prominent and important in all our mental life, should be but an appearance entirely unlike the real, the real being timeless. Thought can not be so much an illusion, and so little a presentation of reality. We must contend that the idea of time can not exist in a timeless mind. The idea would be impossible, apart from real time. It is an appearance which has a real ground or corresponding reality. There would be no appearance if there were not the reality. Mind itself has time or is temporal; its affections are themselves really successive, or past and present; and the thought of time is only the expression of, and is inseparable from, the real.

To state a main point of our doctrine in a different form, it may be maintained that the idea of time is itself temporal; that the presenting thought possesses as its own property what it presents. This view does not require the conclusion that the thought of a time must be as long as the time thought of. Such a conclusion would be only less unreasonable than the assumption that the thought of time is a timeless thought. Certainly we can think of a very long time in a very short time. In a minute or two we can appreciate great periods of history, yea, even the immense cycles of geology and astronomy; but this

fact is entirely consistent with the thesis, that the thought of time is itself temporal.

While we deny that mind has a creative function as respects time, we must admit that it has a very important synthetic or constructive function. Our ideas of long times, times longer than our own experience or personal knowledge, are constructions of our intellect. But they are not formed out of timelessness or timeless elements. They are formed from ideas of short times; ultimately, from the primitive and simple ideas of time in which the presentation is as long as the time presented. There is indispensable synthesis, but no creation. A timeless activity does not produce time. Succession is not generated from a coexistent manifold. We end with long times, because we started with short ones as original and simple facts of experience and materials for synthesis.

After all that can be said of the perception of time, there will yet remain a great mystery regarding it, as there remains regarding memory. The mystery pertains not to the cognition of times longer than our life or personal experience; for this cognition, though a very remarkable fact, may be regarded as the result of synthesis. It pertains to our primitive and simple perceptions of time. These perceptions are of the intervals between the closely succeeding affections of our mind. The mystery is, How do we cognize, with a present affection of mind, a past affection of a particular length of antecedence? How are a present and a past affection combined in the unity of time, or known as terms of one succession? As to this profound fact, we can only assume, and this we seem obliged to assume, that it has its ground of possibility

in the permanence of the mind. The mind endures between the successive and transitory affections; and every primitive cognition of a time interval arises from the relation of the successive affections to the one permanent mind or from their relation to one another as its affections. The cognition may be regarded as a revelation or expression of the permanence of the mind between the successive phenomena. Relating mental events then in time or succession is not a productive process, but rather the passive experience of the permanent and identical mind.<sup>1</sup>

The measurement or estimation of subjective time is a matter of much interest and importance; but we can not go into it fully here. There are striking variations in our estimates of durations of the same real length. When the mind is absorbed in pleasure, it faintly notes time, and underestimates it. When suffering pain, it is inclined to overestimate time. Further, our estimation of a time is influenced by the multiplicity of our experiences within it. Great variety of experiences makes a time appear longer than otherwise it would. Such causes render our measurements of time variable to a degree; never-

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(1) Professor Green teaches a doctrine very different from this. He says: "The relation of events to each other as in time implies their equal presence to a subject which is not in time." "There is an absolute difference between change and the intelligent consciousness or knowledge of change." (*Proleg. to Ethics*, p. 55 and p. 58.) But there is no sufficient warrant for these unqualified assertions. Mental events are known as in time on the double ground of their own real succession and the real permanence of their subject. The knowledge of mental change could not exist apart from real change. The thought is possible only in the reality. Thought is inseparable from the reality and the same.

theless, the primary ground of the measurements of the time of our experiences are the real time intervals between them. Therefrom it results that the individual's measurements of time have a substantial uniformity, and, it may be added, that there is the general belief that we live in a uniformly progressing time.

## CHAPTER III.

### IS THE KNOWLEDGE OF THE MENTAL STATES RELATIVE?

It is a doctrine widely accepted by philosophers that difference or contrast is an indispensable condition of consciousness and knowledge; "that we only know anything, by knowing it as distinguished from something else; that all consciousness is of difference; that two objects are the smallest number required to constitute consciousness; that a thing is only seen to be what it is, by contrast with what it is not." This is one of the chief meanings of the much-used expression, "the relativity of knowledge."

This doctrine is affirmed of all knowledge — the knowledge of subjective things, the knowledge of objective things, the knowledge of subjective and objective. For example, it is said that an affection of mind can be known only in comparison with another or others; that subject and object, ego and non-ego, mind and matter, are known only as they stand in contrast with one another; that subject has no meaning and would not be known without object. We are now concerned with this doctrine in its application to the mental modes — with the question whether we cognize one mental mode only as we are conscious of its difference from another, or of its difference accompanied with resemblance.

A number of distinct points must be taken account of in the consideration of this subject; as, Does contrast or comparison always accompany the conscious-

ness of a mental state? Does it necessarily accompany? If necessarily, what kind or degree of it? How far is the knowledge of the individual state or term affected or modified by the comparison in which it is known?

That knowledge of the mental states can not take place without the perception of contrast and resemblance, and that it consists in this perception, is but the repetition and advancement of the principle of Locke, that "knowledge is the perception of the agreement or disagreement of two ideas." One thing must be granted to this view, that as a matter of fact all our cognitions do take place with comparison. This results at least from the great multiplicity and variety of the phenomena of which the mind by its internal nature is capable, and from their very rapid and numerous successions and coexistences. Every sensation or feeling is attended or quickly followed by others, and contrasts and agreements between simultaneous original modes, or between present original modes and the memories of past modes, may occur every second. Thus from the moment of the dawn of consciousness onward, because of the marvelously varied and rapid experiences of the mind, comparison among them is always possible, and is continually taking place.

But the contrasts and comparisons which manifestly may and do take place with all acts of knowledge or states of consciousness, owing to the wealth of the faculties and the circumstances of the mind, do not of themselves prove that they are necessary to knowledge, that consciousness can not exist without them, that consciousness of one sensation or mode of mind, without comparison with any other, is impos-



sible. The necessity of contrast, and the respect and measure in which it is necessary, can only be proved and determined by facts bearing positively on these points.

There are different species and measures of contrasts pertaining to the mental states. First, there is the simple contrast in the rise of an affection from non-existence into existence. Sir W. Hamilton says of this: "The first or simplest act of comparison is the discrimination of existence from non-existence; and the first or simplest judgment is the affirmation of existence, in other words, the denial of non-existence."<sup>1</sup> Secondly, besides the contrast of existence and non-existence, or of cessation and renewal, there is that of degrees of the same continuous affection. A third species of contrast is between qualitatively different affections, successive or simultaneous.

Of these modes of contrast, the first is hardly entitled to consideration in the discussion of consciousness; for, while the difference between existence and non-existence is very important to the existing thing itself, we may doubt whether it alone can awaken consciousness. The comparison of existence with non-existence is the comparison of something with nothing, or is really no comparison at all. There is but one thing present; and the absolute contrast or negation implied in pure non-existence hardly forms a real determination for consciousness. We hear, indeed, from some, that Being and Not-Being or Nothing are both different and the same. While this may be stated in a manner that may escape the charge of being sheer absurdity, yet, in fact, the only

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(1) *Metaphysics*, p. 465.

contrasts that really appear in knowledge, or at least in the awakening of consciousness and knowledge, are those among different somethings or modes, including different degrees.

Difference of degree in the mental affections gives us, if not different existences, yet at any rate different *existings*, and therefore something more than the contrast of existence and non-existence; and affords a real basis for comparison and discrimination. The difference of qualities is clearly a mutual determination. Now it seems necessary to admit that difference of degree or difference of quality not only always exists in consciousness, but is indispensable to it. Some well-known facts apparently prove that a uniform or unvarying sensation excites no consciousness or is unfelt: as, for example, our insensibility to the pressure of the air on the body, to the weight of the body, and to the contact of clothing. A sensation, as a sound, which was at first strange and striking, we cease to regard because of uniform continuousness. From such instances, it seems that the contrast or shock of differences in intensity and vividness is necessary to consciousness and the very beginning of knowledge. Degrees of intensity serve to define and individualize one another. In the absence of distinctness of qualities, one degree of an affection forms a limit or demarkation for another, and thereby makes definite thought of it possible.

Where difference of degree is wanting, difference of quality seems to be necessary. An unvarying affection is known only by being marked off from another or others. To say that an affection is *this* implies the ability to say it is not *that*. To know is to draw a definite line. An affection that has no limits,

that meets with or is confined by no distinct surrounding, or only by pure non-existence or nothingness, is unknown. The mind appears to awaken in the act of discriminating degrees or qualities. Always to think the same, is not to think.

So far the doctrine of relativity as to the knowledge of mental phenomena seems to be true. But many have gone beyond this into very erroneous extremes. Some have not only affirmed the necessity of comparison in knowledge, but have made the comparison everything, to the entire depreciation of the individual things compared. They hold that the knowledge of a mental state is dependent, as to content, as well as to possibility, upon the other states with which it is compared; that a mental state appears to be what it is by reason of its relation to others, or by reason of the others to which it is related, and has no independent or absolute character in consciousness. Comparison itself has been made expressly and in effect a source of knowledge, a productive or creative activity. Prof. A. Bain remarks: "I believe it correct to say, first, 'Along with whatever any intelligence knows, it must, as the ground or condition of its knowledge, have some cognizance of a quality in contrast to what is known.' It is the contrast that really determines what the knowledge is as well as makes it possible. To know light, we must know something else that affects the mind differently, as darkness. New contrasts give new knowledge. The naming of a quality gives us no information, unless we can find out the contrasts whereby it sprang up." <sup>1</sup> "Any single thing is unknowable by us; its relative

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(1) *Emotions and Will*, 2nd Ed., pp. 597, 598.

opposite is a part of its very existence.”<sup>1</sup> Substantially the same doctrine is a favorite one with the Hegelians. Says Prof. E. Caird: “‘Every finite thing is itself, and no other.’ True, Hegel would answer, but with a *caveat*. Every finite thing, by the fact that it is finite, has an essential relation to that which limits it, and thus it contains the principle of its destruction in itself. It is, therefore, in this sense, a self-contradictory existence, which at once is itself and its other — itself and not itself. It is at war with itself, and its very life-process is the process of its dissolution.”<sup>2</sup>

This doctrine of relativity has been applied alike to the intensity or degree, the special quality, and the time or duration, of sensations. Whatever a sensation is, in any of these properties, depends, we are told, on the sensations with which it is related. We must admit that, as to the intensity and vividness of sensations, there is a measure of truth in the doctrine. Some “phenomena of contrast” seem to make it clear that in many instances these attributes of sensations are determined by relation or comparison.

But what is true of the intensity of sensations, is not true, or to the same extent true, of their particular quality. There may be no consciousness of quality without contrast; nevertheless, quality has independence and constancy in contrast. Perfect or unqualified independence can not be claimed; but a very considerable degree can be, enough to make possible the identification of a sensation in very different relations. If this were not the case, the uniformity and

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(1) Note in *Mill's Analysis*, II., p. 12.

(2) *Hegel*, p. 136.

constancy which undoubtedly belong to the experience of the individual would seem to be impossible; and also the uniformity, constancy and sameness of experiences which are a first condition of all human association and fellowship. Sensations, then, we maintain, have an absolute content or quality. Though every act of consciousness or knowledge is some extent of comparison, still the affections compared have their independent and permanent character, — permanent, that is, in preserving uniformity in repetitions and diverse relations; the same sensations, in quality, are occasioned by the same nervous processes. If a sensation is known only in comparison with others, the others are known only in comparison with it; the determination or definition is reciprocal; and this reciprocity would seem to require independence of quality in the contrasted terms. In short, the necessity of change, or contrast, or comparison, to the beginning and to every degree of knowledge, does not require us to admit that absolute qualities and units or measures do not exist and can not be known as they exist.

Advocates of the extreme doctrine of relativity as to the knowledge of the special quality of sensations, impute great superiority to relations over the terms related; and, especially, in many cases, ascribe a productive or creative function to the relating activity of mind, to comparison, intellection, for which there is little warrant. Surely nothing is more important in a relation than the terms related. Without them the relation is nothing. Remove them and the relation collapses as a bridge when its abutments are washed away.

Generally superiority is reckoned to relations over the phenomena related, on the ground of the assumption that the relating action of mind is in an important measure generative or creative. The particular character of the terms related is said to be the product of the act of relating; and sometimes the relating and the character of the terms related are so distinguished from the producing action of the intellect, as that the former are called *product*, and the latter *process*. Here a productive power is reckoned to intellection similar to that which, as we saw in the preceding chapter, is by some reckoned to it in the rise of the thought of time or succession from the non-temporal or the coexistent. Professor Green says of intelligence: "It is through it that the sensation of the present moment takes a character from comparison with the sensation of a moment ago, and that the occurrence, consisting in the transition from one to the other, is presented to us. It is essential to the comparison and to the character which the sensations acquire from the comparison." "If there is such a thing as a connected experience of related objects, there must be operative in consciousness a unifying principle, which not only presents related objects to itself, but at once renders them objects and unites them in relation to each other by this act of presentation."<sup>1</sup>

The just importance of intellection in knowledge must not be neglected or denied; but so great productive or creative efficiency as the school of Professor Green attribute to it, is an unsupported assumption. We certainly have connected experience; and

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(1) *Prolegomena to Ethics*, p. 31 and p. 34.

the members of this experience may to an extent qualify one another. Further, there is certainly more in comparison than the mental states concerned taken as individuals. In comparison there is unity of consciousness: there is revealed the unity of the mind, or the ownership by the one mind of the different phenomena. There is real synthesis of phenomena. But we have no warrant for postulating creative intelligence for our combined experiences. Diverse sensations stand related to one another because they are affections of the one mind. In the knowledge of their relation, there is no special act of productive intellection. If they are simultaneous, they are simply embraced in the unity of consciousness. If they are successive, they are so in fact, and are so known, on the ground of the permanence of the mind; time being a real property of mental substance. What we know, is what is. There is no productive relating process. In our simplest relating of the mental phenomena, there is no difference of product and process. Different phenomena and the knowledge of their relation are inseparable. What exists is known, not because it is made by intellection, but because it exists. Above the simplest relating of phenomena, there is no doubt much synthesis and construction by the intellect, as in the formation of percepts; but no creation. The only creative intelligence is that of God; who made the mind of man and endowed it in its independence, so to speak, with all its faculties or permanent possibilities of varied affections and of comparing and synthesizing them.

We hold, then, particularly as to the special quality of sensations, that our knowledge is not a product of

the creative activity of our intelligence; in knowing, our intellect is active, but not creative. We hold, further, affirmatively, as to quality, that our knowledge is both relative and absolute. Our knowledge is relative; for a sensation is known only as finite, as limited, or with a relative affection; "to think it is to condition it." But our knowledge is also absolute; for a sensation, in its finiteness or in its relation, is itself and no other. The limiting or relative affection does not make it what it is, or make it essentially different from what it was. Dependence as to knowledge can not be construed to be dependence as to character. Hence, to say of an affection of mind, because of its relativity in consciousness, that it is made by that "which is not itself," or "it is itself and not itself," or "its relative opposite is part of its very existence," is to posit an extravagant and unwarrantable thesis.

What has been said as to the existence and knowledge of the distinctive quality of sensations, may, in substance, be repeated as to the existence and knowledge of the duration or time intervals of sensations. Our knowledge of the time of a sensation is relative, because we always know the time of a sensation, as of every other affection of mind, in comparison with the time of another or others. But our knowledge of the time of sensations is more than relative. It is both relative and absolute. The time of a sensation is real, not merely phenomenal; and our knowledge includes the knowledge of the real. Relativity does not exclude absoluteness. The latter may not be possible without the former; but it is not impossible with it.



But we must admit that our absolute knowledge of subjective times, or our knowledge of the real and independent length of subjective times, is not perfectly exact and unvarying. As has been already remarked, our judgments of times are often not strictly true to their real lengths. In some instances we think that our experiences are longer, in others that they are shorter, than they really are. All that can be claimed, then, is that our judgments or estimates are approximately true. This much may be maintained. It is the ground of the universal conviction that time is a uniform progression, and of the general uniformity and constancy of our estimates. In the measurement of the time of its experiences, the mind often calls to its aid, or relies upon, an objective standard or measurer, as the clock. But it is a very important fact, which should not be lost sight of (though it often is lost sight of), that the existence of the objective clock, as also its accuracy and trustworthiness, are known to us solely through the pure subjective affections or states. Hence, however important and however much employed are objective measurers, still the primary measurement of subjective time, and the foundation of all measurement of it, is the mind's own direct estimate. The mind's judgments of the times of its experiences, we have admitted, are not perfect in exactness and constancy; but they approximate the real; and their approximation is generally so close that we get along in our individual and social life nearly as well probably, in many of our interests, as we would if they were always strictly accurate and unvarying. We observe, finally, that, contrary to the view of the knowledge of subjective time here

expressed, many psychologists have held, on the ground, in part, of the variableness of our estimates of time, that the knowledge of time is only relative, and in no sense, or degree, or measure of approximation, absolute. This seems to be an error pregnant with very serious consequences.

## CHAPTER IV.

### CLASSIFICATION OF THE MENTAL STATES AND THEIR CHIEF COMPOSITIONS.

The consideration of the classification of the mental phenomena has importance here especially for the ascertainment of the elements and the chief structures of knowledge, and the delimitation of intelligence. The primary mental phenomena are the elementary materials of knowledge.

It has been common, since Kant, to divide the mental states into three grand classes, namely, those of Knowledge or Intellect, of Feeling, and of Will. Before this a twofold division was common, into the phenomena of Understanding and Will, the feelings being distributed under these. The threefold division, though at this time very generally accepted by psychologists, is yet far from being uniformly understood; and needs to be subjected to a renewed critical consideration and discussion, for the establishment of its real scientific value, and for the more definite and clear settlement of the lines of discrimination and limitation. There is especial need of careful and clear determination of the relation the intellectual states hold to the other classes. There is need also of marking the line between feeling or emotion and volition. It is manifest that many who accept the three divisions leave no real difference between emotion and volition, but make them essentially the same, or only stages in the same act.

The gravest defect of the above triple division is

its lack of strict logicalness. The terms of the division are not coordinate and mutually exclusive. Knowledge does not exclude feeling and willing. These latter are certainly modes of knowledge; they are states of consciousness or immediate knowledge. It should be here observed, that our knowledge consists of two great divisions, immediate and mediate knowledge, or rather the knowledge of the mind and the knowledge of things external to the mind. These divisions may be stated in another form, employing Locke's definitions of knowledge: part of our knowledge is the "perception of the agreement or disagreement of any of our ideas,"<sup>1</sup> and of the subject to which they are related; the other part is the knowledge or inference of the "conformity between our ideas"<sup>2</sup> and external realities. Now advocates of the triple classification of the mental phenomena are too much disposed on occasion to limit the term knowledge or cognition to the perception of things external, or to those states of mind which have a direct reference to the external. But no matter how direct and strong may be the reference of some states of mind to the external, still in themselves, and as including this reference, they are pure states of mind; and, therefore, the first and chief classification of them is based, not on their relation to the external, but on their relation to the other states of mind. Other modes of mind are as really facts of consciousness or immediate knowledge as they, and on this account they can not rightly alone be called knowledge.

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(1) Locke, *Essay*, IV., i. 1, 2.

(2) *Ib.*, IV., iv. 1, 3. Locke's definitions of knowledge are partial. Extending and combining them we obtain the full definition of knowledge.

The classification of the mental states which we have been considering is earnestly maintained by Sir W. Hamilton, and its currency among English-speaking people owes much to him. But his exposition, like that of others, makes it plain that a tangle is inevitable so long as knowledge is classed as coordinate with feeling and willing. Of the differential characteristics of cognition and feeling, Sir W. Hamilton says: "In the phaenomena of Cognition, consciousness distinguishes an object known from the subject knowing. This object may be of two kinds: it may either be the quality of something different from the ego; or it may be a modification of the ego or subject itself. In the former case, the object, which may be called for the sake of discrimination the *object-object*, is given as something different from the percipient subject. In the latter case, the object, which may be called the *subject-object*, is given as really identical with the conscious ego, but still consciousness distinguishes it, as an accident, from the ego; — as the subject of that accident, it projects, as it were, this subjective phaenomenon from itself, — views it at a distance, — in a word, objectifies it. This discrimination of self from self — this objectification — is the quality which constitutes the essential peculiarity of Cognition. In the phaenomena of Feeling, — the phaenomena of Pleasure and Pain, — on the contrary, consciousness does not place the mental modification or state before itself; it does not contemplate it apart, — as separate from itself, — but is, as it were, fused into one. The peculiarity of Feeling, therefore, is that there is nothing but what is subjectively subjective; there is no object different from self, — no objectification of any mode of self. We are, indeed,

able to constitute our states of pain and pleasure into objects of reflection, but in so far as they are objects of reflection, they are not feelings, but only reflex cognitions of feeling.”<sup>1</sup> It must, however, be held, on the contrary, that feelings and volitions are “subject-objects,” are known or distinguished in consciousness, as really, if not as vividly, as any so-called cognitive phenomena. They are objects of consciousness or internal knowledge. They are also “objects” of reflection or memory; but they would never be so if they had not been previously known in consciousness, that is, immediately and in themselves. Moreover, objectification or externalization of cognitions is wholly phenomenal, not real. Notwithstanding the apparent objectification, cognitions, as phenomena, in themselves, remain entirely subjective. No phenomena are more really and more fully pure subjective states. Sir W. Hamilton again distinguishes knowledge and feeling, perception and sensation, thus: “Perception is only a special kind of knowledge, and sensation only a special kind of feeling.”<sup>2</sup> But this distinction as thus stated can not hold: for the reason that sensation itself is a true mode of internal perception or knowledge. In such instances, Sir W. Hamilton arbitrarily limits the term knowledge to external knowledge. Rejecting therefore the above tripartite division of the mental phenomena, we proceed to the consideration of another.

The first and principal classification of the psychological phenomena grounds itself on the relations of these phenomena to one another, or on their internal

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(1) *Metaphysics*, pp. 571, 572.

(2) *Metaphysics*, p. 335.

resemblances and differences; and disregards their relations to things beyond the mind. As we classify external objects on their relations to one another without special regard to their relations to our mental states, so we may classify the mental states on their relations to one another without special regard to their relations to external objects.

There are three primary faculties of mind, namely, Sense, Emotion, and Will; or, there are three classes of primary mental phenomena, Sensations, Emotions, and Volitions. <sup>1</sup> These phenomena are alike original,

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(1) By faculties we mean functions, or rather distinct permanent potentialities or conditions, in the one mind, of phenomena. The fundamental cause of a sensation is not the external stimulus, but a potentiality, or power, or condition, in the mind itself. The external stimulus is only the occasion of a potentiality passing to actuality. The permanent potentiality or possibility in mind of sensation, may be called the faculty of sensation. In latter times, there has been much zealous opposition to "faculties." This opposition has arisen from several causes. In some instances it has been occasioned by mistake as to the meaning of those psychologists who have assumed faculties. They have been supposed to destroy the unity of the mind. It may be, however, that some writers have occasionally made faculties too independent of one another, or have isolated them too much, and have not put due stress on the unity of mind to which they are subject. Others have opposed faculties because of their assumption that there is but one primary form or type of mental activity, as sensation or sense-perception, and that the other phenomena, as feeling and volition, are but derivatives from it. "Sensations are the simple elements out of whose reciprocal action the totality of the rest of the soul's life is assumed to originate." They then deny that there are distinct original potentialities or powers in the indivisible mind corresponding to the apparent classes of phenomena. Again, others reject faculties because they deny the existence of a permanent mind. They regard the mental phenomena as only a continuous stream, having no relation to an abiding spiritual subject. It must be admitted that faculties stand or fall with the permanency of the mind.

underived. They have the same relation to consciousness and to memory; they are alike modes of consciousness, and are all conserved by memory. In emotions are included appetite, desire, fear, anger, love, joy, grief. In both sensations and emotions are included the pleasures and pains. The latter may be regarded as attributes of sensations and emotions, but not the essential or fundamental attributes. *Feeling* is a general name for sensations and emotions; *tone*, for the pleasures and pains. It should be remarked that, while the different kinds of mental phenomena are distinguishable, they are yet not separable. They are always related in consciousness, and known in their relations. As observed by Sir W. Hamilton, "we are able to distinguish as simple, by an ideal abstraction and analysis, what is never actually given except in composition."<sup>1</sup> It must never be lost sight of that, while it is important for purposes of science to distinguish the diverse modes and faculties of mind, all modes are but modes of the one mind, all faculties are but the different ways in which the one mind exerts itself, all relations of modes are based on the unity of the mind.

1. Sensations are easily discriminated in consciousness from the other primary mental phenomena. The difference between a sound or color, and fear, or desire, or volition, is perfectly clear and certain. But to define sensations with reference to the other phenomena and distinguish them as a class, they are states of mind that do not require, or are not conditioned by, antecedent states of mind. Unlike sensa-

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(1) *Metaphysics*, p. 281.



tions, the emotions and volitions are conditioned by preceding phenomena.

We have been taking sensations as simple affections of mind. But it is held by many psychologists that, though they appear as simple in consciousness, they are really composite. It is said of some apparently simple sensations that they must be composite, because their physical conditions or corresponding nervous processes are composite. To this, however, it may be replied that a sensation might be simple while its nervous condition was multiple.<sup>1</sup> Lotze observes on this question of the "chemistry of sensations": "After all our experience up to the present time it remains uncertain whether this intermingling into new resultants has not in all cases already taken place among the physical excitations in the nerve or in the central portions of the nervous system."<sup>2</sup> There seems to be no decisive argument derivable from the study of the sensations of hearing and of others, against our regarding as elementary the sensations that appear simple and unanalyzable in consciousness, even those of which the relative nervous processes are

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(1) Mr. H. Spencer thus conjectures of sensations, and of all other classes of mental affections: "There may be a single primordial element of consciousness, and the countless kinds of consciousness may be produced by the compounding of this element with itself and the recompounding of its compounds with one another in higher and higher degrees: so producing increased multiplicity, variety, and complexity." (*Psychology*, I., p. 150.) It is not evident that the best psychology will result from reading off the mental experiences, not according to the revelation of consciousness, but rather according to the supposed requirements of the elements, structure and action of the nervous organism, and from giving superiority to mediate knowledge over immediate.

(2) *Metaphysic* (Bosanquet), p. 458.

known to be complex; or against the assumption that epistemology may build safely upon these sensations as elementary or ultimate. It should yet be noted that the same simple sensation may have distinguishable attributes, as special quality, intensity, duration, and extension.

2. Emotions are a class of mental phenomena coordinate in originality with sensations. They are discriminable in consciousness in a clear manner from sensations. Nothing in the mind seems more certain than the difference between colors, touches, painful sensations, and anger, desire, fear. Emotions differ as a class from sensations, in being conditioned by preceding phenomena of mind. The rise of anger, fear, desire, requires the perception or representation of an object.

But with many writers nothing is more confidently disputed than the originality of the emotions. They hold them to be certainly derived or composite. It is maintained that the only original phenomena of mind are sensations, and that all others, including the emotions, are developed or composed from them. We read such declarations as, "Everything is in sensation," "Sensations are in soul-life what the elements are in chemistry."

One thing we must admit at once, namely, that the emotions follow sensations in the order of appearance. But this fact of sequence can not be regarded as conclusive proof of derivation. One affection of mind might precede and be the occasion of the rise of another, and yet not be its cause or generator. An affection of mind might follow and be excited by others, and yet have its real source or cause in a distinct

original mental condition or potency; and be coordinate in this respect with its antecedents.

There are various theories of the constitution and origin of the emotions. For instance, some contend that the emotions are identical with or arise from states of mind which, according to the common opinion, precede them. Others hold that they are identical with or composed of states or sensations which, according to the common opinion, follow them. Again, others combine these two views.

"The emotions," says Professor Bain, "as compared with the Sensations, are secondary, derived, or compound feelings." They are coalescences of "sensations and ideas."<sup>1</sup> For example, he declares that "the emotion of Terror originates in [is not merely excited by] the apprehension of coming evil."<sup>2</sup> Mr. H. Spencer holds that fear is essentially the memory of injuries. He says of fear and anger: "Every one can testify that the psychical state called fear consists of mental representations of certain painful results; and that the one called anger consists of mental representations of the actions and impressions which would occur while inflicting some kind of pain."<sup>3</sup>

Every one can testify, no doubt, that fear presupposes the memory of evil or painful results, that if there were no memory there would be no fear; but not that it consists of such memory. To testify that fear is the same as or consists of representations of painful results or coming evil, would be to misrepresent the facts of consciousness. Fear is a special vivid emotion clearly distinct in consciousness from

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(1) *Emotions and Will*, 2nd Ed., p. 35. (2) *Ib.*, p. 53.

(3) *Psychology*, I., p. 483.

the representation of pains. Though a very fitting sequent to, though a very close associate of, such representation, it is yet a different mode of experience. Further, it is conceivable that there might be representation of pains or pain-producing objects, without the faintest degree of fear. Though this representation and fear form a succession which is eminently fit, which is essential to complete life, yet fear does not seem to follow necessarily from the representation, as if it were involved in or composed by it. Memory might stop with itself, without being followed by the emotion. Fear, we contend, is a distinct advance on memory; it is something superadded; it is a new spontaneous variation of experience. To identify fear and the memory of pains is psychological confusion. The oneness of fear and the memory of painful sensations is supposed to be confirmed by the similarity, between fear and painful sensation, of bodily manifestation. So far as such similarity exists, it may result, in part at least, from the fact that fear often rises immediately upon painful sensation, being immediately concerned as to the continuance of it; and therefore may have an original share, with the sensation, in the outward expression, or become an associate in that expression.

What we have said here, with brevity, regarding the emotion of fear, is true, in substance, of desire. This emotion is not identical with the representation of pleasure-giving objects and the memory of pleasing sensations. It fitly follows these mental events, and would not follow if they had not preceded; but it does not consist of them, it is not gendered by them. Memory of the past might exist, it is conceivable,

without the least measure of this forward-looking emotion. Desire is an advance upon memory or representation; it is a new addition, a qualitatively different affection, rising from a cause in mind distinct from that of sensation.

Instead of identifying emotions, in whole or in part, with what are commonly thought to be states of mind antecedent to them, Professor James identifies them with sensations that are commonly thought to be subsequent. This acute and genial writer denies that emotion intervenes between percept or idea and bodily movement and is the immediate occasion of the latter; but claims that emotion follows the bodily movement, and is identical with the muscular and other organic sensations occasioned by the movement. "Our natural way," he says, "of thinking about these coarser emotions [grief, fear, rage] is that the mental perception of some fact excites the mental affection called the emotion, and that this latter state of mind gives rise to the bodily expression. My theory, on the contrary, is that *the bodily changes follow directly the perception of the exciting fact, and that our feeling of the same changes as they occur is the emotion. . . .* The more rational statement is that we feel sorry because we cry, angry because we strike, afraid because we tremble, and not that we cry, strike or tremble because we are sorry, angry, or fearful, as the case may be." <sup>1</sup> "*If we fancy some strong emotion, and then try to abstract from our consciousness of it all the feelings of its bodily symptoms, we find we have nothing left behind.*" <sup>2</sup>

Contrary to this paradoxical hypothesis, we feel

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(1) *Psychology*, II., pp. 449, 450. (2) *Ib.*, p. 451.

bound to stand for the common doctrine that emotion comes in between percept and bodily agitation as a specific and clear mode of experience, distinct from all muscular and visceral sensations that follow. This doctrine seems to be favored by the strictest introspection; and has considerable justification from the distraction of psychologists, some of these, as we see, confounding emotion with mental states that immediately precede and condition it, while others are confounding it with the states that immediately follow.

We must grant to the hypothesis that the close relation between emotion and physical changes is too evident to admit of doubt, and that the sensations accompanying the physical changes are often too little attended to, and have more importance in life than is usually allowed them. But, however significant are these facts, they do not justify the theory that physical changes follow directly upon perception, without the intervention of emotion, and emotion follows directly upon the physical changes.

It is supposed that the independence of emotion possessed by the bodily changes, and the dependence of emotion on them, are proved or supported by such facts as that we can take on an emotion by voluntarily imitating as far as possible the physical movements that accompany the emotion; and can repress an emotion by inhibiting these movements. These facts deserve regard; but they furnish no decisive support to the hypothesis. Mimicking the physical expression of an emotion brings on the emotion, not solely as its direct effect, but by raising and sustaining such ideas or representations as are the usual occasions or

conditions of the emotion. Again, inhibition of physical expression does not suppress an emotion solely by its direct action; for the inhibition involves opposition to or disapprobation towards the emotion itself, and this disapprobation operates directly as repression on the emotion. When expression is wholly unrestrained, the emotion is wholly unrestrained, no considerations of prudence, conscience or reason resisting it. Other facts, as, for instance, the tendency of wine and certain drugs to call up particular emotions, must be treated somewhat in the same manner. The emotions are not caused by, or made up of, the sensations excited by the bodily changes produced by the nutritive or other elements; but rather are excited by the thoughts and representations (these may often be but vague) called up and supported by the changes and sensations. It may be that emotions are occasionally and in part stimulated by the somatic changes and sensations, because of previous association with the emotions in instances where the latter were aroused directly by antecedent percepts or ideas.

Emotions and the organic sensations concur and become closely associated because of the fact that emotions do not rise to their culmination instantly, but gradually; and in their lower and weaker degrees induce physical changes and sensations which become their accompaniments and grow in strength with themselves. This near association may give plausibility to the derivative hypothesis we are considering; but it does not prove it. If we strive to think away the whole mass of organic sensations accompanying fear, the emotion still seems to remain as a specific

mode of experience. We may not refer the emotion definitely to a corporeal seat; but it seems yet to abide as an irreducible residuum. The same is true of the other primary emotions of which we have been treating. In moments of high passion, the organic sensations appear to be drowned by the passion. We conclude, therefore, in general, that the denial that emotion ordinarily enters as a distinct mode of mind between percepts and the bodily manifestation and becomes the direct occasion of this manifestation, must result from excentric inattention or obliviousness respecting a definite fact of consciousness, or from some such cause; or else it proves that there is a radical difference in the operations of different minds.

3. We pass now to a brief consideration of the Volitions, which are the third and last general class of the primary conscious mental states. Volitions, as the emotions, differ from sensations in being conditioned by antecedent states of mind. The antecedent states are representations of objects, results, or ends, and of the actions requisite to attain these; and also impulses pressing to action. The difference of emotion and volition from one another is a clear fact of introspection. Love, anger, grief, desire, are very unlike choice, resolution, or decision. As a class, volitions are conditioned by the emotions; and as a class, emotions condition volitions, but are not conditioned by them. There is no volition without appetite, passion, desire; but the latter may operate without having volition either as a direct antecedent or consequent.

One of the most important matters in the treatment of the will is to define its range. On this point



there are great differences among psychologists. Some make will coextensive with all action of mind. To it is reckoned all reflex, instinctive, imitative, automatic or spontaneous, movement of mind and body. The truth is that the range of will, though of very great significance, is rather narrow. During all life there is a great deal of the activity of mind and body that is not initiated or directed by the resolutions of the will. Volition proper is always conditioned by antecedent sensation, perception or representation; it is always purposive. A leading and general function of will is the effort of attention. It is a special fact of will, that a primary or cardinal decision controls a considerable extent and variety of action, and makes volition in many instances predictable.

The difference between the voluntary and involuntary action of mind is one of the most certain subjective contrasts, and is fundamental. But it is a difference that is often ignored or deemed unimportant or non-essential. This is a sign of the powerful drift of many psychologists towards a mechanical or fatalistic interpretation of human volition. Contrary to these, the difference must be held to be radical. It is the same as the difference between simple succession and succession with power or causation, which were so arbitrarily confounded by Hume; or as the difference between spontaneous and willed attention.

We have been assuming that volition is an independent and primordial or original phenomenon of mind, coordinate with sensation and emotion. But the originality and coordination of volition has been more hotly disputed than that of emotion. The negative doctrine has a ground of plausibility in the fact

that volition is conditioned by preceding states of mind, and is nearly associated with both preceding and succeeding states. It is concluded that volition is identical with, or but a derivative from, one or more of these conditioning and associate phenomena.

That volition is conditioned by antecedent states of mind is a primary fact which we have already fully admitted. There is no real volition without a representation of an object or end, and, especially in volition that relates to the external, of the action proper to reach the end. This is the primary conditioning state of volition. But with all its importance, it is yet not the cause, but only the occasion, of volition. The latter is not identical with it. A volition is a resolution, a decision, a fiat; the difference, the unlikeness, between it and representation is manifest. Again, volition is not a necessary issue from representation. There are often representations and percepts of desirable objects not followed by volition. We may easily not will to obtain a pleasing object which we clearly perceive. It must be maintained, therefore, that while volition does not and can not occur without antecedent cognition, and while it never goes beyond the range of such cognition, yet it is not the same as, or a necessary evolution from, the latter; but is an original mode of mental activity, having antecedent cognition as the primary occasion of its rise. In this wise the will is free, without being anarchical.

Another conditioning state for volition is emotion or emotional impulse. The mind in willing is always urged by some impulse, just as it is always led by some representation. But emotion is no more the cause of volition than is representation; it is only

an occasion or stimulus. Volition is not the same as emotion; but, as choice, decision, causation, is clearly distinguished from it. The difference between desire and the fiat that starts the movement to attain the object of desire, is a definite and certain fact to careful attention. Men in all ages have not been in error in asserting it. Further, volition is not a necessary outcome of emotion. It is indeed always preceded and influenced, but yet it is not necessitated, by emotion. There is no adequate evidence to show that volition must follow impulse, that it is included within or generated by the latter.

" 'Tis one thing to be tempted, Escalus,  
Another thing to fall."

When volition refuses to follow one impulse, it is, no doubt, stimulated, but it is not wholly determined, to the refusal by another impulse. When urged on different sides by different emotions, the will, or the mind in willing, possesses independent power of choice or determination, which it exercises in view of the objects set before it by perception and representation. We conclude, therefore, that when a full account is taken of the character and potency of emotion, volition is found to be a residual phenomenon, as really independent and original as emotion.

Latterly, many writers have contended that the muscular sensations are an important, if not the leading, factor in volition. It is said that volition consists of the idea of a movement combined with the muscular sensations, especially, attending the movement; that the idea and the sensations of the executed motion are all. In this manner many psychologists treat of volition, with volition left out. The importance of

the muscular sensations and their intimate relation with attention and volition must not be disregarded; but certainly there is a clear difference of character between volition and present or remembered muscular sensations, or them and the other sensations of motion associated with them. In real voluntary motion, between the thought of the motion and the sensations of the executive organs, volition, as conscious resolve, decision or causation, surely intervenes. To this we must adhere with the tenacity due a primary fact of mind.

The principal reasons for holding volition to be a primordial phenomenon of mind, distinct from sensation and emotion, are its clear unlikeness to and separation from them. This separation and manifest and considerable unlikeness peremptorily forbid the supposition that volition is identical with either, or with any combination, of the others, or is but a transformation or necessary issue or effect of them. A secondary reason of much importance is furnished by certain remarkable phenomena that closely associate themselves with volition; as the consciousness of freedom, and the feeling of guilt. It would seem that these phenomena should never arise, if volition were not a distinct, independent mode of the mind's energy or action.

The freedom of the will is by many emphatically denied;<sup>1</sup> the apparent consciousness of it is held to answer to nothing real in mind, but to be only a "sub-

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(1) ". . . There can not be any such thing as free will." (Spencer, *Psy.*, I., p. 503.) "Physiological Psychology acknowledges no freedom of will." (Ziehen, *Phys. Psychology*, p. 28.)

jective illusion." The illusion is by some supposed to arise from the mind's ignorance or forgetfulness of the antecedents and causes of its volitions. If this conjecture be true, then we would appear to be obliged to draw at least the significant practical conclusion, that all the higher moral and social life of the world, all administration of justice, is governed by a delusion.

But these assumptions are unreasonable. That the conviction of freedom should rise in mind, when in mind there is in reality only non-freedom or necessitation; that the conviction of guilt should rise where there is not the least real responsibility, or where an immoral choice is in fact impossible, is incredible. That these convictions should come into consciousness as delusions and lies, falsifying the real condition or facts of mind, and grossly deceiving us, must always seem impossible. This absurd sort of development, this instance of the rise of a thing out of its very opposite and contradiction, belongs to the same unreasonable and inadmissible class as the supposed development of the idea of time out of the timeless.

The only natural and just conclusion regarding the remarkable convictions of which we are treating is, that they are phenomena which truly answer to or express what in mind is real. This is their only sufficient ground, their only adequate reason. We have the consciousness of freedom, because the will actually exercises the power of alternative choice, is actually capable of causative agency, and is not subject to full determination by other modes of mind, or to internal mechanical necessitation. We have the feel-

ing of guilt, because the mind in instances really decides for a course of action when it could have and ought to have decided for a different one.<sup>1</sup> In short, these convictions require that volition should be a function of mind distinct from and independent of sensation and emotion. They corroborate the principle, that the difference between the voluntary and involuntary action of mind is fundamental and certain.

Sensations, emotions, and volitions, and the memories of them, are the elementary data of knowledge. All constructions of the intellect are formed from them. To adapt an old and familiar epistemological saying, there is nothing in intellection which was not before in sensation, emotion, or volition.

The great constructive function of mind, intellection, is properly considered as including only the higher grades of the mental comparison and elaboration. Comparison is coextensive with consciousness. Every act or phenomenon of mind is known only in relation with another or others. The simplest activity of the mind, then, implies comparison. But this simplest comparison and relating, as to quality and duration, is not intellection proper; but only the more complex and architectonic.

The great processes of intellection are Perception, Imagination, and Logical Thought; and its chief products, accordingly, are percepts, images, and logi-

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(1) Kant says that "if phenomena are things in themselves, there can be no freedom." (*Kritik d. r. V.*, p. 373.) But this is only one of his dogmatic assumptions. Phenomena at least truly correspond to and represent things in themselves. Mind or will is not an inexplicable mixture of reality and illusion.

cal concepts and judgments. Memory is involved in all intellection; it supplies the record of past experiences which are always employed. But though its service to intellection is of the highest importance, memory can not be properly regarded, as is done by some, as a faculty or function of intellect coordinate with perception and imagination. It is not a special constructive faculty like these. As we have already observed, memory is to be regarded rather as a general function of mind similar to consciousness. As consciousness is the knowledge of all present states of mind simple and composite, so memory is the knowledge of all past states of mind simple and composite. Accordingly, presentations and the representations of memory constitute the two main divisions of the most comprehensive classification of the mental phenomena.

As was just remarked, the sensations, emotions, and volitions, and the reproductions of them by memory, constitute the original data of intellection. All the three classes are employed by the different functions of the intellect. For instance, our full notion of a fellow-man, of his physical and mental attributes, which may be rightly called a *percept*, is constructed from our own experiences of these different kinds, which are taken as true representations of the experiences and attributes of the man. And these classes of phenomena supply the whole of the data of the intellect. They include all matter and form. The most elaborate intellectual formations contain, or employ no materials besides what are given with them. The intellect furnishes no matter or form from itself. It is not a creator, but only an architect; or it is only the advanced revelation of the unity and unifying power of the mind.





**PART II.**  
**COGNITION OF REAL MIND.**



## COGNITION OF REAL MIND.

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### CHAPTER I.

In now passing from the consideration of the cognition of the mental states to that of the cognition of real mind or the substance of mind, we enter upon what is probably the most important topic belonging to the science of knowledge. Great perplexity and conflict of views prevail regarding it. In the first place, there is the primary conflict as to whether there is a substance of mind. Some contend that no such thing as is commonly called mental substance exists; that the temporal series or the process of mental phenomena is itself the only mind and the whole of mind. Again, among those who hold to the existence of a mental substrate, there is the subordinate conflict as to the mode of its existence with reference to the mental states, and the mode of cognizing it. Some affirm that real mind exists, but is forever unknowable, or is known only inferentially or mediately through the mental states and merely as having existence, and not immediately or in consciousness; that we know only the phenomena of mind, but not real mind. Others hold that real mind is known in and with the phenomena or states of mind, immediately, in consciousness, — in inseparable association with phenomena, with the same directness and certainty.

The discussion of the cognition of real mind has been unnecessarily and disadvantageously confused

with that of the cognition of real matter. Many assume that mind and matter are, except as to the fact of bare existence, both alike unknowable; and that this fact of bare existence is known of both in the same way, with the same degree of directness and certainty, through phenomena. Others assume that mind and matter are both really known, and known with the same immediateness, in or with phenomena. These different assumptions are based, in the different cases, on anterior assumptions regarding the relations of phenomena to mind and matter.

The question of the relation of phenomena or ideas, especially sensations, to mind and matter is a fundamental question of philosophy, and is as old as philosophy. The differences regarding it, which continue as to important points to this day, are seen clearly in the diverse theories of perception. It is curious to observe the progression and gradation of views on this subject. In the earliest theories of knowledge ideas were considered as things distinct from the mind, passing from external objects into mind. Afterwards they were considered as standing in a more intimate relation to mind than to external things, the relation, however, being left indefinite, as in the teaching of Locke. Again, ideas have been held to be modifications of mind. Finally, ideas have been identified with mind. This doctrine of idealism and identity is more commonly expressed by saying that Thought and Being are the same, Being here including material or non-mental Being as well as mental. Thus theories range from the extreme of entire separation of ideas and mind, to the extreme of absolute identity.

It was above remarked that Locke's indefinite

and imperfect teaching on this subject is the most serious defect of his philosophy of mind. He distinctly asserts that thought is the action or operation, and not the essence, of the soul; but he makes no precise and positive statements in regard to the connection between them: how close thought is to the mind; how it proceeds from the mind, if it does, and stands with the mind; how it is in, or is an operation of, the mind. Philosophers, as is well known, have long been divided on the question whether Locke regarded the ideas of sensation, or sensations and perceptions, as entities in the mind, but different from it, or as states of mind, owing their constitution and character, but not their occasion, to the internal energies of the mind. He expressly refuses to call perceptions modifications of the mind.<sup>1</sup> His view of the relation of ideas to matter or external things is equally indefinite. Locke left the subject very much as he found it.

Kant, though he wrote a century later than Locke, is not a day in advance of him on this subject. His theory of knowledge appears to imply that bright phenomena and the sphere of consciousness are severed alike from real mind and real matter (the former alone being known, but mind and matter unknown), somewhat as the flame of a lamp suspended over the wick, or an ignis fatuus hovering over the bog where it was generated, or a luminous atmosphere surrounding a dark and unknown body; and by thus sundering thought and things, especially thought and mind, gave occasion for reaction to the opposite extreme of identifying thought and things.

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(1) *Exam. of P. Malebranche's Opinion*, Sect. 48.

As to our knowledge of mental and material substance, Locke remarks: "All our ideas of the several sorts of substances are nothing but collections of simple ideas, with a supposition of something to which they belong and in which they subsist; though of this supposed something we have no clear, distinct idea at all." <sup>1</sup> "The idea we have of spirit, compared with the idea we have of body, stands thus: the substance of spirits is unknown to us; and so is the substance of body equally unknown to us." <sup>2</sup> "Whenssoever we would proceed beyond these simple ideas we have from sensation and reflection, and dive further into the nature of things, we fall presently into darkness and obscurity, perplexedness and difficulties, and can discover nothing further but our own blindness and ignorance." <sup>3</sup> In the following passages, however, he affirms some inequality, making the knowledge of spirit more certain than the knowledge of body; that is, in case "existence" and "being," which Locke distinguishes from thinking, reasoning, pleasure and pain, are the same as "substance." "Every act of sensation, when duly considered, gives us an equal view of both parts of nature, the corporeal and spiritual. For whilst I know, by seeing or hearing, etc., that there is some corporeal being without me, the object of that sensation, I do more certainly know that there is some spiritual being within me that sees and hears." <sup>4</sup> "We have the knowledge of our own existence by intuition; of the existence of God by demonstration; and of other things by sensation. As for our own existence, we perceive it so plainly and so

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(1) *Essay*, II., xxiii. 37.

(2) *Ib.*, II., xxiii. 30.

(3) *Ib.*, II., xxiii. 32.

(4) *Ib.*, II., xxiii. 15.

certainly, that it neither needs nor is capable of any proof. For nothing can be more evident to us than our own existence; I think, I reason, I feel pleasure and pain — can any of these be more evident to me than my own existence? If I doubt of all other things, that very doubt makes me perceive my own existence, and will not suffer me to doubt of that. For if I know I feel pain, it is evident I have as certain perception of my own existence, as of the existence of the pain I feel; or if I know I doubt, I have as certain perception of the existence of the thing doubting, as of that thought which I call doubt. Experience, then, convinces us that we have an intuitive knowledge of our own existence, and an internal infallible perception that we are. In every act of sensation, reasoning, or thinking, we are conscious to ourselves of our own being; and, in this matter, come not short of the highest degree of certainty.”<sup>1</sup>

Kant affirms plainly and frequently the unknowableness of real mind and matter, in a manner like that of Locke in places; but differs from him in hinting that both realities may be of the same essence. Although, indeed, Locke held that the Deity might endow matter with the power of thought; that we “possibly shall never be able to know whether any mere material being thinks or no”;<sup>2</sup> and that, whether our own thinking substance “be a material or immaterial substance, can not be infallibly demonstrated from our ideas; though from them it may be proved that it is to the highest degree probable that it is immaterial.”<sup>3</sup> Kant says of external things:

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(1) *Essay*, IV., ix. See xi. 1-3.

(2) *Essay*. IV., iii. 6.

(3) *First Letter to the Bishop of Worcester*.

"Objects in themselves are not at all known to us, and what we call external objects are nothing but mere representations of our sensibility, whose form is space, but whose true correlate, *i. e.*, the thing in itself, is not at all known by them, nor can be known, but concerning which indeed there is never, in experience, any inquiry";<sup>1</sup> and of the soul: "The internal sense, by means of which the mind views itself or its internal state, gives, indeed, no perception of the soul itself as an object."<sup>2</sup> "The objects of experience as such, including our own subject, have only the value of *phenomena*, while at the same time things in themselves must be supposed as their basis. . . . *The thinking subject is to itself in internal intuition only a phenomenon.*"<sup>3</sup>

Regarding the sameness in nature of real mind and matter, Kant says: "The difficulty which has occasioned this problem [of explaining the community of the soul with the body] consists, as is well known, in the presupposed difference in nature between the object of the internal sense (the soul) and the objects of external senses, since the formal condition of the perception of the former is only time, of the perception of the latter also space. But if it be considered that both species of objects do not differ from one another internally, but only so far as one *appears* external to the other, consequently that what is the basis of the phenomena of matter as a thing in itself may perhaps not be so different, the difficulty vanishes."<sup>4</sup> "The transcendental object which is the basis of external phenomena, as also that which is the

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(1) *Kritik d. r. V.*, p. 64. (2) *Ib.*, p. 58. See p. 347.

(3) *Practical Reason* (Abbott), pp. 90, 91.

(4) *Kritik d. r. V.*, p. 289. See p. 611.



basis of internal intuition, is in itself neither matter nor a thinking being, but only a to us unknown ground of phenomena, from which we derive our empirical notions of either kind." <sup>1</sup>

Starting from the teachings of Locke and Berkeley regarding the loose relation of ideas to the mind, Hume advanced the theory that the only mind that is known and exists is merely the series of our ideas. This series has no relation to a mental substance or permanent subject; such a subject is not known and does not exist. He says: "What we call a *mind* is nothing but a heap or collection of different perceptions, united together by certain relations, and supposed, though falsely, to be endowed with a perfect simplicity and identity." <sup>2</sup> Again: "All our particular perceptions are different, and distinguished and separate from each other, and may be separately considered, and may exist separately, and have no need of anything to support their existence." <sup>3</sup> "Every distinct perception which enters into the composition of the mind, is a distinct existence, and is different, and distinguishable, and separable from every other perception, either contemporary or successive." <sup>4</sup>

There are two main principles in Hume's theory of mind: *First*, the bundle or series of perceptions that compose mind is a broken series, its terms "exist separately"; there is no junction or connecting medium among the terms, but apparently only absolute voids or breaks. *Secondly*, certain relations are known to exist between the separate terms, viz., the

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(1) *Kritik d. r. V.*, p. 604.

(2) *Phil. Works* (Treatise), I., p. 260.

(3) *Ib.*, p. 312.

(4) *Ib.*, p. 320.

relations of resemblance, nearness in time, nearness in space, and causation. But upon a little consideration it becomes quite evident that these principles contradict one another, that their discordancy destroys the theory. If the perceptions forming the mind be as "loose and separate" as they are represented to be, then the cognition of resemblance, contiguity, and causation is impossible; or, if this cognition is possible, the relations of the perceptions can not be as they are represented.

There can be no cognition of resemblance between the terms of the mind-series, if they exist separately. The severance of the terms, the absence of any "real connection" in the form either of mere medium or of substrate, means the absence of all ground of comparison. Resemblance, though it might exist, certainly could not be known. If consciousness could be in or of one sensation or perception, how could it embrace two? how could one term get and maintain hold of another, or how could one term perceive itself, or be perceived, as standing in relation to another, making comparison and the discovery of resemblance and difference possible? Again, there could be no cognition of the succession or time-relation of the mental terms. For, according to the hypothesis, the terms are separated, so to speak, by pure voids of time. Every term, therefore, must be always an entire stranger to every other term. No term can have any hold upon the preceding or following. There is no basis of communication. Further, nor could the relation of causation be known between the terms of the serial mind, even if it should exist. The terms are so loosely related, so stand apart from one another, that the transition of power or influence,

or any kind of action of one upon another, or constancy of succession, is made impossible, or at least unknowable. Because of the postulated separation of the perceptions or terms composing the mind, it is perfectly clear that Hume found himself compelled, in order to maintain at all the cognizable relations he assumes to exist among the terms, to bring in, under the title "imagination" and others, what is identical with the mental substrate he had refused.

Here it is of interest to notice the statement of Hume's theory of mind, and the extension given to it, by Mr. J. S. Mill. "If, therefore," says Mr. Mill, "we speak of the Mind as a series of feelings, we are obliged to complete the statement by calling it a series of feelings which is aware of itself as past and future; and we are reduced to the alternative of believing that the Mind, or Ego, is something different from any series of feelings, or possibilities of them, or of accepting the paradox, that something which *ex hypothesi* is but a series of feelings, can be aware of itself as a series." <sup>1</sup> To call the mind a series aware of itself as a series, is but a compact mode of stating the two grand principles, separation and union, of the doctrine of Hume; and the same contradiction is manifest. A series, properly so-called, can not be aware or conscious of itself as a series. A series cognizant of itself as a series plainly can not be only a series, but must be much more than a series. The character of mere series and the character of self-consciousness stand in direct opposition or exclude each other. A real temporal or spatial series is a line of distinct units. Now in such a line of sensations, feel-

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(1) *Exam. Hamilton*, I., pp. 261, 262.

ings, or ideas, if it were possible for one idea to know itself, how could it yet be possible for this term to know either the one that precedes or the one that follows it, or any of the remoter terms? How could it be possible for consciousness or knowledge to pervade the series, crossing the voids or breaks that separate the terms, and to bring about the unity of a series aware of itself as such? This pervasion and unification is inconceivable and impossible.

Mr. Mill, however, recognizes the difficulty here, and says with reference to it: "The true incomprehensibility perhaps is, that something which has ceased, or is not yet in existence, can still be, in a manner, present; that a series of feelings, the infinitely greater part of which is past or future, can be gathered up, as it were, into a single present conception, accompanied by a belief of reality."<sup>1</sup> He remarks again: "This succession of feelings, which I call my memory of the past, is that by which I distinguish my Self. Myself is the person who had that series of feelings, and I know nothing of myself, by direct knowledge, except that I had them. But there is a bond of some sort among all the parts of the series, which makes me say that they were feelings of a person who was the same person throughout, and a different person from those who had any of the parallel successions of feelings; and this bond to me constitutes my ego."<sup>2</sup> These last words are a considerable advance upon Hume, and seem not very far from the admission of a permanent mental subject.

In recent years, Hume's theory of mind, with some

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(1) *Exam. Hamilton*, I., p. 262.

(2) Note in *Mill's Analysis*, II., p. 175.

modification, has had a considerable revival, affording a striking testimony to the persistent influence of Hume in philosophy. Many psychologists of the present doubt and deny the existence of mental substance as zealously as did Hume; but differ from Hume in holding that the abstract or pure succession of phenomena or affections which constitute mind is not a broken succession, a succession of separately existing terms, but a closed or continuous succession, a process, a flow, or stream. Professor James says of mental substance: "*It is at all events needless for expressing the actual subjective phenomena of consciousness as they appear.* We have formulated them all without its aid, by the supposition of a stream of thoughts, each substantially different from the rest but cognitive of the rest, and 'appropriative' of each other's content." <sup>1</sup> And further: "My final conclusion, then, about the substantial Soul is that it explains nothing and guarantees nothing. Its successive thoughts are the only intelligible and verifiable things about it." <sup>2</sup> "The phenomena are enough, the passing Thought itself is the only *verifiable* thinker." <sup>3</sup> According to these declarations, the only mind cognizable, and entitled to recognition in science, is the continuous succession, or stream, of thoughts; but we are to understand that the whole of mind at any one moment is the passing thought with its capacious memory. This thought is a "perfectly distinct phenomenon" from any that preceded it. <sup>4</sup>

Our author observes that the only obscure point in his doctrine is the "act of appropriation." So far,

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(1) *Psychology*, I., p. 344. (2) *Ib.*, p. 350. (3) *Ib.*, p. 346.

(4) *Ib.*, p. 340.

at least, as this act consists in or implies remembering, it is indeed a difficulty of the most serious kind; in truth, it refutes the doctrine, for it is an act impossible to the supposed mind. Remembering may seem easier to the stream-mind than to Hume's discontinuous mind, because the former is one step nearer the character of the permanent mind; but it is really not so. Memory, or the knowledge of succession, is certainly impossible to the serial mind of Hume, because of the separation and incommunicability of its successive terms. All that can be known is the present passing perception. But memory would seem to be as certainly impossible to the stream-mind, in which the successive thoughts are connected or contiguous; all knowledge possible would seem to be only knowledge of the present as present. For, even if we should grant that a present thought may appropriate or possess the content of its predecessor, because of its close relation to it in the succession, yet there is no seeing why the present thought should think of any of its content as having been in the past, or as representing the past. The present thought being "perfectly distinct" from its predecessor, and being the whole of mind for the time, it is inconceivable that it should be capable of any thought or representation of the past. There remains for the theory of the stream-mind the insuperable task of showing how a succession or stream of "perishing thoughts" may know itself as a stream; how a member or section of the stream may know itself as a part of the stream; or how a thing that never had a past can recall or think of the past. The theory, in short, like the theory of Hume, goes to pieces on the problem of memory. This conclusion is entirely justifiable,

unless we should suppose that the brain can engender thoughts, and can, from its cells and established paths of molecular motion, impart to a thought memories of past thoughts. But this unmitigated materialism brings too much of the miraculous into psychology to be acceptable; and renders the term psychology a misnomer for brainology.

It is a curious phenomenon of recent psychology and deserves notice, that many writers, in the same breath in which they deny or express grave doubt of the permanent mind or mental substance, admit most unhesitatingly and fully the permanent and extended brain, without the slightest suspicion apparently that in the circumstances they are doing else than the most proper thing in the world. In stating the doctrine of parallelism, or the doctrine that every mental change has its corresponding nervous change, that the stream of thoughts is accompanied by a "stream of cerebral activity," it is assumed that the thought stream does not belong to and does not require a permanent mind, but that the cerebral stream belongs to and could not exist without the permanent cerebrum. The only entity concerned or connected with either or both streams is the permanent extended pure material brain. The assumption of the existence and clear knowledge of the permanent and extended brain immediately upon the denial or exclusion of the permanent mind, contradicts what seems to be a very important truth, namely, the priority of the mind in knowledge, and elevates mediate knowledge over immediate. Our nearest knowledge of any brain is by a percept composed chiefly of our visual, tactual and muscular sensations, which are pure states or phenomena of our mind. These states are the

medium of the knowledge of the brain, and are therefore known before the brain. Furthermore, as these sense-phenomena of mind are the medium of the knowledge of qualities of the brain, it would seem as certain that the permanence of the mind is the means and the only means of our knowledge of the permanence of the brain. There is warrant for believing it to be a fundamental principle of knowledge, that no quality of the brain or of any other object can be known, unless it can be represented by a mode or property of mind or by an ideal abstraction from a property of mind.

Influenced largely by Hume's denial of the existence, and Locke and Kant's denial of the knowableness, of mental substance, many psychologists are proposing to leave the consideration of mental substance altogether out of psychology, and to confine the science to the treatment of the pure detached succession of the mental phenomena, and of their relation to changes of the cerebral substance. They advise that the question of the existence and nature of mental substance be handed entirely over to "metaphysics." Under this proposal is sometimes, no doubt, the tacit belief, that there is no mental substance, and that the question of its existence may be relegated to any limbo. Different writers express themselves as follows: "Empirical psychology does not inquire into the ultimate nature of mind as an entity or 'substance,' or into the closely connected question of the metaphysical interpretation of the connexion of mind with a seeming heterogeneous substance, *viz.*, the bodily organism. At the same time, the study of the phenomena of mind naturally leads on to these meta-



physical questions." <sup>1</sup> "Whether mental facts find their ultimate basis in an independent mental substance or in the brain, the facts and the science of the facts remain the same." <sup>2</sup> "We employ the word mind only in the sense of consciousness, as a collective term for all our inner experiences (sensations, thoughts, feelings, and resolutions), and ask what guidance experience affords as to the connection of these experiences with those whose content is what moves in space. Our standpoint is thus, to begin with, purely *empirical* or *phenomenal*, not metaphysical or ontological." <sup>3</sup> "Psychology, the science of finite individual minds, assumes as its data (1) *thoughts and feelings*, and (2) a *physical world* in time and space with which they coexist and which (3) *they know*. . . . This book, assuming that thoughts and feelings exist and are vehicles of knowledge, thereupon contends that psychology when she has ascertained the empirical correlation of the various sorts of thought or feeling with definite conditions of the brain, can go no farther — can go no farther, that is, as a natural science. . . . I have therefore treated our passing thoughts as integers, and regarded the mere laws of their coexistence with brain states as the ultimate laws for our science." <sup>4</sup>

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(1) Sully, *Human Mind*, II., p. 366.

(2) Baldwin, *Psychology*, p. 1.

(3) Hoeffding, *Psychology*, p. 29.

(4) James, *Psychology*, I., pp. vi., vii.

Lotze thus gives utterance to the opposite doctrine: "It has been required of any theory which starts without presuppositions and from the basis of experience, that in the beginning it should speak only of sensations or ideas, without mentioning the soul to which, it is said, we hasten without justifica-

These writers, in urging the importance of admitting into psychology nothing of mind but the abstracted succession of the mental phenomena, are proposing something which they do not accomplish themselves, and which can not be accomplished. So often as, in psychology, they make the assumption, for instance, that a stream of perishing thoughts can know itself as a stream, or that one part of the stream can know another part as having been past, they are certainly assuming and employing much more of mind than the pure dirempted stream of thoughts, and something more than a permanent and remembering brain. Psychology never does and never can get on without taking account of mental permanence as well as of mental succession. These two facts are inseparable in knowledge, and are inseparable in science. Permanence is not separated from succession only as an inference from it. Furthermore, to many psychologists it must always seem anomalous to admit material substance into the science of mind and to exclude mental substance, or to admit the metaphysics of matter, and to exclude the metaphysics of mind. It would be somewhat different if only the stream of cerebral changes parallel to or concomitant with the mental changes were introduced, while all assumptions as to the existence of the cerebral substance, the permanent and extended cerebrum, were, as is proposed respecting mental substance, left out; but this is not done. Not only are the concomitant brain

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tion to ascribe them. I should maintain on the contrary, that such a mode of setting out involves a willful departure from that which is actually given in experience. A mere sensation without a subject is nowhere to be met with as a fact." (*Metaphysic*, p. 423.)

changes deemed proper to psychology, but the brain substance itself is brought in and treated in the freest and fullest manner. Those who believe in psychology with a soul as well as with a brain, will give proper regard to the laws regulating the relation of mental changes to physical changes; but they can not reconcile themselves to the proposition to admit only material substance into psychology, and altogether to shut out mental substance.

Leaving now the consideration of the close chain of doctrines, past and present, regarding the existence and cognition of mental substance, we proceed to the direct exposition of the nature of mental substance and the character of our knowledge of it. The first thing in order is to come to a clear understanding as to what is substance, and, especially, mental substance.

It may be proper here, by way of introduction, to notice one or two of the most notable definitions that have been given of substance. Spinoza defines it as follows: "Substance is that which has existence in itself and is conceived through itself, *i. e.*, that the conception of which does not need for its formation the conception of another thing." <sup>1</sup> Spinoza's definition seems more suitable to the divine being than to any other being. Some have defined substance as that which "has the power to act on something else, and to be acted on by something else." Interesting definitions of Being or Existence may also be mentioned. The following have been made: "Existence means nothing more than persistence"; and, "To be, is to act."

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(1) *Ethics*, I., Def. 3.

We can get to the definition of substance by way of the definition of being. Being or reality is that which has permanence and spatial extension. Mind, Matter, Space are species of being. Mind and Matter are properly denominated substances; for, in addition to permanence and extension, they possess activity or power. Space is a reality, but not a substance; for, though it is permanent and extended, it is not potent or active, it never resists us. If these statements are true, then definitions often given of substance are inadequate. For instance, it seems to be a great defect in much of the current metaphysic regarding matter, to make its being consist of force, or of permanent or persistent force, alone, and to ignore or deny its extension as an original property. Persistent force or action is certainly a property, and a very important property, of matter; but it is no more certainly a property of matter than extension. It is no more original and real to knowledge. To define matter as force, or a mode of force, and to deny or omit its extension, is to the extent of that great omission, a misrepresentation of the nature of matter. By no subtilty or contrivance can extension be resolved into force or into mere sequence. Matter is neither forceless extension nor extensionless force, but has both extension and force as distinct primary attributes.

Mind as a substance differs from matter by the very important property of personality; that is, by the fact that it is self-conscious, cognizant of other things, and self-controlling. Further, we must suppose that mental power or force is specifically different from material force. Mental causation and physical causation agree perfectly in the fact that neither is pure suc-

cession; that antecedent does not in either case simply precede consequent, but determines it. But the forces in the two causations are heterogeneous. The force in volition is one thing; the force in physical motion is another. Nevertheless, there appear to be very important relations between these forces.

Let us now pass to consider the nature of our knowledge of mental substance or real mind. A primary characteristic of this knowledge is that it is immediate, and not mediate or inferential. Real mind is known simultaneously and immediately with and in the mental states, modifications, phenomena, not subsequently to them and inferentially or mediately by them. This is possible because of the intimate relation between the states of mind and mind. States, ideas, phenomena, are not things detached from the mind, capable of floating into and out of it, but the modes and operations of the mind, inseparable from it. Because of this inseparability, phenomena can not be in consciousness and the mind itself outside. Phenomena become in consciousness, raising mind with them or themselves borne up by mind. When the light of consciousness is struck, both phenomena and the mind are revealed. The mind itself is to a depth transparent, so to speak; the light of consciousness penetrates it, and we immediately cognize it. Thought and thinker are given together and at once. They are inseparable in being or existence, and are inseparable in consciousness. Our discussion of the cognition of the mental states or phenomena before and apart from that of the cognition of real mind, has not therefore been because phenomena are known before or apart from real mind, or the latter apart from the former; but because of the expediency of the

analysis and the necessity made for it by the diversity of the theories of knowledge.

Contrary to this doctrine of the immediacy of the knowledge of mind, many realists and others have held that our knowledge of mind is mediate, that it is the result of inference or memory. Des Cartes seems to make our knowledge of mind inferential in his celebrated saying, *Cogito, ergo sum*. It is possible, however, that he did not mean his proposition to be understood as expressing an inference as much as it seems to do; but to be taken, rather, as identical with *Cogito, scilicet sum*—I think, that is to say I am; which appears to be a statement of the simple doctrine that thought and mental being are known together, and of the simple truth. Among late writers, Sir W. Hamilton remarks thus on the mediacy of our knowledge of mind: "There exists no intuitive or immediate knowledge of self as the absolute subject of thought, feeling, and desire, but, on the contrary, there is only possible a deduced, relative, and secondary knowledge of self, as the permanent basis of those transient modifications of which we are directly conscious." <sup>1</sup> Mr. J. S. Mill

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(1) Ed. of *Reid*, p. 929. The same writer says again: "The notion of the ego or self arises from the recognized permanence and identity of the thinking subject in contrast to the recognized succession and variety of its modifications. But this recognition is possible only through memory. The notion of self is, therefore, the result of memory." (*Metaphysics*, p. 142.) "Mind and matter, as known or knowable, are only two different series of phaenomena or qualities; mind and matter, as unknown and unknowable, are the two substances in which these two different series of phaenomena or qualities are supposed to inhere. The existence of an unknown substance is only an inference we are compelled to make, from the existence of known phaenomena." (*Ib.*, p. 97.) It should be noted that there are other statements of Sir W. Hamilton respecting the knowledge of self which are not consistent with these.

says: "The notion of a Self is, I apprehend, a consequence of Memory. There is no meaning in the word Ego or I, unless the I of to-day is also the I of yesterday; a permanent element which abides through a succession of feelings, and connects the feeling of each moment with the remembrance of previous feelings." <sup>1</sup>

These latter writers impute too much importance to memory in the knowledge of self or mind. We must admit, no doubt, that memory is necessary to our knowledge of the identity or permanence of the mind. The knowledge of permanence requires the knowledge of the present and of the past; and of the past we have no consciousness or immediate knowledge, but know it only by memory. Permanence, however, though a primary property of mind, is not the whole of mind; though contributing much to the full notion of mind, it does not form the whole of that notion. We know the one self as certainly in diverse simultaneous states of mind, as in diverse successive states; or our experiences of the former contribute as certainly to our knowledge of self, as our experiences of the latter. For example, we immediately know self as possessing power, in instances where volition and mental effect are simultaneous. We immediately know self as the one owner, in experiences of spatially separate simultaneous sensations. There is, as has been contended in a previous chapter, the possibility of consciousness, or of a contribution to consciousness, without memory; and so is there of a knowledge of self. Discrimination, we grant, is the condition of consciousness; but discrimination is not possible only through change or succession. It is possible with

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(1) Note in *Mill's Analysis*, I., p. 229.

difference; and difference may exist with simultaneous momentary affections. Consciousness may awaken in the discrimination of such affections; and self may at the same time be known as the one owner of the diverse affections. It would seem there is knowledge of self that precedes the knowledge of the permanence of self.

Some writers hold that our knowledge of real mind is entirely inferential, on the assumption that the mental phenomena are in some sort detached from mind so that phenomena can be known while mind is entirely unknown. They conclude, then, that we infer mind from phenomena, or reason from known phenomena to unknown mind. For example, we find Sir W. Hamilton saying that "the existence of an unknown substance is only an inference we are compelled to make from the existence of known phenomena." According to the extreme doctrine of Kant, phenomena are so separated from real mind or mind in itself that they are known while mind in itself is forever unknown; and, further, that phenomena not only do not present or represent properties of real mind, but misrepresent them, or directly contradict them. For instance, phenomena present time and extension; but real mind is supposed to be timeless and extensionless.

The assumption of such separation and contrariety between mental phenomena and real mind, can not be admitted as one grounded on facts. Phenomena are in immediate relation to mind. They are not detached appearances, but modes or modifications of mind, undetachable from mind. And this closeness of relation forbids that we shall be conscious or immediately cognizant of phenomena, and not know mind,



the one self and possessor of phenomena, or know it only as an inference from them; and certainly forbids that phenomena shall contradict the character of mind. Phenomena, called "operations" and "modifications" of mind, can not be sundered so far from mind as that they may be known, and mind itself be, at the same time, merely a "supposed something," or "unknown" and "unknowable"; or that thought may be in consciousness, and mind absolutely outside. We do not infer the existence of mind from the phenomena or states; we do not reason that, because we are conscious of simultaneous distinct affections, there must be a substance comprehending them; that, since we can control affections of self, there must be more of a cause than merely another state of mind, or than the preceding term of the series. We are conscious of the mind with its states, or of the states as inhering in the mind. Consciousness not only embraces phenomena, but also reaches down, so to speak, and takes in the substratum to which they belong. There is no interval of time, and no inference. Both state and substrate are grasped at once in the same mode of consciousness. The relation of thought and thinking substance is so close, the one is so much the cause of the other, the other so inheres in the one, as its quality, mode or action, that they both must appear in consciousness together, indissolubly in consciousness as they are in existence. Consciousness does not produce the mind; but the mind is known in consciousness. The mind exists before there is any consciousness, and is in no sense generated by it, but is simply known. Consciousness is itself rather generated by the internal action of the mind. The mind exists before it is awake to its existence: and when it awak-

ens in all its conscious states, nothing is added to its real existence or constitution; but only its potentialities, so to speak, are actualized. Locke's singular doctrine that "personal identity consists not in the identity of substance, but in the identity of consciousness," is plainly but a consequence of his view regarding the obscure and indirect cognition of substance; for he says: "Self is not determined by identity or diversity of substance, which it can not be sure of, but only by identity of consciousness." <sup>1</sup>

The character of our knowledge of mind as immediate will be made clearer by brief comparison of it with our knowledge of matter. We shall be helped in this comparison, if we first give attention for a moment to the general nature of phenomena. It has been long the leading view, as to phenomena, that there are two great classes, namely, the phenomena of the "internal sense," and the phenomena of the "external sense"; or the phenomena of mind or subject, and the phenomena of matter or object. But objection may be well made to the indiscriminate application of the term "phenomena" to the qualities of mind and the qualities of matter. Strictly speaking, there is but one class of phenomena, and that is the phenomena of mind, the pure modes of mind. These alone present themselves in consciousness, or come immediately before the eye of the mind; and are therefore alone properly called phenomena or appearances. Matter no doubt has its qualities as really as mind; but they are never phenomena strictly, never as the modes of the mind are. Furthermore, as the phenomena or modes of mind alone

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(1) *Essay*, II., xxvii. 19 and 23.

enter consciousness, all objects and qualities, all things whatsoever, separate from these modes, must be known by means of them.

The knowledge of real mind is a special kind of knowledge, unlike that of matter, because of the peculiar relation in which phenomena stand to mind. Phenomena proper, the conscious modes of mind, sensations, emotions, etc., hold a relation to the mind very different from their relation to matter. This point deserves more distinct and full consideration from psychologists than it commonly receives. The mental modes or phenomena belong to or inhere in mind, and not in matter. They are immediately related to mind, and are inseparable from it; but have no such connection with matter. Their relation to mind may be compared to the relation which a color (in the popular conception) holds to its rose; their relation to extra-mental things may be compared to the relation which the color of one rose holds to another rose. Or, the former is like the relation of an impression to the wax in which it is made; the latter, like the relation of the impression to the seal by which it was made. The difference between the relation of the mental phenomena to matter and their relation to mind, accordingly, is such that the question regarding the cognition and being of mental substance must be taken as quite different from that regarding the cognition and being of material substance.

It is because of inattention to this fundamental difference of relation that many have viewed Hume's skepticism concerning mind as if it were a logical development from Berkeley's skepticism concerning matter. There is manifestly no such connection between the conclusions of the two philosophers.

Skepticism concerning matter is one thing, and skepticism concerning mind is another thing; for the simple and sufficient reason, just given, that the relation phenomena hold to mind has no likeness to their relation to matter. All knowledge is in and with the mental phenomena; and it is clear that the knowledges of the two realities are of very diverse character, and that skepticism as to the remoter reality in no manner warrants skepticism as to the nearer. This Berkeley himself maintained. The other view, however, is consistent with Berkeley's notion regarding the relation of phenomena or ideas to the mind. He held ideas as capable of being entirely detached from the mind, so as that they could be successively the possessions of different minds; and gave them thus the character rather of distinct entities, than of modifications of an entity. The relation of ideas to the mind was made, accordingly, almost as loose as is their relation to external material objects.<sup>1</sup> On this theory of mind, Hume's denial of the existence of real mind is indeed but a natural sequence to Berkeley's denial of the existence of matter. Nevertheless, the denial of mental substance has no logical connection with the denial of material substance; because the relation of ideas, sensations, perceptions, to mind, is not that loose one apparently taught by Berkeley, is nothing like their relation to matter, but is altogether

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(1) "The things [ideas] perceived by sense may be termed external, with regard to their origin, in that they are not generated from within, by the mind itself, but imprinted by a spirit distinct from that which perceives them. Sensible objects may likewise be said to be without the mind, in another sense, namely, when they exist in some other mind. Thus when I shut my eyes, the things I saw may still exist, but it must be in another mind." (*Principles*, Sect. xc.)

different and closer. Ideas are the modes of the mind, not its transient possessions distinct from itself. They inhere in mind; are not entities, but the various modes of the mental entity, inseparable from it, but separate from material objects by a gulf serious enough in width.

Because of this significant difference of the relation of phenomena to mind and to matter, the knowledge of mind is evidently prior and immediate, while that of matter is secondary and relative or mediate. Sir W. Hamilton, accordingly, in his assertion, that the existence of an unknown substance is but an inference from the existence of known phenomena, expresses the truth regarding our knowledge of matter, but reverses the truth regarding our knowledge of mind. In our knowledge of mind, knowledge and being are one or inseparable — knowledge presents being; but in our knowledge of anything else, knowledge and being are separate — knowledge only represents being.

The doctrine of the priority and immediateness of our knowledge of mind, and of its contrast with the knowledge of matter as secondary and inferential, which we have been advocating above, has but little conformity with the views of many psychologists of both the monistic and dualistic parties. For instance, take the following statement of Mr. H. Spencer regarding the knowledge of mind and matter: "No effort of imagination enables us to think of a shock [in consciousness], however minute, except as undergone by an entity. We are compelled, therefore, to postulate a substance of Mind that is affected, before we can think of its affections. But we can form no notion of a substance of Mind absolutely divested of

attributes connoted by the word substance: and all such attributes are abstracted from our experiences of material phenomena. Expel from the conception of Mind every one of those attributes by which we distinguish an external something from an external nothing, and the conception of the mind becomes nothing. . . . We know nothing of cause save as manifested in existences we class as material — either our own bodies or surrounding things.”<sup>1</sup> There is much implied in this declaration, but we are now concerned only with its assertion that the knowledge of mind depends upon or is abstracted from the knowledge of matter. On this point it seems directly to oppose the truth. We have been maintaining above that, to speak with strictness, there are no “material,” but only mental, phenomena; that no molecule or mass of matter, no motion or quality of either, ever appears in consciousness; but only the pure qualities or states of mind. This should be regarded as a primary fact of mind. On the ground of it, all our knowledge of matter follows and depends upon our knowledge of mind; it is a knowledge deduced from our prior knowledge of the pure mental phenomena which the qualities of matter occasion through their impressions, and by which they are represented. For this reason we should hold that our knowledge of the attributes of matter is “abstracted” from the phenomena of mind, and not the reverse. We know, for example, the permanence of matter or of a material object, only by the similarity of the successive sensations or percepts which it excites in, and which are known as the affections of, the permanent mind; the permanent

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(1) *Psychology*, I., pp. 626, 627.

mind reasons that its successive affections are occasioned by a permanent object. And we know causation, or the determination of consequent by antecedent, as existing among material objects, through our knowledge of pure mental causation, which is experienced, for instance, in the voluntary direction of the attention, and which is our first knowledge of causation. It may be affirmed, therefore, in general, that, if our terminology should follow the order of knowledge, we should say, not that mind is immaterial, but that matter is non-mental. We know matter only by abstraction and negation from our knowledge of mind.

To those who call in question or deny the doctrine of the immediate knowledge of mind, a certain concession must yet be made; which is, that our immediate knowledge is not of the totality and perfection of mind. The conscious modes of mind are produced by the mind itself, are changes caused by its own internal activity and laws, and the mind is immanent, and is known, in these modes; but there are activities, conditions, peculiarities of internal organization, in mind, which are always out of consciousness and concealed. The possibility of this is implied in the pre-existence of mind to consciousness. If the mind has existence before consciousness, some of its activities and properties may never rise into consciousness.

The mind, as truly as the brain, is a reality before phenomena. It does not become a reality at the rise of phenomena. A fact worthy of note here is the ease with which the materialists postulate an unconscious brain as the antecedent and producer of the conscious phenomena. The rise of phenomena

marks the transition of the mind from a preceding state of unconsciousness. The declaration that the "soul is what it does," is an inadequate definition. The soul is something before its conscious action, and besides all its action. For example, its extension can be, by no means, resolved into mere action. But at the same time, mind exists and is revealed in the conscious modes or phenomena. Phenomena are not thrown off by the mind like sparks. There is no diremption. The mind continues immanent in phenomena. They pre-exist somehow as possibilities in the unconscious mind. The mind in some manner contains potentially all changes or affections that will come in time, and contains in memory, for reproduction, all affections that have been; and in the coming of conscious affections, the mind comes with them. But this marvelous change of the mind from unconsciousness to consciousness, — what its nature is, how it is effected, how the conscious exists *in posse* or implicit in the unconscious and comes to actuality, — is a problem that will never, probably, be solved by human intelligence.

Mind, we have said, is immanent in the conscious modes, but not in its wholeness. Thought is not coextensive with mind. But the question may well arise here, How come we to *know* that there are *unknown* properties of mind? What are the grounds for affirming that phenomena are in community or continuity with unconscious activity and organization of the same mind? And why should we not hold with Berkeley, that phenomena are introduced into the mind by a "governing Spirit," and are not generated or unfolded by unknown internal faculties and action of mind itself?



We know these properties mediately, by means in part of our voluntary command over the rise of phenomena. We can by will occasion affections of mind, and can greatly vary the production. For instance, by opening and closing the eyes, by moving the body or its organs, we can occasion the rise and repetition of various visual, tactual, and muscular sensations. But while we can bring about the rise of modes of mind at pleasure, we know at the same time that we do not, by our volition, create them. The volition and the sensation are known in most intimate relation, as modes of self, and modes of self which are occasion and occasioned; but the marked difference between the modes, and the contrast and relation between what we know we do, and what we know we do not, to produce the sense-mode, lead to the inference of a causal process or of properties below consciousness, but within the mind, as the needed origin of the difference. Memory also gives rise to the inference of unconscious mental conditions, or properties of internal constitution.

In general, according to the above considerations, while we have immediate knowledge of mind, this knowledge has two chief limitations or qualifications. First, part of our definite knowledge of mind, that is, the knowledge of its permanence, is not immediate, but mediate through memory. Secondly, our immediate knowledge of mind does not embrace the whole of mind. Besides what we know immediately of mind, and what we know mediately by memory, but not by inference, there are activities, and properties of the innermost organization of mind, which we can know only by inference or conjecture, as the hidden causes or conditions of conscious effects. This infer-

ential knowledge of mind, or our knowledge as respects the wholeness or perfection of the content of mind, is illustrated by our knowledge of matter. We certainly know definitely the permanence and extension of a material object; but of the ultimate elements, and innermost constitution, of the object, our knowledge as far as it goes is only conjectural or hypothetical. Something analogous to this is true of our knowledge of mind.

Hitherto the statements and argumentation as to the knowledge of real mind may have appeared to be, in part at least, somewhat general. Let us therefore now descend to consider with more particularity, yet briefly, what may be known of real mind. To begin then, we know mind as a temporal, causational, and spatial unit. In other words, we know (1) the time or permanence of the one mind, (2) its causation or power, and (3) its extension. These known properties are not mere forms of our thought; they, especially time and extension, are not mere *Erscheinungen*, appearances, directly contradictory, according to the Kantian "transcendental aesthetic," to real properties of mind; but present attributes of mind in itself; the conscious phenomena are the self-revelation of real mind. Because the mind possesses these properties, it is a substance; and in knowing these properties of mind, we know mind as a substance.

1. Our knowledge of the Permanence, identity, duration, time, of the mind is by memory. It is therefore, as already observed, not an immediate knowledge. Memory is not an immediate knowledge of the past, but an immediate knowledge of the present combined with representation and belief of the

past. A present experience is believed to represent a past experience. Our knowledge of the permanence of the mind is therefore, strictly, a composition of immediate and mediate knowledge, — the immediate knowledge of the present existence of the mind, given in that diversity of affections necessary for consciousness itself at any moment and in any mode, and the indissoluble belief in the past existence of the mind.

But though our knowledge of the past or permanence of the mind is mediate, it is not on that account in any degree inferential: it is not the result of reasoning, or a deduction of the unknown past from the known present. Our belief of the mind's past is a primitive and spontaneous conviction, which precedes and is entirely independent of reasoning. In this respect there is an ineradicable difference between the mediate knowledge of the mind and the mediate knowledge of an entity distinct from the mind. In the latter case there is a chasm between the knower and the object known, formed by a difference of nature or of number and space; but in the former, the present knower and the past known are identical. They are the same entity enduring from time to time, or through time. There is no difference of nature, number, or space; there is only the difference of two dates of the same thing. But if this is the only difference, it is yet one of the most notable experiences of the mind.

Apparently the only adequate or rational account that can be given of the belief in the mind's past is, not that it is the product of repeated inference, but is the expression of the fact that the mind had a past, and has endured in identity from the past to the present. The permanent mind forms the connection between

the represented mode and the representing mode, and makes the conviction possible and supports it. It measures the interval of time between the present and represented mode, and fixes the place of one past mode among other past modes. We are convinced that the present mode represents the past mode, because self existed at the time of the past mode, and exists now with the present mode, having endured through the interval. Its endurance is the ground of the representation, and of the conviction that the representation is true. Continuing from the actual existence of the past mode to the coming and consciousness of the present representation, it in a manner makes the past present, or brings the past to the present. In short, the ontological fact of having had a past is the basis of the mind's belief in its past.

Accordingly, while memory is our knowledge of the permanence of the mind, yet that permanence is itself the necessary condition or ground of the memory. If there were no permanence of mind there would be no thought or appearance of the past, of change, or of time. The reality is the necessary ground or cause of the thought or appearance. Without the former the latter would never occur. Phenomenon is inseparable from mental reality, and therefore conforms to reality and is the presentation of reality. Kant has said that "such properties as belong to things in themselves can never be given to us through the senses."<sup>1</sup> This unjustifiable and mischievous assumption, so far as it pertains to mind and to time, presupposes a gulf or severance between sense-phenomena and mind in itself which does not

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(1) *Kritik d. r. V.*, p. 68.

exist, and also a contrariety between the properties of phenomena and of mind which is impossible. Phenomena are inseparable from mind; they are modes or modifications of mind; and therefore necessarily present the properties of real mind, and not the opposite. We have the thought of time because time is an attribute of real mind. There could be no thought of the past if there had not been a past; or what never had a past can never think of or recall the past. Permanence of mind is the indispensable basis of memory, as also of habit and heredity; and to this may be added the observation, that it is as easy for the mind to be permanent as for it to think of permanence.

The only plausible alternative to this view of mind is the doctrine that the timeless mind or thought creates the phenomenon of time. The postulation of creative power for mind is at least a very convenient one; for it affords a ready resource in many perplexing questions regarding mind. But it lacks warrant. There is no real evidence that the mind ever exercises a creative function. The mind no doubt has remarkable constructive power. Out of original materials furnished, it forms many compositions. But the original, elementary materials themselves are not compounded or created. They are but presentations of real properties of mind or of what exists. Our notions of long times are intellectual compositions from our notions of short or elementary times, or are the ideal prolongations of elementary times; but the notions of elementary times, themselves simple or uncompounded, are the self-revelation of the real times, or portions of the real time, of the mind.

When, therefore, we have the thought of subjective permanence, duration, or time, we are cognizant,

not of a phenomenon which is detached from and is the direct opposite of the character of real mind, but of a property of real mind. Our thought is a mediate knowledge or belief, not an immediate knowledge; but it is a belief which owes its existence to the reality of the thing believed in or of the content of the belief, and would not occur and would not be possible without this basis in reality.

2. The mind is immediately cognizant of its power, in the control it manifestly exerts over its own states or modifications. The mind is cognizant of simultaneous and successive affections, both without the consciousness of power and with the consciousness of power; and the two experiences, with power, and without, are a primary and distinct difference. Often, we may say generally, our thoughts succeed one another and flow in a stream, independently of our volition according to the hidden laws and energies of the mind. But, on the other hand, the mind can of its will control the course of its thoughts to some extent, can change it, can excite in itself certain affections; and in this the mind is cognizant not only of succession, but also of power. It is conscious of exerting itself, and of the effect produced in itself by the exertion. The consciousness of the exertion and the effect is a perfectly clear experience, wholly distinct and easily distinguished from the notion of mere succession. This causation within the sphere of the mind, within consciousness, is the beginning of the notion of causation, and the basis of our whole conception and comprehension of it.

First, the mind has power to control the course of thought. In this control we are simultaneously conscious of active power and passive effect, of the exer-

tion enduring with its effect. This consciousness is universal. Though there are great differences among men in the degree of their subjective power, though well disciplined minds possess an extraordinary degree of it, yet the least disciplined possess some degree. Even in the simple act of writing a letter, there is a distinct direction of the course of thought, in the selection from the mass of our information of what is fit for the purpose of our writing, and in the rejection of what is unfit. But in the severe command of the trained thinker over his mental processes, in the rigorous confinement of his thought to a definite subject, in the resistance to the powerful tendencies of thought to run off and to escape close control, there is the exertion and consciousness of no little power.

Again, the mind has power over the emotions or passions. Every one has experience of effort to control or suppress, from a sense of prudence or a sense of duty, a rising passion, as anger; of yielding to or resisting urgent feelings. Power to do this is the backbone of moral character. It is the power every one does and must exert who would establish any moral command and discipline over himself.

But while the control of the mind over the course of its thought and over its feeling is plain, it is also plain, as already admitted, that the control is not all-embracing and entire. Every mental faculty over which the will exercises control is capable, by subjective laws, of action which is not controlled by the will. For example, memory may be commanded by the will so far at least as that it may be urged to get fuller hold upon an event which is imperfectly seized, or to more perfect recollection; but it often acts by the laws of association quite independently of volition.

The same may be said of imagination, discovery, and all application of mind. The creations of the imagination may be controlled somewhat by volition, but are often entirely automatic. The succession and combination of thought are determined by laws that the will frequently influences but little. There is thus within the pure activity of mind these two remarkable spheres of voluntary and involuntary activity limiting each other, the same faculty acting at one time under the direction of the will, at another time not, or only partly. The fact is much the same as with our corporeal activity. Some of the organs are under the command of the will, and some are not. Within both mind and body there is a line of demarkation between the voluntary and involuntary action. The sphere of the will is plainly bounded. This combination of the voluntary and involuntary, of the conscious and unconscious, in man, is one of the most striking phenomena of his nature. But notwithstanding the fact of the voluntary and involuntary with different faculties, and with the same faculty, the mind easily distinguishes between what is done or produced in consciousness by its own will, and what is not. The actions of the mind that are not produced or controlled by the will, or that persist in spite of the will, do not affect the reality of the voluntary actions. The limitations of the will do not destroy the significance of what the will does and what is known within these limitations. They serve rather by contrast to bring the volitional action out, to make it more distinct in consciousness.

Of our thought of subjective power or causation it is as true as of our thought of subjective time, that it is not a mere phenomenon or appearance standing



apart in a manner from real mind, and having no correspondence with a real property of mind. The thought must be regarded as but the presentation of a real process or fact of mind. The thought is inseparable from real mind and by necessity expresses a real property of mind. We are conscious of volition producing a mental effect, because real mind does act upon itself, or to an extent determines the succession of its states. If cause and effect were not a real connection in mind, or if causation were not a real function of mind, the appearance or thought of it would be forever impossible. The thought must correspond to, and not contradict, reality. It is dependent upon and inseparable from the real, and can only express or present the real. Therefore in knowing power or causation in mind, we know, not an appearance only, but a property of mind in itself.

3. The extension of the mind is a fact of immediate knowledge, given especially in the tactual and visual sensations. In a single moment of time, as in the light of an electric flash, without succession, memory, or inference, we are cognizant of extended sensation, and of extended mind. Distinguished men among later psychologists, as Ward, James, Kuelpe, earnestly maintain, against the derivatist theories of extension, that extension is an original attribute of sensation. Of course the substantialist will hold that, as the sense-modes are extended, the mind of which they are modes must be extended. It is as true of extension as of time, that the thought is but a presentation of the reality. We are conscious of extended sensations because extension is a property of real mind. If it were not so, such consciousness would never be. Because of the close relation of sen-

sation to mind, there is included, in the consciousness of the extension of a sensation, the consciousness of the extension of mind.

According to Kant's theory of space or extension, which has long ruled so widely in philosophy, extension, like time, is only a pure subjective form, a form of sense. The theory first denies that space or extended things have any existence outside the mind. Extension is nothing but a mode of the subjective thought. In the next place, the theory denies that mind in itself is extended, as firmly as it denies that anything outside mind is extended. Extension is only a phenomenon of the unextended mind. And the theory yet goes apparently a very important step beyond this. It assumes that the phenomenon, or the sense-form extension itself, is not extended. There is but the appearance of extension, where no real extension whatever, of the mind itself or phenomenon, exists. In this last important assumption, Kant seems only to repeat, in his peculiar phraseology, the doctrine of Berkeley, that extension is in the mind "not by way of mode or attribute, but only by way of idea."<sup>1</sup> Thus the Kantian theory of extension holds that no extended thing exists out of mind; that the mind itself is not extended; and that the subjective form or phenomenon of extension itself, which is the only extension in existence, is not really extended. The theory therefore ends with the absurdity, that the form of extension is an extensionless form. The fundamental assumption, however, of Kant's hypothesis seems to be that the unextended mind creates extension or the form of extension, and causes its sensa-

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(1) *Principles*, XLIX.

tions, which primitively, or in themselves, are absolutely unextended, to appear as extended.

Kant's doctrine of space and extension is as fantastic and unwarrantable as his doctrine of time. The severance which the "transcendental aesthetic" supposes between phenomenon and mental noumenon can not be admitted. There can not be an appearance of extension in consciousness standing off, so to speak, from the mind in itself, which latter is supposed to be unknowable. Phenomenon and noumenon are together, are inseparable; the appearance of extension must be an appearance of mind in itself. Further, the apparent extension of sensation can not be only an appearance or illusion, where there is no real extension; but is a real, genuine property of sensation. The subjective appearance or thought of extension is itself extended. Lotze, following Kant, argues thus: "Ideas, *ex parte nostra*, do not generally admit that what forms their content being predicated of them. The idea of Red is not itself red, nor that of choler choler, nor that of a curve curved. These instances make that clear and credible to us which in itself notwithstanding is most strange; the nature, namely, of every intellectual presentation, not itself to be that which is presented in it." <sup>1</sup> This doctrine can not be admitted to be true of the primary, permanent, constitutive attribute of extension. We are conscious of extended sensation, because the sensation, the consciousness, is itself actually extended. We must hold that the percept of a curve is itself really curved. The percept is itself, as to extension, what is presented in it. Moreover, the extension of sensa-

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(1) *Metaphysic*, p. 249.

tion or percept can only properly be regarded as an expression or presentation of the real permanent extension of mind; such sensation or percept occurs and is possible only because it has its basis and origin in this real property of mind. Kant has said: "Time and Space . . . do not present things in themselves." <sup>1</sup> If for Space we here substitute Extension, the statement, as far as it is applied to real mind, is the direct opposite of the truth. The presentation of extension would be impossible, if it were not immediately related to, and the immediate expression of, an attribute of mind in itself. At the last, it may be contended that it is as easy for the mind to be extended as to think of extension.

The chief rival of the doctrine that the apparent extension of sensations and percepts is real extension, and that it is a presentation of the extension of real mind, is the doctrine that the unextended mind creates extension or the form of extension, or produces it from elements that are in themselves absolutely unextended; and invests its unextended sense-experiences with this form, *i. e.*, causes them to appear as extended. As to the theory of creation, we must contend that it has no cause for existence in the defects of the other theory. Moreover, the postulate of creative power, or the function of creative synthesis, for mind, is itself unwarrantable. It is an open door for unlimited assumptions regarding the character and activity of mind; but, primarily, it attributes an efficiency to mind which mind does not possess. The mind is surely capable of synthesis; but not of creative synthesis. It can construct representations of exten-

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(1) *Kritik d. r. V.*, p. 70.

sions greater than that of the body, and of extensions immensely great; but in all such construction, it employs elementary extended experiences, whose extension is not created by the mind, or by any other agent, but has its ground in and is the expression of the permanent extension of real mind. That the mind can cause extension to appear where there is no real extension, must be regarded as an idle supposition.

We shall now proceed to consider one or more of the chief objections or arguments made against the theory that sensations and percepts are in themselves really extended and present the extension of the mental substance. The first to be noticed is the argument of some, that if percepts and the mind are in themselves extended, then the percept of a distance must be as long as the distance perceived; or, the mind can not perceive an extension greater than its own or the body's. "To introduce spatial qualities bodily into consciousness," says Prof. B. P. Bowne, ". . . would lead to such nonsense as that the thought of the distance of the earth from the sun is ninety-five millions of miles long." <sup>1</sup> Sir W. Hamilton has remarked: "To exist as extended is supposed necessary in order to think extension. But if this analogy held good, the sphere of ideal space which the mind can imagine, ought to be limited to the sphere of real space which the mind actually fills." <sup>2</sup>

The quaint inferences of these writers might have a show of justification, if the mind did not possess an intellect or a faculty of synthesis and construction. But no reasonable psychologist will dream of denying

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(1) *Theory of Thought and Knowledge*, p. 74.

(2) *Metaphysics*, p. 402.

such a faculty to mind. In this synthetic power, the mind has the complete ability to form, from its original experiences of very limited extensions, representations of very great extensions. There is no serious difficulty in understanding, as will be found when we come to the direct discussion of perception and the cognition of the external, how, by the cooperation of the senses, especially the tactual, muscular and visual, the mind can put together its primitive experiences of extension into the representation of a continuous extension a thousand times greater than any extension it directly cognizes: or how, on the basis of its narrow immediate knowledge of extension, it can construct the mediate knowledge of almost illimitable extension. The mind possesses the same power of synthesis and construction respecting the representation of extension, as it possesses respecting the representation of time and number. By this power we easily think or treat of times very much longer than the time of our experience or the length of our life. The thought of these long times is the ideal repetition and synthesis of the times we really experience. We can form the representation of, or we can handle in thought, numbers infinitely larger than any number we ever have actual experience of. This is done by the ideal addition or continuation, by a system of notation, of the numbers we have experienced. To think of great extension, on the basis of our very limited immediate experience of extension, has no more mystery, or more difficulty for the intellect, than to think of times longer than our life, or of numbers larger than we find in our personal experience. There is as little necessity for thought to be as extended as the greatest extension thought of, as for it to be as

long as the longest time thought of, or as numerous as the largest number thought of. <sup>1</sup>

The most important objection to the theory of the extended mind is the hypothesis that extension is incompatible with the unity of mind. Especially since the rise of Leibnitz and Kant, psychologists have often been asserting, "nothing in its own true existence can be extended," "an extended thing can not be a unit," "points are the only simple things." But these men seem to have been burdening themselves to some extent with factitious difficulties. We can not indeed say that the coexistence of extension and unity is easily intelligible; but there appears no real reason or necessity for denying it of all mental phenomena and mind. We have the clear and primary consciousness of extended unitary sensations.

The unity of the extended mind must be different from the so-called unity of a material object. Matter

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(1) Something slightly analogous to the propositions we have just been considering, is expressed by Professor James: "In some manner our consciousness is 'present' to everything with which it is in relation. I am *cognitively* present to Orion whenever I perceive that constellation, but I am not *dynamically* present there; I work no effects." "Cognitively its [the soul's] presence extends far beyond the body, and dynamically it does not extend beyond the brain." (*Psychology*, I., pp. 214, 215.) Idealists may have their own meaning in such a phrase as "to be cognitively present to Orion"; but the realist supposes the chief fact of our knowledge of Orion, stated very briefly and simply, is, not that our mind is in any sense present to Orion, but that a notion which has been propagated all the way from Orion makes an impression on our retina, and from the sensation so excited we infer the existence of Orion. We thus know mediately the most remote and extensive objects, without the mind's presence going in any sense whatever beyond the retina or the body. The intellect is fully equal to such extensive mediate knowledge.

is regarded as atomic, and its unity can only be such as its atomic character admits of. The extension of consciousness or sensation seems to require that the mind should be non-atomic in its structure; the spread or pervasiveness of consciousness demands a closer consistence than the atomic, or the absence of such breaks and transitions as an atomical constitution would imply. We can not, however, say that the Scholastic dictum, *Totum in toto, et totum in qualibet parte*, expresses the exact truth regarding the unity of mind; although it is, no doubt, right in its suggestion of a great difference between the spatial unity of mind and the spatial unity of matter. Extended consciousness can not be said certainly to require this extraordinary mode of unity. To affirm that no entity can have real spatial unity unless it have all its being in every part, is to close the question arbitrarily. We may suppose that, intermediate between this mode of unity and the unity of a material object, is a spatial unity that admits of absolute continuity of consciousness, or of perfectly continuous sensations occasioned by external extended objects that are atomic or discontinuous.

But the impossibility of explaining how extended unitary consciousness or sensation can exist, must still be admitted. This is a case where it is as impossible to show *how* a thing is, as it is impossible to deny *that* it is. The possibility of extended unitary sensations can not be denied, since they exist. They are primary facts of experience.

The assumption that an extended thing can not be a unit, is well met by the assumption that our unitary consciousness of extension could not exist unless an extended thing can be a unit. Unitary consciousness of extension requires unitary extension of con-



sciousness and mind. It is as impossible to explain the knowledge of discontinuity without continuity, as it is to explain the knowledge of continuity by discontinuity or by a single point. Of course, the spatial divisibility of the extended mind is always thinkable. While some then argue that, as spatial divisibility is thinkable, therefore it takes place, and the mind can not be a unit, we may argue with at least equal cogency to the contrary conclusion. Though divisibility of the extended mind is thinkable, division does not take place; and is impossible; and the extended mind is a unit. The former conclusion is the traditional one; but while tradition is generally entitled to our reverence, this is an instance where it enthralls by its prejudice. Since the mind is non-atomic or perfectly continuous, and actually indivisible, in its being, it is a unit.

Unity in space is no more difficult to understand than unity in time and in causation. Mind knows its identity through its changes in time; it embraces the past and the present in the unity of knowledge. Mind also embraces cause and effect in the unity of its being and of its knowledge. These facts are accepted as certain, though there is something in them that is inexplicable; but the fact that the mind knows unity in extension, is no less explicable and no less certain than they are. To compass successive events, whether associated with power or not, and to compass points separate in space, or to endure in time and to be extended in space, are two primary and coordinate possibilities and facts of mind.

Some of the most determined opposition to attributing extension to mind, arises from the powerful prejudice existing in many against supposing that mind and matter can possess a common property.

Extension, they say, is indeed a property of matter; but to assign it to mind is to materialize mind. This prejudice is a form or transformation of the old philosophical and theological doctrine that matter or body is the seat of evil, and that mind is confined, soiled, and degraded in association with body. It reveals itself also in the contempt sometimes heaped, by the most refined spiritualists and transcendentalists, upon mere sensation, as being something received from, or occasioned or shared by, the body. To attribute extension to mind is certainly to affirm so far that mind is like matter. But when all has been said, no just reason is produced why there may not exist, contrary to Spinoza, two substances, both possessing extension; and why mind may not possess both thought and extension in unity, or be *substantia extensa et cogitans*. If, however, either mind or matter must be regarded as extensionless, it had better be matter. <sup>1</sup>

(1) Professor Bain seems to involve himself in a singular contradiction when he affirms that object and subject, matter and mind, are but two sides of one substance, or of a "double-faced unity," (*Body and Mind*, pp. 196, 136, 134.) and that yet the one face is extended and the other unextended. We do not take the figure too literally in this case in denying the possibility of the unit's having one *face* extended and the other unextended. He says further: "This, then, as it appears to me, is the only real difficulty of the physical and mental relationship. There is an *alliance with matter*, with the object, or extended world; but the thing allied, *the mind proper*, has itself no extension, and can not be joined in local union." (*Ib.*, p. 136.) But if mind be as intimately connected, or form a unit, with nerve matter and currents, as Professor Bain holds; and if the nerve matter and currents be extended, as he affirms; then, contrary to what he affirms, must mind also be extended. The faces must both be either extended or unextended. The latter alternative is really more in harmony than any other view with Professor Bain's fundamental teaching regarding the nature and origin of the notion of extension.

Finally, while we seem quite justifiable in holding to extension as an immediately known property of the unitary mind, there are, however, certain important qualifications and admissions that must be made respecting the mind's experiences of its extension. In the first place, not all modes of mind are known as extended; but, chiefly, the tactual and retinal sensations. Many other modes, emotions, volitions, sensations, are not thought of either as extended, or as spatially outside and beside one another. It does not, however, necessarily follow from the real extension of the soul, that all its affections should be known, or known with the same definiteness, as extended. Certain conditions of the soul may admit of some sensations or affections being known as definitely extended, others as less definitely, and others as bearing no thought or consciousness of extension at all. There is one point that must be conceded by all, namely, that it is far easier to believe that some of the affections of an extended mind can be known as unextended, than to believe that any affection of an unextended mind can ever be known or appear as extended.

Again, we have not definite and full knowledge of the place or region in the body occupied by the mind. The mind certainly does not extend beyond the body; but precise knowledge of its seat and bounds within the body we can not claim. It is certainly present in the brain. It seems to be present in the tactual and retinal expanses. We definitely localize extended sensations in the tactual surface. The prevalent theory, that all localization of sensations in this surface is only phenomenal projection of sensations from the brain, a theory which we shall consider hereafter, can not be substantiated.

## CHAPTER II.

### IS THE KNOWLEDGE OF REAL MIND RELATIVE?

We now come to consider the same question regarding Real Mind which we have already considered regarding mental phenomena, namely, whether our knowledge is relative. It is common to join phenomena and the mind in the discussion of the question of relativity, as if the question were just the same in regard to both. This is a serious error. It is the confusion of two quite distinct problems. Whether one affection or phenomenon of mind can be known out of contrast with another or others, and whether real mind can be known out of contrast with another entity, are questions that can not be answered in the same way, and should not be mixed in discussion.

It is the doctrine of many that the knowledge of mind is as certainly relative as that of the affections of mind; that just as an affection or mode of mind can be known only in comparison with another or others, in which resemblance and difference are perceived, so Real Mind, Subject, Ego, Self, can be known only in comparison with Matter, Object, non-Ego, not-Self; that the knowledge of opposites is one; that when we posit Me or Self we do it only because we at the same time posit the not-Me or the not-Self; that either is known only because it stands in comparison and contrast with the other.

It has been granted above that the knowledge of mental affections is relative. Facts seem to require us to admit that change, or rather difference, is neces-

sary to the awakening of consciousness. The light of the mind appears to be kindled by diverse modifications, as the spark is struck out by the collision of steel and flint. While admitting this view, I have, however, contended against the assumption often made from it, that the individual modes compared have no permanent and independent character; that they derive their character wholly in and from comparison. This assumption is capricious and groundless.

But as to the knowledge of real mind, it can not be granted that it is relative — relative, that is, not simply to the knowledge of its own modifications, but to the knowledge of another distinct entity. There can be no question that we are constantly thinking of mind and matter together; that we very often compare them and set them in opposition; but yet the comparison is not necessary to the knowledge of mind. We know mind in comparison with not-mind; yet the knowledge of mind does not necessarily derive all from the comparison. We may know mind, in comparison, in its independent and permanent character, distinguishing it from not-mind. We may know mind without any comparison at all with not-mind.

The knowledge of mind is possible in the comparison of its pure states, qualities, phenomena among themselves, without any other, or objective, comparison. We are conscious of the mental states as we compare them with one another and discern their likenesses and differences. The contrasts among the mental qualities themselves are entirely sufficient for the consciousness of these qualities, without any additional contrasting of them with qualities not men-

tal. Now, in that comparison of the pure qualities or modes of mind in which we become conscious of them, we also become conscious of real mind. Whatever is sufficient to excite the consciousness of the mental modes is sufficient to excite the consciousness of mind. Both arise together. As soon as we are conscious of the mental modes, we are conscious of mind or self as possessing them in unity; and even the so-called "passive" modes are sufficient for this experience. The mind contrasts its diverse affections with one another, and knows them as they resemble and differ. Again, the mind contrasts its affections with itself; them as modes, acts, doings, with itself as possessor, agent, doer; them as changing and passing states, with itself as the permanent entity to which they belong. All is subjective, requiring no reference to the objective, quality or entity, although admitting it. To pass on, as some do, from the contrast of mental affections as necessary to consciousness, to the assumption of the contrast of mind with an opposing entity, as also necessary, is but the idle following out of a system of imaginary contrarieties. If the question yet be asked, how is it possible for a thing to know itself? how can the mind be at the same time both subject and subject-object? I answer, the consciousness of the mental affections and of mind itself, amidst the comparison and diversities of the affections, is a simple, primary, inexplicable fact, and can be opposed only by facts less certain than itself. Those who ask this question do it often on the tacit assumption that it is easier to understand how the mind can know an entity distinct from itself, than know itself; that the mind can better reach beyond and grasp or be conscious of something out-

side and different from itself, than be conscious simply of itself. But no one has ever shown why this should be; why introversion or introspection should not be at least as easy as, if not easier than, and also independent of, supervision and the seizure of the extra-mental. This is not the only unwarranted assumption in the psychology of many at the present supported by determined iteration.

The possibility of knowing mind apart from matter is fully implied in the general principle, considered in the last chapter, that the relation of the mind to the cognitive modes is very different from the relation of anything really objective, as matter or another person, to these modes. The cognitive modes are the modes or phenomena of mind; and this great difference of relation manifestly makes it possible for mind to know itself in its own diverse phenomena, without necessarily deriving any help for self-knowledge from the relation which its phenomena may hold to anything extra-mental.

While contending for the possibility and actuality of knowing mind independently of any other entity, I have yet admitted that mind is very often thought of in relation to objective or extra-mental things. This relation is frequently the most prominent or marked fact in the cognition of mind. Properly speaking, the knowledge of mind in its relation to the extra-mental is a second and higher stage in our knowledge of mind. In the rapid advance of our knowledge of the external from our first perceptions, and because of the importance of this knowledge, the contrast of mind and the external soon becomes a positive and permanent matter of experience; and we have many sets of correlative terms to express it, as ego and non-

ego, self and not-self, subject and object, etc. Now the great error of psychologists who deny the independent knowledge of mind is, that they carry the results and fuller content or significance of this second stage of the knowledge of mind back to the first stage, and insist that because the relation of mind to the external, of the me to the not-me, becomes so clear, marked, and certain, knowledge of this relation must have formed part of our first consciousness of mind, that mind or subject is never and can not be known apart from matter or object. The fact is, the not-self or the non-ego is known after the self or ego, and named negatively from it. Mind is first known in itself, and afterwards as having a correlative in matter. <sup>1</sup>

We must not, however, forget the fundamental fact that, though mind and matter are known simultaneously in comparison, our knowledges of the two are always essentially different. Mind is known immediately, because it stands in immediate relation to the acts of knowing. Matter or not-mind is not known immediately, because it does not stand in immediate relation to the acts of knowing. These acts are the properties or modes of mind; they are

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(1) Dr. Mansel says: "The first testimony of consciousness is to the distinct existence of *self* and *not-self*, — of the conscious subject and of the object of which he is conscious." (*Letters, Lectures and Reviews*, p. 210.) The fact seems to be rather that the first testimony of consciousness is to the distinction of different modes of self and to self as the one possessor of the modes. The knowledge of anything really different from self is later.

Professor Ferrier holds that "object *plus* subject is the *minimum scibile per se*." (*Institutes of Metaphysic*, p. 110.) If the "object" be a mode of mind, this is true. If the "object" be something separate from mind, it is not true.



not of matter. Mind is known in its own modes; matter is known through the modes of mind. Accordingly, while mind and matter are known together, even by the same act, the knowledge of the former is immediate, and that of the latter mediate; the former is in consciousness, the latter is outside; and the knowledge of mind being more direct, may for that reason exist without the knowledge of matter, though the knowledge of matter can not exist without that of mind. The dictum that subject could not be known without object, nor object without subject, has all the merit and all the demerit of a half-truth. Object can not indeed be known without subject, because it is known only through the conscious modes of subject; but Subject, though it can not be known as a relative without the knowledge of its correlative, yet as mind, in its independent character, it can be known apart from the knowledge of object, because it is known, not through the modes of object, but immediately in its own modes.

The doctrine of the independent knowledge of subject or mind, as above set forth, is confirmed by some of the chief forms and defences of the opposite doctrine. Many who most earnestly contend that mind and matter, or subject and object, are and can be known only in contrast with one another, make, in fact, both subject and object internal or subjective, regard them both as in the mind, or as modes, aspects, pulses, or parts of the same reality — mind.

There are somewhat different modes of drawing the line between subject and object within mind. Professor Bain, for instance, assigns especially our muscular or active experiences to object, and our passive experiences, as the tactual sensations, to sub-

ject. First, he remarks of the distinction of subject and object as being a distinction of things wholly within mind: "The totality of our mental life is made up of two kinds of consciousness — the Object consciousness and the Subject consciousness. The first is our external world, our *non-ego*; the second is our *ego*, or mind proper. It is quite true that the object consciousness which we call Externality, is still a mode of self in the most comprehensive sense, but not in the usual restricted sense of 'self' and 'mind,' which are names for the subject, to the exclusion of the object." <sup>1</sup> Here, plainly, the external world and mind are both made purely subjective, but modes of what is commonly and properly called mind. The position becomes yet more plain by the express manner in which Professor Bain denies the existence of matter, and implicitly everything else external to and independent of the mind. "Knowledge," he says, "means a state of mind; the notion of material things is a mental fact. We are incapable even of discussing the existence of an independent material world; the very act is a contradiction." <sup>2</sup> "Of matter as independent of our feeling of resistance, we can have no conception; the rising up of this feeling within us amounts to everything that we mean by resisting matter. We are not at liberty to say, without incurring contradiction, that our feeling of expended energy is one thing, and a resisting material world another and a different thing; that other and different thing is by us wholly unthinkable." <sup>3</sup> Next, of the difference between Subject and Object considered as different modes of one

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(1) *Senses and Intellect*, p. 378.

(2) *Ib.*, p. 375.

(3) *Mental Science*, p. 199.

reality: "The contrast of subject and object," says Professor Bain, "springs originally from the contrast of movement and passive sensation. The impressions that we call feelings of movement, or active energy put forth, are recognized by us as different from the impressions of passive sensation; and through this difference a light, so to speak, is struck up in the mind, an effect of knowing is produced in the transition made, or the comparison instituted." <sup>1</sup> "We live a double life, of object states and of subject states. The *sentiens*, or the mind that feels, is one portion of the totality of our being; the *sensum*, the thing felt, is the alternative or contrasting portion of our being, the attitude of putting forth actual energy. The validity of the contrast does not require that we should be both subject and object in the same instant." <sup>2</sup>

Whether subject and object, mind and matter, are entirely within mind, are but parts of mind, and whether there is no existence or object outside and independent of mind, is a question that manifestly depends for its complete answer upon the doctrine of external perception. The discussion of that doctrine can not be entered upon here; at the proper place it will receive the attention its importance deserves. I would merely remark of the above mode of distinguishing subject and object, that it is opposed by very weighty considerations. The muscular feelings, in themselves, are in reality as purely subjective as any of the so-called passive feelings whatsoever. They come to form, it is true, an important part of our notions of external realities, and have an immediate

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(1) *Emotions and Will*, pp. 593, 594.

(2) *Senses and Intellect*, p. 382.

reference to such realities; but that, notwithstanding this reference, they are not in themselves as subjective as the most passive sensations, is not proved, and that they constitute these notions to the extent Professor Bain supposes, is untenable, in fact, and untenable on his own primary assumptions. The muscular feelings are taken as being, originally, pure time feelings, or as forming, originally, only pure time series, and not spatial series. The ingenious trifling by which Professor Bain endeavors, as others, to deduce our notions of space, externality, extension and matter, chiefly from these pure time experiences, I have treated of elsewhere and characterized in proper terms. To endeavor, in addition, to maintain that the muscular feelings constitute, not only our notions of space and matter, but space and matter themselves, is but a farther step on the road of inconclusiveness. The theory in no measure answers that just and cardinal question, How, from pure temporal, spatially unextended, subjective experiences, can our notions of space and of extended external objects arise? Idealists from Kant to the present have beaten around this great question, and have made loud pretensions to having answered it. They have not succeeded. Between the import of that question and the import of their best answers, is a great and undeniable want of correspondence. The question yet remains on their hands an unanswered and very serious problem.

The difference between subject and object has been held by some monists to consist, or to reveal itself, chiefly in the difference between sensations and memories, or the vivid and the faint manifestations of mind. "Each order of manifestations," says Mr. H. Spencer, "carries with it the irresistible implication of

some power that manifests itself; and by the words *ego* and *non-ego* respectively, we mean the power that manifests itself in the faint forms and the power that manifests itself in the vivid forms."<sup>1</sup>

The doctrine that mind and matter, subject and object, both exist within and together constitute what is commonly called mind, is monism in its simple character. It stands directly opposed to dualism in its simple character, which is that an extended world exists beyond and independent of mind, though related to mind as a part of the same general system or creation, and that this outside and independent world is alone properly called object.

Monism is certainly right in maintaining that mind may know itself, or distinguish its active and passive, vivid and faint, modes. It is right in the confirmation it impliedly gives, by its whole character, to the doctrine I have above sought to maintain, that the mind may know its modes and itself by subjective contrasts alone, without necessary help from the knowledge of the real extra-mental; but to call mind or any of its modes, or any complex of them, when thought of, "object," is the abuse of a word growing out of the

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(1) *First Principles*, p. 154.

Hegel remarks of the relation of subject and object to each other in knowledge and existence: "The aim of knowledge is to divest the objective world that stands opposed to us of its strangeness, and, as the phrase is, to find ourselves at home in it; which means no more than to trace the objective world back to the notion, — to our innermost self. We may learn from the present discussion the mistake of regarding the antithesis of subjectivity and objectivity as an abstract and permanent one. The two correlatives are wholly dialectical. The notion is at first only subjective; but without the assistance of any foreign material or stuff it proceeds, in obedience to its own action, to objectify itself." (*Logic* (Wallace, 1st Ed.), p. 289.)

fundamental error of a theory. The only proper term to be applied in the case is "subject-object," the word "object" being left to denote extra-mental things and their qualities. These things and qualities have no such relation to mind, as mind and its qualities have to mind itself, and are alone properly called objective.

This theory that mind and the extra-mental, subject and object, are but modes of the one mind, or of the same entity or power, or are differentiated from the same subjective notion, has its strongest support in the apparent favor of the principle, that all objective things are known through subjective modes. This principle is true; but at the same time it is true that the distinct and independent existence of extra-mental things is assured to us by the facts of external perception so-called; and the duality of subject and object thus proved has never been reduced to a real unity. We have this duality; and all efforts to make it appear a real unity have ended in some doctrine less satisfactory than dualism, having gone farther than normal, consistent and trustworthy thought can ever go.

Some very important facts of external perception are, however, as is well known, strongly appealed to in the interest of monism; as, for example, the fact that colors, though they seem, and are confidently taken by many, to be qualities of things which I have assumed to be properly called objects, are in reality qualities of mind, sensations, objectivized or projected, so to speak, by the mind,—a fact out of which idealists and monists do not fail to make all that rightly can be made, and often a great deal more, towards proving that all qualities and entities sup-

posed to be objective are really subjective. But this and the like facts of objectivization can be shown conclusively, I believe, to be consistent with dualistic realism; I will say more, are explicable only by dualistic realism.

There have been some psychologists, not monists, but emphatic dualists, who have yet subscribed to the view that subject and object, mind and matter, are given together in consciousness, and necessarily. Different arguments are used in support of the view; as, that the knowledge of opposites and relatives is one, etc. Sir W. Hamilton says: "In the act of sensible perception, I am conscious of two things; — of *myself* as the *perceiving subject*, and of an *external reality*, in relation with my sense, as the *object perceived*. Of the existence of both these things I am convinced; because I am conscious of knowing each of them, not mediately, in something else, *as represented*, but immediately in itself, *as existing*. Of their mutual independence I am no less convinced; because each is apprehended equally, and at once, in the same indivisible energy, the one not preceding or determining, the other not following or determined; and because each is apprehended out of, and in direct contrast to, the other." <sup>1</sup> Dr. Mansel remarks: "Every state of consciousness necessarily implies two elements at least: a conscious subject, and an object of which he is conscious. . . . That of which I am directly conscious may be an object numerically distinct from myself, or it may be a modification of my own mind." <sup>2</sup> Dr. McCosh accepts the same view: "I believe that

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(1) Edition of *Reid's Works*, Note A, p. 747.

(2) *Prolegomena Log.*, pp. 20, 21.

in our conscious sense-perceptions we know both the self and the not-self in one concrete act." <sup>1</sup>

This doctrine rests mainly on an assumption expressly made, as has been already remarked, by Sir W. Hamilton, that sensations and sense-perceptions are not pure modes of mind, but modes of both mind and matter or body as they are united. Of this assumption it must be said that, though it sounds differently in words, it stands in perilous intimacy in fact with the monistic doctrine, that nervous change and sensation, mind and matter, are but faces or modes of the same reality. It is difficult to see how any one can accept the former and disown the latter. Dualists certainly can not consistently make this assumption. For, if mind and matter give themselves "equally," "immediately," and "at once," in the same indivisible "concrete" "energy," "state," or "act," it will long puzzle any dualist to show that mind and matter are not in fact the same, or modes of the same thing. Such perfect unity in phenomenon will make it hard indeed to prove plurality or contrariety of existence. The assumption is baseless. Sensations and perceptions are pure affections of mind. It has never been proved that they have any material element, quality, or part in them. We may appreciate the zeal for dualism that is behind this assumption, and is in reality its procuring cause; but yet, in this instance, it is zeal not according to knowledge; it is zeal that seizes upon and blindly supports a most questionable assumption, that risks too much on an assumption which is not needed. Sensations and perceptions have indeed a prompt and positive reference

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(1) *Fundamental Truth*, p. 240.



to external things or excitants; but still they are surely, in themselves, with this reference, as purely subjective as any idea, feeling, or passive experience.

Simply to assume for a primary principle, as is done by many *a priori* dualists, that both mind and matter are known with like immediacy and certainty in the same mode or modes of mind, is to theorize about mind while ignoring some of the chief facts. On their part it is quite arbitrary, unless they are to be allowed the unqualified employment of transcendental principles. Mind and matter are known, it is true, by the same identical modes of mind; self-consciousness and sense-perception are combined in the same indivisible cognitive act, and are not different acts; nevertheless, if mind and matter are different entities, and if knowledge is possible only in and through the *modes or acts of mind*, or, in other words, if mind, and not matter, is the knower, then our knowledge of mind and of matter can not be equally direct. The knowledge of mind is immediate, because the modes of knowledge are its modes. But the knowledge of matter can not be the same, because the modes of knowledge are not its modes. From the fundamental nature of the case, as viewed by dualists themselves, only mind can be known immediately, and matter only mediately. In the same modes of mind, indeed, both mind and matter are known, mind immediately, matter mediately.

The above doctrine of the *a priori* dualists gives to consciousness an extension which has no warrant. The sphere of consciousness, as has been long the general view, is wholly within mind. The contents of consciousness are mind and the modes or phenomena of mind; matter and its attributes are outside, and do never enter. The distinction which Sir W. Hamilton

and others make between consciousness and self-consciousness, or rather between the two species of consciousness — consciousness of the not-self, and consciousness of self — must be regarded as untenable. <sup>1</sup> There is in fact only one kind of consciousness, and that is self-consciousness, the consciousness of the mind and its states. Both in the assumption of compound (mental and corporeal) sense-perceptions, and of this extended range of consciousness, Sir W. Hamilton and his followers make a great and unwarrantable departure from the more common and tenable dualistic views.

The principle that the knowledge of opposites is one, is brought to the support of the doctrine that both mind and matter, or their qualities, are in consciousness and known immediately and together. Undoubtedly the knowledge of opposites is one; as of the opposites long and short, right and left. The knowledge of counterparts is one; as of husband and wife. The knowledge also of such relatives as father and son is one. To know either member of any of these pairs, is to know the other. And this principle, we may grant, would be applicable also to our knowledge of subject and object, mind and matter, *if they were real opposites*. But they are not real opposites. They are indeed different from one another numerically and essentially; they stand in relation; they affect one another; but they are as certainly not strict opposites as a feather and the air in which it floats, or a stone and the space in which it rolls, are not. To hold that mind and matter are opposites like long and

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(1) There are other varieties or divisions of consciousness specified by some psychologists, which seem to be the discoveries of erratic or overrefined analysis.

short, and that, consequently, the knowledge of the mind implies the knowledge of matter, as the knowledge of long implies the knowledge of short, is a specimen of the loosest reasoning, and seems not worthy of a serious attempt to refute.

The answer now given to the question, whether the knowledge of real mind is relative, is, in brief, that mind or subject, though commonly thought of together with matter or object, because of their near and constant relation, may be and is known without necessary help from the knowledge of the latter. Subject and object are distinct realities; all knowledge is in and by the modes of the subject; consequently, object can not be known immediately as are subject and its modes, and is not therefore necessarily known with them. The contrasts within the sphere of mind itself, among its diverse phenomena, bring about, or are sufficient for, the knowledge of the mental modes and of mind, apart from the knowledge of everything else; and all our knowledge of mind in its relations to matter is possible and exists through the immediate knowledge of mind and the mediate knowledge of matter. The ultimate question and mystery how introspection can be, how the mind can be both subject and subject-object — in short, how self-consciousness is possible — is a problem common to all theories, and appears insoluble.

To put mind and matter both within the sphere of mind, or to make them only parts or modes of mind, is to posit within mind a greater difference than we are conscious of existing there. The mind differs from its conscious modes, and these differ from one another in quality and in external reference; but the active and passive, the vivid and faint, modes are both,

in themselves, entirely subjective, in no degree objective; both hold essentially the same close relation to mind, and the same distant relation to not-mind. Within mind we are conscious of both identity and difference; but the identity is far greater than that between mind and matter, and the difference is far less. In thus separating mind and matter in knowledge and in existence, we do not make their relation more "mechanical" than the simple facts make it, nor destroy the unity of the universal system to which both belong as parts.

**BOOK II.**  
INTELLECTION.



# INTELLECTION.

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## CHAPTER I.

### GENERAL NATURE OF INTELLECTION.

There are, as was indicated above, two grand stages in knowledge. The first is the cognition of the simple and primary modes of mind, of their relation internally to the one mind, and of their simplest relations to one another — of these relations so far at least as they are necessary to the existence or awakening of consciousness. This stage of knowledge is limited; but it is yet very important, because it includes the elements and beginnings of all knowledge. Heretofore, we have been chiefly concerned with it. The second stage in knowledge is that of synthesis or construction proper, and is by far the more extensive of the two. Human knowledge taken in its whole compass is chiefly synthetic, consisting as such, for the most part, of definite compounds of different kinds and of more or less complexity. Out of the simple and primary modes and elements, the mind constructs its concrete distinct notions of individual things, real and imaginary, some of which are of very little, some of very much, complexity; and out of the notions of individuals it constructs logical concepts or generalizations, some of which are very extensive, including a great host of individuals.

Some writers contend that synthesis, or what I

call the second chief stage of knowledge. is alone entitled to the name knowledge; especially, that a thing is known only when classified, etc. This doctrine appears to be somewhat erroneous both in what it expresses and in what it implicates. No doubt, when anything is classified, and known and definitely fixed amidst many relations, there is a great increase and advance of knowledge. But there is real knowledge before any real classification, and as the indispensable condition of classification. The qualities and elements which enter into complex notions have an individual and comparatively permanent character; and complex notions, as sense-perceptions, have an individual and permanent character before they enter into concepts. This character may be known and is known to a degree, I do not say without any contrasting or comparison, yet before the formation of definite perceptions and logical aggregates. The elements of synthetic knowledge, if never known without some comparison with one another, are known in their individual and permanent character, in this comparison. They do not derive their character from their relations; and all perceptions of relations beyond the simplest, all formation of notions and concepts, is possible on the previous existence and cognition of the individual character of the primary modes and elements. This is our primary knowledge; and no knowledge is more important and worthy of the name.

I do not, however, contend for the existence of a hard line, or a marked break, between the two stages of knowledge. Consciousness is present from beginning to end. It does not lose hold of the primary cognitions, at least as representations of memory, no



matter into what complex syntheses they may enter. The conviction that mind is the one possessor of knowledge is universal. The compounds of the second stage are formed from elements furnished in the first. Particularly as to method, the fact of comparison, of discrimination, of the discovery of resemblance and difference, is coextensive with knowledge, characterizing it from first to last. This fact is necessary to the existence of consciousness and the most elementary knowledge. It is the means of forming all compound cognitions up to the highest. But there is a significant difference between the degree of comparison necessary to the excitation and first experiences of consciousness, to the cognition of the elementary modes and their simplest relations, to all cognitions where the individual character of these modes is chiefly considered, and little attention given to their relations, even the simplest; and the degree necessary to the formation of the definite and fixed syntheses of sense-perception and the judgment.

The Intellect is the general faculty of synthetic knowledge proper. All that is ever made out of the simple and pure materials or elements of knowledge is the work of the intellect. All the processes that effect or result in synthesis, as abstraction, comparison, unification, are the workings of the intellect. In short, all knowledge beyond that of the primary modes of mind in their simplest relations, and in their relations to the mind itself, is the work of the intellect, including also all references to external realities. But synthesis or construction is the chief function of this great faculty, and we shall give most attention to it. Under the intellect are comprehended several special

faculties; as those of Sense-Perception, Imagination, Logical Conception.

The most important question to be considered in the discussion of the Intellect is this: What are the original and primary materials of the intellect, and what is their source or sources? This general question includes a subordinate question that deserves special attention, namely, Does the intellect contribute anything from itself to the materials furnished to it; or, in other words, is it purely a constructive faculty, using in its compositions only the elements given it, or is it both creative and constructive?

1. (a) As to this general question, especially as to the question of the character and extent of the materials employed by the intellect, I answer, the sensations, emotions, and volitions are the original materials of the intellect. They constitute the whole of them. All formations of the intellect from first to last are made out of these elements and the memories of them. The limits to human knowledge are the limits determined by the sensations, emotions, and volitions.

These original and distinct elementary materials are variously combined. For example, those complex modes, our notions of external inanimate things, are formed largely out of sensations. Again, our notions of our fellow men, and of human relations, social, political and religious, include sensations; but include also large contributions from the emotions and volitions. My notion of the physical magnitude, figure and motions of another person, is constructed in a great degree from my sensations; but my notion of his internal character and of what is termed his conduct, very important objects of knowledge, con-

tain manifestly leading constituents from my emotions and will. The idea of another person, as to the wholeness of his character, would be very imperfect, if the intellect had only sensations to construct it out of. Our ideas of the Deity and the divine government have constituents from sense, emotion, and will.

On the present point there seem to be not a little confusion and error in the thinking of some metaphysicians. For instance, in the first place, undue prominence has been given to sensation in intellection, — a fact that has occasioned some quite just, and some quite unjust, application of the opprobrious term “sensationalism.” Again there are mistake and confusion regarding the relation of the emotions and also the volitions to intellection. Some apparently exclude the emotions and volitions altogether from intellection, and assign them to other provinces of the mind; or make them the modes or operations of faculties distinct from and coordinate with the intellect. This, as we have already endeavored to show, is to form an arbitrary division within mind, and is very far from the truth. Emotions and volitions are as really materials of the intellect as sensations. They enter as really into those high and complex notions, just mentioned above, as sensations. Without them those notions could not be formed. The ideas a man has of his fellow men as certainly contain emotions — those, for instance, of love, obligation, hatred, — or the remembrances of them, as visual and tactual sensations. The knowledge of the emotional character and conduct of men is certainly a no less important part of our notions of them, than the knowledge of their size, weight, color, etc.; but

such knowledge or representation is possible only by means of our own impulses and conduct. <sup>1</sup>

(b) Taking sensations, emotions, and volitions as being all with equal reality the materials of the intellect, and also as constituting the whole of these materials, being, according to the classification already given, the whole of the primary affections of mind, let us consider them with respect to the question of their source or sources, and with special reference to the question whether there are an internal and an external source. It will contribute much to the clearness and satisfactoriness of our discussion, if we shall give first some consideration to the views of Locke and Kant on this important subject.

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(1) It is well remarked by Dr. Mansel: "In speaking of Imagination as the test of Conception, we do not accede to the ultra-sensationalism of Condillac, nor even to the modified doctrine of Laromiguiere, who derives from the senses the whole *matter* of our knowledge. *Individualize your concepts* does not mean *sensationalize them*, unless the senses are the only sources of presentation. If I am immediately conscious, for example, of an exercise of will, as an individual act taking place within me, the phenomena of volition become a distinct class of presentations, coordinate with, not subordinate to, those of the senses, and capable, like them, of being represented by the imagination and thought upon by the understanding. If I am conscious of emotions of joy or sorrow, of anger or fear, existing as present individual states of mind, distinct from sensible impressions, these, in like manner, must be considered as data for thought, furnished by intuition." (*Prolegomena Log.*, pp. 43, 44.) Some metaphysicians indiscriminately rank as sensationalists all who reject *a priori* knowledge. But there is surely a great difference between pure sensationalists and those psychologists who, while rejecting *a priori* knowledge, regard emotions and volitions as distinct and original classes of presentations and give them a high place as materials of intellection. The doctrine of these latter holds very important ground above pure sensationalism.

Locke assumes, as is well known, two grand sources of the "materials of thinking" — Sensation and Reflection. He says: "These two are the fountains of knowledge from whence all the ideas we have or can naturally have do spring. First, our senses conversant about particular sensible objects, do convey into the mind several distinct perceptions of things, according to those various ways wherein those objects do affect them; and thus we come by those ideas we have, of yellow, white, heat, cold, soft, hard, bitter, sweet, and all those which we call sensible qualities; which when I say the senses convey into the mind, I mean, they from external objects convey into the mind what produces there those perceptions. This great source of most of the ideas we have, depending wholly upon our senses, and derived by them to the understanding, I call SENSATION. Secondly, the other fountain, from which experience furnisheth the understanding with ideas, is the perception of the operations of our own mind within us, as it is employed about the ideas it has got; which operations, when the soul comes to reflect on and consider, do furnish the understanding with another set of ideas, which could not be had from things without; and such are perception, thinking, doubting, believing, reasoning, knowing, willing, and all the different actings of our own minds; which we being conscious of, and observing in ourselves, do from these receive into our understandings as distinct ideas, as we do from bodies affecting our senses. This source of ideas every man has wholly in himself; and though it be not sense, as having nothing to do with external objects, yet it is very like it, and might properly enough be called internal sense. But as I call the

other *Sensation*, so I call this REFLECTION, the ideas it affords being such only as the mind gets by reflecting on its own operations within itself." <sup>1</sup> He denominates sensation and reflection, in the above extract, also as the internal and external sense. These terms he uses again as follows: "External and internal sensation are the only passages that I can find of knowledge to the understanding. These alone, as far as I can discover, are the windows by which light is let into this dark room." <sup>2</sup>

Locke's sensation plainly includes what are commonly called sensation and sense-perception; that is, individual sensations and the compounds made largely of them which constitute our notions of individual objects. One of the most important points to be considered in regard to Locke's doctrine is his view of the relations that sensations hold, on the one side, to the mind, and, on the other, to external objects. I have already had occasion briefly to remark on the great defects of Locke's teaching on this fundamental question, and the diversity of understanding among philosophers regarding his views. It seems idle to attempt to extract anything definite and complete on the question from any statement or collocation of statements of Locke. He, however, makes no pretensions to definiteness; rather, he expressly professes ignorance.

He distinctly denies that sensations are modifications of mind. "For my mind, when it sees a colour or figure is altered, I know, from the not having such or such a perception to the having it; but when to explain this, I am told that either of these perceptions

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(1) *Essay*, II., i. 3, 4.

(2) *Ib.*, II., xi. 17.

is a modification of the mind, what do I conceive more, than that from not having such a perception my mind is come to have such a perception? which is what I as well knew before the word *modification* was made use of, which by its use has made me conceive nothing more than what I conceived before.”<sup>1</sup> He remarks again, as to the incomprehensibility of the rise of sensations and of their relation to the mind: “By the ‘nature of ideas’ therefore is meant here their causes, and manner of production in the mind, *i. e.*, in what alteration of the mind this perception [of ideas] consists; and as to that, I answer, no man can tell; for which I not only appeal to experience, which were enough, but shall add this reason, *viz.*, because no man can give any account of any alteration made in any simple substance whatsoever; all the alteration we can conceive being only of the alteration of compounded substances, and that only by a transposition of parts.”<sup>2</sup> The obscurity in Locke’s mind is shown further by his using the term *idea* with reference both to the internal sensation and the external quality producing it. Sensations and perceptions are thus left between the mind and the external objects said to produce them, without any clear and definite statements as to the particular characters of their opposite relations to the mind and the objects. We can infer from such expressions as “produce in the mind,” “excite in the mind,” “causes of ideas in us,”<sup>3</sup> used with reference to sensations, that Locke believed that sensations hold a closer relation to the mind than to

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(1) *Exam. of P. Malebranche’s Opinion*, sect. 48. See sects. 39 and 8.

(2) *Remarks upon Norris*, sect. 2. See sects. 17, 18.

(3) *Exam. P. Mal.*, sects. 15, 16.

the external excitants; but what may be the difference of the two relations; what may be the comparative dependence of sensations for origination upon the mind on the one hand, and upon the external object on the other, what they owe to the one and what they owe to the other, he does not with any precision indicate.<sup>1</sup>

Reflection, according to Locke, is the "perception of the operations of our own mind within us," as thinking, willing. Emotions are included in these operations, as appears from the last words of the same section from which the above chief extract regarding reflection was taken: "The term *operations* here I use in a large sense, as comprehending not barely the actions of the mind about its ideas, but some sort of passions arising sometimes from them, such as is the satisfaction or uneasiness arising from any thought."

Owing to the obscurity of Locke's language, there has been some difference of view among philosophers as to whether he meant, by Reflection, memory combined with fixed attention, or self-consciousness. The latter is more commonly held to be his meaning. This view is apparently justified by Locke's use of the terms "conscious" and "consciousness." Consciousness he distinctly defines as the "perception of what passes in

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(1) Locke's view of the closer relation of sense-perceptions to the mind is illustrated by the following remarks he makes regarding the pleasures and pains: "By pleasure and pain, I must be understood to mean of body or mind, as they are commonly distinguished; though in truth they be only different constitutions of the mind, sometimes occasioned by disorder in the body, sometimes by thoughts of the mind." (*Essay*, II., xx. 2.) "To speak truly, they are all of the mind; though some have their rise in the mind from thought, others in the body from certain modifications of motion." (*Ib.*, xxi. 41.)



a man's own mind." <sup>1</sup> This is about identical with the import of the following definition of "reflection": "By reflection, then, in the following part of this discourse, I would be understood to mean that notice which the mind takes of its own operations, and the manner of them; by reason whereof there come to be ideas of these operations in the understanding." <sup>2</sup> Reflection being then apparently the same as consciousness, it is well enough to remark that Locke's expression, "ideas of reflection," or "ideas of the operations of the mind within us," can not properly signify anything more than the operations themselves; the "ideas" and "operations" are identical. Consciousness is not a faculty different from other known faculties of the mind, as those of "reasoning," "willing," "believing," etc.; but is the general faculty of which they are species. An act of consciousness is not different from a known "operation" of mind, but is identical with it; or the operation is a special mode of consciousness. It should be similarly remarked of sensation, that Locke's expression "ideas of sensation" can not properly mean anything more than simply sensations.

Further, as regards the relation that Locke holds to exist between sensation and reflection, it should be observed that sensations are the materials with which those operations of the mind that come under the cognizance of reflection, as thinking, believing, willing, passion, are concerned. He says on this point: "In time the mind comes to reflect on its own operations about the ideas got by sensation, and thereby stores itself with a new set of ideas, which I call ideas

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(1) *Essay*, II., i. 19.      (2) *Ib.*, II., i. 4.

of reflection.”<sup>1</sup> “The mind receiving the ideas, mentioned in the foregoing chapters, from without, when it turns its view inward upon itself, and observes its own actions about those ideas it has, takes from thence other ideas, which are as capable to be the objects of its contemplation as any of those it received from foreign things.”<sup>2</sup> Accordingly, the ideas of sensation (sensations) precede the ideas of reflection in the order of time, and are their subject-matter.

This is the simple character of Locke’s “Reflection” as given by Locke himself. But much less has been made of it by many writers than he ever designed should be made, whereby his relation to sensationalism has been greatly misrepresented; and also, on the other hand, much more has been made of it by many writers than he ever designed, whereby his relation to the *a priori* philosophy has likewise been greatly misrepresented.

It is a very pertinent and important question respecting the two sources of the “materials of thinking” announced by Locke, whether they are really distinct, whether, even on Locke’s own fundamental principles, they are as distinct as they are represented to be in the formal passages in which they are set forth, and especially whether they can be properly distinguished as “external” and “internal.”

Locke’s most noted French followers held that they were not really distinct; that sensation is the only source of knowledge, and that reflection is a development from, or is identical with, sensation. This conclusion was a deduction chiefly from Locke’s principle, just noticed, that sensations are the subject-

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(1) *Essay*, II., i. 24.

(2) *Ib.*, II., vi. 1.

matter of the operations or ideas of reflection. If reflection concerns itself with sensations alone as its original matter, it can only be, they said, a derivation from sensation, or the consciousness of sensations and their compositions.

That such a distinction can not be properly made between Sensation and Reflection, or the ideas of sensation and the ideas of reflection, as Locke affirms, especially not the distinction that the former are external and the latter internal, appears certain. But the order of the unification of the two should be the reverse of that taken by the sensationalists; that is, instead of regarding reflection as derived from or essentially the same as sensation, sensation should be regarded as but a mode of reflection.

Locke distinguishes the relations which sensations and the operations of reflection hold to the mind, by declaring that sensations are "produced," "excited," "caused" in the mind by external or "extrinsical" objects; but that the operations of reflection are, on the contrary, "intrinsical" or "of our own mind within us," are "furnished" by, or have their "source" wholly in, the mind itself. But what may be the difference in their relations to the mind, between an idea "produced" in the mind, and an idea having its "source" in the mind itself, — that is, between a sensation and a mode of reflection, — Locke does not make clear. He is confused here, as he is everywhere else, regarding these fundamental and most important relations.

The truth as to the relation of sensations, in themselves, to the mind is, that they are not so loosely related to the mind as Locke seems to regard them; nor entirely distinct and objective as Berkeley makes them; nor both subjective and objective, mental and

corporeal, as some later writers represent them; but are purely subjective or internal, like the operations or ideas of reflection; they are as really and entirely "within" us as reasoning and willing, are as pure operations and modifications of mind. Accordingly, sensations and the ideas of reflection are, in themselves or as acts, alike of an internal origin, or are modes of the one self-consciousness; and the two sources of the materials of knowledge denominated "external" and "internal" are, so far as the fact that they are both internal goes, really but one.

But if sensations are as really internal, as really ideas or facts of consciousness, as the so-called "operations of our own mind," there are yet, no doubt, significant differences between the two as internal. There are unlike differences, because, in part at least, of the variety of acts which Locke specifies as belonging to reflection. For instance, the difference between sensation and some modes of reflection is largely one of complexity. This difference of complexity is the only one believed in by some of Locke's sensationalistic followers. But between sensation and the operations of willing and passion or emotion, there are differences not only of complexity, but also of kind. Neither emotion nor volition is derived from or compounded of sensations. They are both original modes of mind or variations of experience. True, they follow sensations, are called up by them, move with reference to them, are in general subsequent in the order of development; yet they are not developed from sensations, they are original modifications of mind excited primarily, it may be, by sensations, — are pure original modes of mind occasioned by preceding pure modes of mind. Another import-

ant difference is, that sensations in general are directly excited by external things and have a direct reference in consciousness to them; but many of the ideas of "reflection" have not such direct excitation and reference.

It is this last difference of external excitation and reference which is the only real ground that Locke could have for designating and distinguishing sensation and reflection as "external" and "internal sense." These terms which have figured so prominently in the discussions of knowledge from the time of Locke to the present, as we shall have occasion hereafter to notice further, have been often used, as they are used by Locke, to denote an essential difference in character, to denote something really external and something really internal; in short, to express all the difference which is properly meant by the words *external* and *internal*. This is a fundamental error. Considered in themselves, in their real constitution and character, sensations are as truly internal as the ideas or modes of "reflection." Both classes are pure subjective modes, or modes of consciousness, existing in the same close relation to mind. To call one "external" and the other "internal," is exalting what can be only a difference of occasion and reference, to the prominence of an actual difference of place and nature. Sensations are pure modes of consciousness arising by the direct action of external things; ideas of "reflection," many of them at least, are pure modes of consciousness arising by the internal processes of the mind, without being immediately occasioned by, and without such immediate reference to, external things. Both classes are alike, in themselves, absolutely internal.

On the ground, therefore, of the real nature of sensations, as pure affections of mind, and of the real nature of consciousness, as universally cognizant of the mental phenomena and as not distinct from these phenomena, it seems to be clear that Locke's two sources of the "materials of thinking," considered with reference to the inner character of these materials, are not really two, but only one; that is, one is not really external and the other alone internal, but both are alike purely internal or subjective. Sensation being a mode of mind distinct from the external object which "produces," "excites," or "causes" it in the mind, and receiving no contribution to its inner nature from this object, but receiving all its elements from the mind itself—in a word, forming a pure affection of mind—belongs as really and wholly under reflection or consciousness, as any operation specified by Locke. Its source "every man has wholly in himself." The ideas of "sensation" and the ideas of "reflection" are both alike produced by the mind from within, and are only different modes of the one general faculty, consciousness. It must here be acknowledged that, considering the prominence given by Locke to the distinction of the two sources of knowledge, his discussion of it is confused and imperfect to a degree which the age he wrote in does not wholly excuse, and which has brought down upon him severe and deserved censure.

Kant announces with as great emphasis as Locke the "external" and the "internal sense" as the sources of the "matter" or "manifold" of phenomena and knowledge. He says: "By means of the external sense (a property of our mind) we represent to ourselves objects as external to ourselves, and as an

aggregate in space." By the internal sense "the mind views itself or its internal state."<sup>1</sup> But there is more marked inconsistency in Kant's use of the terms "external" and "internal," to denote the sources of the matter of knowledge, than in Locke's; for Kant holds in fact that the external sense is a function of the mind, that the "phenomena of our external sense" are not external to us, but are really internal,<sup>2</sup> "in us," "in our thoughts," are affections or "modifications" of the mind; affirming also, at least in the *Prolegomena* and second edition of the *Kritik d. r. V.*, 3

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(1) *Kritik d. r. V.*, p. 58. The terms are seen also in the following passages: "In the transcendental aesthetic we have undeniably proved that bodies are mere phenomena of our external sense, and not things in themselves." (*Ib.*, p. 591.) "External objects (bodies) are mere phenomena, consequently are nothing more than a mode of my representations, whose objects exist only through these representations, but severed from them are nothing. Therefore external things exist just as well as I myself exist, and both truly on the immediate witness of my self-consciousness; but with this difference, that the representation of myself, as the thinking subject, is referred only to the internal sense, but the representations which indicate extended realities are referred also to the external sense." (*Ib.*, p. 599.)

(2) "However our representations may spring, whether they be produced by the influence of external things or by internal causes, whether they have arisen *a priori* or empirically as phenomena, as modifications of the mind, they yet belong to the internal sense." (*Kritik d. r. V.*, p. 567.) "Phenomena are not things in themselves, but the mere play of our representations, and these prove in the end to be determinations of the internal sense." (*Ib.*, p. 569.)

(3) "Objects in themselves are not at all known to us; what we call external objects are nothing but mere representations of our sensibility, whose form is space, but whose true correlate, i. e., the thing itself, is not at all known by them, nor can be known, but concerning which indeed there is never in experience any inquiry." (*Kritik d. r. V.*, p. 64.)

that they are excited by real but unknown external objects, and not produced by the spontaneity of the mind itself.<sup>1</sup> He calls one sense external; but in reality makes it a purely subjective property or faculty.<sup>2</sup>

Kant is here chargeable with the blunder (of which he is not the last exemplar) of believing one theory and using the language of another. His two senses are, in his own conception, both really internal; the matter of the phenomena of both is internal; though the phenomena of the external sense are excited by external objects, or though the mind, in coming into the possession of these phenomena, is affected by external objects, it does not receive an atom or element of the phenomena from them.<sup>3</sup> Accordingly,

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(1) *Prolegomena*, sect 13, Anm. II.

*Kritik d. r. V.*, pp. 55, 56. See pp. 607, 608: "External phenomena, as all other thoughts, belong to the thinking subject, only they bear in themselves the illusion that, since they represent objects in space, they detach themselves, as it were, from the mind, and appear to hover outside of it."

(2) An able student and expounder of Kant thus remarks on the pure subjectivity of Kant's external sensation: "This particularisation constituted to Kant an *a priori* subjective machinery — form — by which our sensations (matter — *a posteriori*, in that they are excited by causes external to ourselves, but *subjective*, quite as much as the *a priori* elements, in that they are simply *our own* states) are taken up and converted or projected into the connected world of experience or of perceptive objects. In this way, each of us inhabits a universe of his own subjective sensational states (still namable inner or outer) reticulated into nexus, law, and system by his own subjective intellectual functions," etc. (Stirling, *Secret of Hegel*, I., p. 228. See *Text-Book to Kant*, pp. 368, 369.)

(3) But there is considerable difficulty connected with Kant's assertion that mind is affected by real external objects. For while at one time Kant makes external objects the cause of the rise of sensations in the mind, at another time he in



instead of using language, as he was bound to do, that recognizes the fundamental fact, as he believed it, of the essential sameness of the two senses, and also the sameness of the "matter" furnished by them, in that it is in both cases purely internal, purely mental affection; he takes terms that suppress this sameness and that hoist into prominence altogether undue the difference of the mode of production by the mind. It is to be borne in mind, then, that Kant's "external sense" is but a part of his "internal"; and that though his language might lead us at times to suppose he held to two sources of the matter of knowledge, the one external and the other internal, he really holds to but one, which is internal, and really makes all the matter of knowledge pure mental affection.

Many later and recent writers have affirmed, with more distinctness and emphasis than Locke and Kant, the existence of two sources of the matter of knowledge; naming them external and internal sense, perception, experience, or perception and self-consciousness. Sir W. Hamilton remarks: "Under the general faculty of cognition is thus, in the first place, distinguished an Acquisitive, or Presentative, or Receptive Faculty; and this acquisitive faculty is subdivided into the consciousness of the non-ego, or External Perception, or Perception simply, and into the consciousness of the ego, or Self-consciousness, or Internal Perception. This acquisitive faculty is the faculty of Experience. External perception is the faculty of

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effect declares them to be causationless, as he declares them to be also timeless and speechless; causation being considered as only a form of subjective thought. These diverse statements are believed by many to constitute a palpable and incurable contradiction in Kant's philosophy.

external, self-consciousness is the faculty of internal, experience. If we limit the term Reflection in conformity to its original employment and proper signification, — an attention to the internal phaenomena, — reflection will be an expression for self-consciousness concentrated.”<sup>1</sup> This doctrine of Sir W. Hamilton rests upon his erroneous view, which we have had already occasion to refer to, that the modes of external perception are in part really external, — that is, that some at least of their constituent material comes from outside the mind, that the mind is receptive of a real external element, and that we are conscious of the extra-mental; and also that, on the other hand, internal perceptions or states are, in their nature, internal or subjective in a sense that can not be affirmed of the external, and are, in a very important sense above the external, the effects of the productive action of the mind. “Perception,” says Sir W. Hamilton again, “is only a special kind of knowledge, and sensation only a special kind of feeling; and *Knowledge* and *Feeling*, you will recollect, are two out of the three great classes into which we primarily divided the phaenomena of mind. . . . Perception proper is the consciousness, through the senses, of the qualities of an object known as different from self; Sensation proper is the consciousness of the subjective affection of pleasure or pain, which accompanies that act of knowledge. Perception is thus the objective element in the complex state, — the element of cognition; sensation is the subjective element, — the element of feeling.”<sup>2</sup> Here, as at other places, the conscious complex perceptive state is held by Sir W. Hamilton

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(1) *Metaphysics*, p. 274.      (2) *Ib.*, p. 335.

to have, not simply an objective reference, but a real objective element, which element is a quality or qualities of matter, so that the inner constitution of the perceptive state is partly material or corporeal. The chief fact which Sir W. Hamilton has in mind in these passages of course is, that we have a sure knowledge both of the mind and extra-mental realities. This fact is, no doubt, a fundamental one; but his statement of the mode of knowledge, in which he is followed by many *a priori* dualists, is indefensible. It does not rightly and clearly distinguish between the source and the excitant of the cognitive phenomenon.

The truth and proper mode of statement is, that, as to the inner nature of the so-called external perceptions, they are as purely and wholly internal or subjective as the internal perceptions. They derive no element whatever from without. All their constituent parts or properties are provided by the mind, just as in the case of the most refined internal states. The sensations of color and of touch are as purely mental and internal as the most exquisite emotion or the most subtile or remarkable form of thought; they are as pure modes of self-consciousness and as clearly reveal self. But though the external and internal perceptions differ not as to internal nature, since the former are as purely subjective and modes of self-consciousness as the latter, they yet differ in regard to excitation and reference. Here is the element of truth in the distinction of the external and internal perceptions. The former are excited directly by external objects; the latter arise more from the spontaneous labor of the mind. Yet in the excitation of perception, the external realities contribute nothing to the matter of the perception. They only move the

mind; and the resulting perception owes all its inner nature to the productivity of the mind. The resulting perception, however, though purely subjective in nature, doubtless embraces the double consciousness of its relation to the mind and its reference to external things. The same individual perceptive mode is a mode of self-consciousness, and also has a reference to the not-self. The mind is therefore as productive, though not as spontaneous, in regard to perception as in regard to any of its phenomena. The so-called external perceptions are external, not because they contain any constituent element from the external, but merely because, though pure mental effects, they are occasioned by external excitants and have an immediate reference to them. The mind produces these affections wholly, in that it provides all the matter of them; but produces them on excitation from outer objects, not from its own movement or spontaneity. The "external" perceptions get their name, then, not from their nature or real place, but from their occasion. It is something remarkable that this mere difference of excitation and directness of external reference should have led to the formation of as prominent a distinction among the mental states as that of "external" and "internal" perception has long been; and to the denial or entire neglect, often, of the sameness of inner nature, the real identical pure subjectivity, of the two classes of perceptions. The history of philosophy, however, enables us to account for it.

From these considerations we may, in brief, conclude that the different original materials of intelligence have but one origin, which is internal, in the mind itself; and are one in nature, so far as being all

purely subjective or mental. Some have a direct external occasion, and some an internal occasion. These materials, as has been above said, are the three classes of affections, sensations, emotions, and volitions — the original affections of mind. They are all modes of consciousness, and are all conserved by memory. Sensations, though excited from without, form in themselves as pure internal states or perceptions as emotions and volitions; and emotions and volitions enter as really into the so-called external cognitions as sensations, though in many cases not to the same degree, or not as prominently or strikingly. Whether there are different internal sources of knowledge, and in what sense, will be considered presently.

2. From the consideration of the general question regarding the character and source of the materials of intellection, let us pass to the consideration of the particular and important question mentioned at the outset as coming under it, viz., Whether the Intellect, the architect of knowledge, contributes anything of itself to the materials given it in sensation, emotion and volition; or whether it is both constructive and creative. The question is to be understood as embracing the inquiry whether the synthetic power of the mind even in its highest action contributes anything whatsoever to the materials of knowledge. This question is very closely related to, or in a large part identical with, the much discussed question of the comparative activity and passivity of the mind in knowledge.

(a) Locke clearly distinguishes between the activity and passivity of the mind in knowledge. In the reception of the materials of knowledge, he declares the mind is passive. To the activity of the mind or the intellect he ascribes nothing more than the power

to "repeat and join together its ideas," the materials from sensation and reflection. He says upon this important subject: "Thus the first capacity of human intellect is, that the mind is fitted to receive the impressions made on it, either through the senses by outward objects, or by its own operations when it reflects on them. This is the first step a man makes towards the discovery of anything, and the groundwork whereon to build all those notions which ever he shall have naturally in this world. All those sublime thoughts which tower above the clouds, and reach as high as heaven itself, take their rise and footing here: in all that good extent wherein the mind wanders, in those remote speculations it may seem to be elevated with, it stirs not one jot beyond those ideas which sense or reflection has offered for its contemplation. In this part the understanding is merely passive; and whether or not it will have these beginnings, and, as it were, materials of knowledge, is not in its own power; for the objects of our senses do, many of them, obtrude their particular ideas upon our minds whether we will or not; and the operations of our minds will not let us be without, at least, some obscure notions of them. No man can be wholly ignorant of what he does when he thinks. These simple ideas, when offered to the mind, the understanding can no more refuse to have, nor alter, when they are imprinted, nor blot them out, and make new ones itself, than a mirror can refuse, alter, or obliterate the images or ideas which the objects set before it do therein produce." <sup>1</sup> "The dominion of man in this little world of his own understanding, being much

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(1) *Essay*, II., i. 24, 25.

what the same as it is in the great world of visible things, wherein his power, however managed by art and skill, reaches no farther than to compound and divide the materials that are made to his hand; but can do nothing towards the making the least particle of new matter, or destroying one atom of what is already in being." <sup>1</sup> "We have hitherto considered those ideas, in the reception whereof the mind is only passive, which are those simple ones received from sensation and reflection before mentioned, whereof the mind can not make one to itself, nor have any idea which does not wholly consist of them. But as the mind is wholly passive in the reception of all its simple ideas, so it exerts several acts of its own, whereby out of its simple ideas, as the materials and foundations of the rest, the others are framed. The acts of the mind wherein it exerts its power over its simple ideas, are chiefly these three: 1. Combining several simple ideas into one compound one, and thus all complex ideas are made. 2. The second is bringing two ideas, whether simple or complex, together, and setting them by one another so as to take a view of them at once, without uniting them into one, by which way it gets all its ideas of relations. 3. The third is separating them from all other ideas that accompany them in their real existence: this is called abstraction, and thus all its general ideas are made. This shows man's power, and its ways of operation to be much the same in the material and intellectual world. For the materials in both being such as he has no power over, either to make or destroy, all that man can do is either to unite them together, or to set

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(1) *Essay*, II., ii. 2.

them by one another, or wholly separate them.”<sup>1</sup> “Even the most abstruse ideas, how remote soever they may seem from sense, or from any operations of our own minds, are yet only such as the understanding frames to itself, by repeating and joining together ideas that it had either from objects of sense, or from its own operations about them.”<sup>2</sup>

In harmony with this view of the passivity of the mind in gaining the materials of knowledge, Locke compares the mind to an “empty cabinet,” a “dark room,” “white paper.” “The senses,” says he, “at first let in particular ideas, and furnish the yet empty cabinet.”<sup>3</sup> “External and internal sensation are the only passages that I can find of knowledge to the understanding. These alone, as far as I can discover, are the windows by which light is let into this dark room.”<sup>4</sup> “Let us then suppose the mind to be, as we say, white paper, void of all characters, without any ideas; how comes it to be furnished?”<sup>5</sup> These illustrations are, however, unfortunate, like some other notable ones employed in philosophy, in darkening instead of illuminating their object. They have been the occasion of much misconstruction and extravagant criticism of Locke’s philosophy. Some have taken him literally, supposing him to make the mind as passive, or as dead a blank, as a sheet of white paper. His theory of knowledge has been thought by many as by Leibnitz, to be embodied, in brief, in the old proposition, *Nil est in intellectu quod non fuerit prius in sensu*; and Leibnitz made the famous appen-

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(1) *Essay*, II., xii. 1.

(2) *Ib.*, II., xii. 8.

(3) *Ib.*, I., ii. 15.

(4) *Ib.*, II., xi. 17.

(5) *Ib.*, II., i. 2.



dix to it, *nisi intellectus ipse*, as expressing a necessary complement to Locke's teaching.

But while Locke undoubtedly emphasizes the passivity of the mind in the reception of the matter of knowledge, no attentive and impartial reader can declare that he does not recognize to some extent the internal constitution, life, power, activity of *intellectus ipse*. He certainly distinguishes between the mind, or the capacity to know, and knowledge. He ascribes consciousness, various faculties, including a very important synthetic power, to the mind. True, he denies to the synthetic action of the mind, or intellection proper, any ability to add anything to the conscious contents possessed from the twofold sense, or to contribute much or little, under the specious name form, to the real substance of knowledge; and limits this action to dividing, repeating, compounding, what is made ready to hand; which is certainly a simple view compared with the extraordinary assumptions of many later writers as to the productivity or creative function of intelligence.

Especially, according to Locke's theory of passivity and activity, our ideas of external realities are complex ideas formed by the synthetic power of the mind out of simple ideas (sensations); but in the composition of these complex ideas the power of synthesis is not so unqualified or arbitrary, or so entirely independent of the external things themselves, as that the ideas have no real conformation to the things.<sup>1</sup> In particular, Locke makes our ideas of external things resemblances of them as to the primary qualities.

The question of the comparative passivity and

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(1) *Essay*, II., xii. 1, and xxiv.

activity, or receptivity and spontaneity, of the mind in knowledge rose to full expression and prominence with Kant, and has filled a large space in the science of knowledge ever since. With some resemblance, there is a marked difference between his theory and that of Locke. Kant's general view is given in the following passage, which contains his noted Copernican illustration, and was written probably with special reference to Locke: "Hitherto it has been assumed that all our knowledge must conform to the objects; but all attempts to determine anything about them *a priori*, through notions whereby our cognitions might be extended, have under this presupposition come to nothing. Let us try, therefore, whether we may not succeed better with the problems of metaphysics on the assumption that objects must conform to our knowledge. This now agrees better with the desired possibility of a knowledge that should determine something concerning objects before they are given to us. Our condition here is just like that of Copernicus; who, when he could not succeed in the explanation of the celestial motions on the assumption that the whole starry host revolved around the observer, considered whether it would not be better to assume that the observer revolves and that the stars remain at rest. In metaphysics we may experiment in the same manner concerning the perception of objects. If perception must conform to the nature of the objects, then I do not see how we can know anything of it *a priori*; but if the object (as an object of the senses) conforms to the nature of our faculty of perception, then I can quite easily conceive this possibility." <sup>1</sup> The substance and intent of this passage

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(1) *Kritik d. r. V.*, p. 18.

is condensed in the brief declaration that the "understanding makes nature." Locke's theory similarly condensed would amount only to the declaration, that the understanding, by means of its complex ideas, *represents* nature.<sup>1</sup>

Let us descend to the particulars of this doctrine. Kant finds two elements in every phenomenon or knowledge, viz., "matter" and "form."<sup>2</sup> This is the second of the two most important distinctions marked by him in his analytical handling of the mind. First, he distinguishes between noumenon and phenomenon, and separates them. Here, secondly, within phenomenon, he distinguishes and separates "matter" and "form." This second distinction, as drawn by Kant, was not recognized by Locke, and has been represented as a great advance upon him and of the highest importance in itself. "Matter" Kant describes as the crude or raw material of perceptions (*den rohen Stoff sinnlicher Eindrücke*).<sup>3</sup> Of forms or forms there are said to be two species: first, the forms of sense, of which there are two, space and time — space being the form of the external sense, and time of the internal, or rather of both; and, secondly, the categories of the understanding, among the chief of which are unity, substantiality, and causality; both species having probably the same root or origin. As an illustration of the union of matter and form in perception, we may take a colored surface. The mere

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(1) Locke says: "Solidity, extension, figure, motion, and rest would be really in the world, as they are, whether there were any sensible being to perceive them or not." (*Essay*, II., xxi. 2.) Kant holds that these properties are in the world because they are put into it by the percipient mind.

(2) *Kritik d. r. V.*, p. 56. (3) *Ib.*, p. 33.

color is the matter; the extension, duration, and unity are the forms. The apparent objectivity and independence are also the effect of the forms.

Now Kant assigns the matter of knowledge to the passivity or receptivity of the mind; and the forms, especially the forms of the understanding, the categories, to its productivity or spontaneity. The matter is said to be given to the mind, to be received by the mind, to be *a posteriori*. The forms are said to lie *a priori* in the mind, to be pre-existent conditions of the possibility of knowledge, to arise from the spontaneity of the mind itself, to be supplied by the faculty of cognition. We are to understand, then, that in knowledge the matter is received, as something external or distinct, into the forms as a net-work, or that the forms are applied, as something distinct, to the matter. The affections of sense excite the mind to bring forward its *a priori* forms. But though Kant distinguishes matter and form thus as to character and origin, it should be observed he holds that they are not known apart, but always appear together in consciousness. He says indeed of form that it is an "addition which we do not distinguish from the basal matter until long practice has made us attentive to it, and qualified us to separate it." <sup>1</sup>

As to the relative importance of matter and form, Kant remarks: "Neither notions without perception in some manner corresponding to them, nor perception without notions, can furnish a cognition." <sup>2</sup> "Without sensibility no object would be given to us, and without understanding no object would be thought. Thoughts without a content are void; per-

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(1) *Kritik d. r. V.*, p. 33.

(2) *Ib.*, p. 81.

ceptions without notions are blind. Therefore it is just as necessary to make notions sensational (that is, to add to them an object in perception) as to make perceptions intellectual (that is, to bring them under notions). . . . 'The understanding can perceive nothing, and the senses think nothing. Only in their union can knowledge arise.'<sup>1</sup> The importance of the categories of the understanding to sense-perceptions is worthy of special note. Kant seems to attribute all spatial unity, even the spatial unity of a mere color, as that of a piece of white paper, not, as we might expect, to the sense-form space, but to the category of the understanding.

We may briefly observe further that, according to Kant, another productive faculty besides the understanding, a faculty concerned with the highest intellection, is reason with its three ideas of the soul, the world, and God. These ideas are much farther removed from the matter of phenomena or experience than the notions of the understanding. They are not constitutive of knowledge, but only regulative; that is, they do not enter into the body of real knowledge as the categories do, but are only principles or schemata for the guidance of the understanding to the highest synthesis. "Reason," says Kant, "never holds a direct relation to an object, but only to the understanding, and by means of the understanding comes to its own empirical employment. It therefore *forms* no notions (of objects), but only *arranges* them and gives them that unity which they are capable of having in their greatest possible extension. . . . Reason has therefore, for its proper object, only the

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(1) *Kritik d. r. V.*, p. 82.

understanding and its arranging purpose. As the understanding unites the manifold in the object through notions, so reason, for its part, unites the manifold of notions through ideas, since it gives to the operations of the understanding to aim at a certain collective unity, as they would otherwise be concerned only with a distributive unity." <sup>1</sup> "Pure reason which appeared to promise us at first nothing less than an extension of our knowledge beyond all limits of experience, contains, when properly understood, nothing but regulative principles, which truly give greater unity than the empirical use of the understanding can attain. And this they do by pushing out the goal of the progress of the understanding so far that they bring the agreement of the understanding with itself, through systematic unity, to the highest possible grade." <sup>2</sup>

But under all intellection, as the foundation principle of it, Kant puts the synthetical "unity of apperception," or the "unity of consciousness." "*Understanding* is, to speak generally, *the faculty of cognitions*. These consist in the definite relation of given representations to an object. An object is that in the notion of which the manifold of a given perception is united. Now all union of representations requires a unity of consciousness in the synthesis of them. Hence it is the unity of consciousness which alone determines the relation of representations to an object, consequently their objective validity, and the fact of their becoming cognitions; and on it therefore rests the possibility of the understanding itself." <sup>3</sup> The

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(1) *Kritik d. r. V.*, p. 436.

(2) *Ib.*, 469.

(3) *Ib.*, pp. 118, 119.

understanding itself "is nothing more than the faculty of binding *a priori*, and of bringing the manifold of given representations under the unity of apperception, which is the supreme principle in all human knowledge." <sup>1</sup> The categories of the understanding appear, accordingly, to be only different modes or functions of the "unity of consciousness."

Kant's scheme of intellection can not be defended against the charge of being, in no small degree, arbitrary and inconsistent. Especially his division of the active and passive, or productive and receptive, spheres of mind, and the implied serious diremption of the "matter" of knowledge from the "forms," (taking the latter as including, with the forms of sense and the categories of the understanding, also the ideas of reason), are groundless. They were made not in obedience to the requirement of facts, but in much disregard of them.

We notice first the assignment of the matter of knowledge, the pure or crude affections of sense, to the passivity or receptivity of the mind. The passivity as to matter is expressed by the terms *given* and *received*. The matter is said to be given to the mind, and received by the mind. Kant's use of these terms in this reference can only be regarded as the abuse of them. He manifests in them the same inexactness, the same holding to one view and employing the language of another, which we saw above, when considering his doctrine of the two senses, in his use of the word "external." These terms can only properly imply that something is actually communicated to the mind by the unknown external objects supposed to

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(1) *Kritik d. r. V.*, p. 117.

affect it; or that the mind actually receives something into itself from external sources. But though this be the only proper meaning of the words, it can not be consistently the meaning of Kant. For he really holds that the raw materials of special sense are not at all imparted to the mind by external things, or received from them; but are in fact subjective, pure affections of mind, at most only excited in the mind by the influence of external things. These materials have their source and place solely in the mind. The mind must produce them, if not by its spontaneous, yet by its excited action. The only sense, accordingly, in which they can be said to be given or received, is, that they are given by the mind to itself or received from itself: and, therefore, instead of the mind being passive as to their origin, it is really in a very important sense active.

If the matter of knowledge be thus in reality furnished by the mind itself, it is evident that there can be no such difference, as to origin, between matter and form as Kant's formal terms require. Matter is, in fact, as truly subjective and as truly the production of the mind, as form. There does not remain even the difference, that form is the effect of the spontaneous action, but matter the effect of the excited action, of mind; for Kant as expressly makes the sense-matter the occasion of the appearance of the *a priori* forms, as he makes external things the occasion of the appearance of the sense-matter. From these considerations we may justly conclude that Kant's distribution of the so-called matter and form of knowledge, the one to the receptivity, the other to the productivity, of the mind, is but an example of contradictory and erratic analysis.



But the most serious point in this distribution of the matter and form of knowledge is the simple severance, in itself, of matter and form implied in it. The assumption of the original severance of matter and form, is, as I remarked above, one of the two chief results of the Kantian criticism and analysis. The other is the diremption of phenomenon and mental noumenon. Both results stand on the same level. They must be regarded as two of the most serious errors in mental analysis that have ever been promulgated and applauded. The latter has already been considered. Phenomena are not things floating in the sphere of consciousness and known apart from the mind, with marked qualities entirely different from those of the mind in itself; they are not produced by the mental noumenon, and then thrown off as it were to a distance; but are modes of mind, stand in existential relation to mind; and mind is known immediately with them. Kant's opposing view, regarding especially the isolation of the forms of sense, space and time, is something truly remarkable. The forms of sense he declares "lie already *a priori* in the mind"; but he also declares it as fundamental that they are not properties of mind in itself, that mind in itself is extensionless and timeless. We are to understand him as holding that an extensionless and timeless mind has lying in itself space and time; or, at least, that such a mind possesses *a priori* the conditions of extended and enduring phenomena, or the faculty of forming and projecting such phenomena into consciousness and into the extended and enduring world. This is to ascribe to the mind an extraordinary power of productivity. That a spaceless mind should form and project extended objects and the whole extended

world, would indeed be something miraculous. But the supposition of it is fanciful and baseless.

Likewise of the severance of "matter" and "form." They are not originally separate and then brought together by the intellect, matter being put into form, or form being applied to matter, and so presented in consciousness; but matter and form are from the first undivided. They are distinguishable elements of the same indivisible original mental modifications. The extension, duration, and unity of a sensation of color are not elements originally severed from the special quality of the color; but are originally and indivisibly combined with it. The notion of causation is not an element existing originally apart from perceptions of cause and effect or of some antecedents and consequents; but is from the first in indivisible union with, or a constitutive element of the perceptions. Matter and form are always together in consciousness. There is no good ground for going beyond consciousness in our assumptions and holding that they are at any time separate. It should be remarked that, in the words *matter* and *form*, we have another capital instance of Kant's perverse use of language. It is undeniable that what he calls form constitutes a large portion of the very matter, or substance, proper of knowledge. With him "form" means very much more than form; and "matter" means very much less than matter. He takes the original and undetachable properties of the real matter of knowledge to make his detached forms.

(b) I have dwelt at some length on the views of Locke and Kant regarding especially the general question of the receptivity and productivity of the mind in knowledge, because no discussion of intellec-

tion can do well without the light which the discussion of this question, by these two great minds, affords. Let us now proceed, without further considerable detention of this kind, to seek the answer to the question with which we started: Does the Intellect, or the synthetic faculty, proper contribute anything of itself to the matter of knowledge?

We have already reached the conclusion that the materials of knowledge consist of the sensations, emotions, and volitions. We have also reached the conclusion that these materials have not two sources, one external and one internal; but have only an internal or subjective source. The materials are all alike pure subjective affections. It is now necessary, in the first place, to consider somewhat the activity of the mind in the production of the materials of knowledge, of which it is the only real source. This will help us to the proper discrimination of the action of the mind in intellection from this preceding action in providing materials for intellection.

The mind is productively active in the rise of the materials of knowledge; but it is at the same time so far passive or so far qualified in this activity, as that it greatly depends, for the movement to produce, upon the impression of external things. The materials of knowledge come wholly from the innate faculties of the mind itself; but they are dependent on stimulation from without. It is therefore a great exaggeration of the passivity and receptivity of the mind to compare it, even with reference to sensation, to a sheet of white paper, a mirror, etc. It must be granted that the mind is open to the impressions of outer things, just as a sheet of paper is to the pen of a writer; and that sense-perceptions would not occur, any more

than characters on the paper, without the external agency. But here the resemblance ends, leaving an important difference. The outer agency actually communicates something to the paper; but not to the mind. The characters are wholly given to the paper by the writer; the perceptions are wholly produced by the mind. The external object only excites or moves the mind, and the mind furnishes the perception of itself, without receiving the least particle from the exciting object. Like the paper, then, the mind is subject to the impression of external things; but unlike the paper it possesses internal action and productive powers which supply the whole of the elements of perceptions. The living, active, productive mind responds to excitation from without by furnishing the perceptions entirely. A mirror is a little closer illustration of the mind than a sheet of paper. The mind affords pictures, just as the glass or metallic surface; but between the two cases is yet the cardinal difference that the mirror only reflects the pictures given to it, while the mind makes its pictures within itself, receiving not the least element of them from without. The mirror is a mere reflector. The mind is wholly the producer. Like the mirror, it is affected from the outside, and its pictures in certain particulars truly represent the outer affecting objects; but yet, entirely unlike the mirror, it produces its pictures wholly by its own internal powers. The mind thus resembles a sheet of paper and a mirror, in being subject to impulse from without: but differs from them by the very important fact that it possesses productive power, of which they possess absolutely none. The mind is therefore receptive, from the fact that it receives excitation; but with the excitation it receives

no material from the external exciting things. This it originates of itself. Nothing passes from them into the mind, and enters as a constituent element into the sensation, making it a subjective and objective compound; as would be the case if the mind were really receptive in sensation.

But there is a difference regarding the properties of the primary and indivisible material units of knowledge that must not be passed without consideration. Properties are purely subjective and inseparable; but they may yet have different relations to the productivity of the mind. They may be in cases loosely distinguished as contingent or variable and permanent. For example, in a sensation of color, the special quality of color may be distinguished as variable, from the extension as permanent. They are differently related to the mind as to origination. The special quality is the contingent production of a faculty; but, in the strictest use of language, the extension of the sensation can not be said to be a production of the faculty. There is evolution or change in the rise of the special quality; but the extension is rather only a revelation of the same constituent and permanent quality of the faculty or mind itself. In the rise of the contingent quality, the mind may be said to produce; but in the extension of the sensation, the mind seems only to express its constitutional quality, extension. There is here, within mind and knowledge, a singular union of the relation of substance and attribute with the relation of cause and effect. What has just been said of extension may be in part said of duration or time.

There is not, however, with this difference as to origination between color and extension, any such

primitive separation of the two properties in source and existence as is assumed by Kant. There is no reason whatever to suppose that they are ever apart, whether beneath or before consciousness, or in its primitive stages. Extension is not added to color from a different source in the mind, but is something from which the color was never separate. From the first they are properties of the same indivisible phenomenon, extended color. They rise together from the same source by the inexplicable working of the mind. The Associationalist psychologists assume the union of color and extension in the same sensation as one of the chief instances of the inseparable association of originally separate elements. But they clearly fail to establish the assumption by any new evidence. They have never proved or made probable that the two elements which, in advanced intelligence, appear inseparable, were ever apart. There are instances, no doubt, of originally separate elements entering into very close and lasting associations; but it is yet to be shown that color and extension make one of them.

Among the qualities belonging to the mind itself before experience as well as after experience, we must count extension, and also, in the proper sense, time or duration. Extension can not be a form in and under the command of the mind, and yet not be a real quality of mind; it can not be a mere *a priori* condition of the mind's thought, and not an attribute of the mind's being. That such a form as extension should lie in, or be in any manner the product of, an unextended mind, is incredible. Extension is a constitutive property of mind, existing before phenomena appear and after they disappear. Considered in this light, it may be properly said to "lie already *a priori* in the mind,"

or to be a pre-existent condition of the possibility of experience. When in due time experience begins, or the mind is excited to produce the "matter" of phenomena, this matter appears invested with the form extension. In its rise it bears with it this form or property of the mind. In the origination of the material or experiential productions, the mind imparts, so to speak, its own *a priori* quality; it expresses in these productions its own anterior property; and matter and form arise indivisibly from the same origin. Extension is then, first, a constituent property of mind, given by the Creator in the origination of mind; and becomes, secondly, the property of the contingent productions of the mind. It makes part of the original and primary matter of knowledge; the sense form and the sense matter are rightly recognized and named in their indissoluble character, by Locke, as "materials of knowledge." We have here illustrated for us in part the proper meaning of Leibnitz's celebrated supplement of *nisi intellectus ipse*, to the principle, *Nil est in intellectu quod non fuerit prius in sensu*. The mind itself, with its internal organization and properties, precedes every sensation and every mode of consciousness. All modes become what they are by the prior organization of mind.

What has been just said of the productivity of the mind in sensation, is, in general, true of its productivity in regard to all the divisions of the materials of knowledge. In particular, while there are different origins or faculties embraced within the unity of the one mind for the diverse classes of materials, there is no difference of origins for what are called in the Kantian phraseology "matter" and "form." Sense form arises from the same source as matter. The two

are the indivisible properties of primary and elementary mental affections or modes. Likewise of the forms or categories of the understanding, as unity and causality. They are not forms or conditions of thought originally foreign to the matter of thought, and brought and applied to it from a different source. These forms have no origin and existence apart from the matter of thought. They and "matter" are not only together in consciousness, but are inseparable as possibilities from the very first. And likewise even of the so-called ideas of reason, as the idea of God. These ideas can not be originally entirely apart from and above the matter of knowledge, and from their high place operate only as rules, plans, or schemata, directing the understanding to the highest unity; but are, in origin and existence, indivisible from the elementary matter of knowledge. The idea of God has no origin, existence, possibility, or basis, apart from this original and elementary matter.

We now come directly to the central question of our discussion: What is the nature of the action of the mind in Intellection? What work is left for the Intellect? Is it in any real sense productive or creative? If matter and form are so closely related in origin, as affirmed above; if they arise together, indivisible, by the same primary and unitary exertions of mind; then the highest function of the intellect is synthesis or construction, without origination; its office can only be, substantially, that assigned to it by Locke — to divide, compare, combine, and repeat the materials set to its hand. The intellect is the mind analyzing and synthesizing its multiple and varied experiences. It discerns the constituent properties of the primary and unitary mental affections; it discerns



the relations among these affections; consolidates these relations; by combining and repeating the original material units makes large artificial units; but does not originate or create. To ascribe to the intellect such originating power as the Kantian and *a priori* philosophy ascribes to it, is but robbing the original and elementary matter of thought of its chief properties to set up and ornament in the mind a high distinct fictitious faculty.

Particulars and details of these general statements will be given with some fullness in subsequent chapters. I shall only notice here briefly a main fact or two. The question might be asked, Does the Intellect really contribute nothing original to the unity, as the spatial unity, of our great complex cognitions; and to at least the principal relations between the mental states or between objects, as, for example, the relations of resemblance and causation? As to the spatial unity of complex cognitions, I answer that it is at most but a composition made by the intellect out of the spatial unities of the original and elementary materials. The visual perception of a wide prospect is, as to its spatial extension, but a composition and representation of the spatial extension of simple and antecedent sensations. Similarly as to relations, the intellect is active, but not originative. Compare two different colors of the same superficial magnitude, a red and a blue. We immediately perceive the resemblance in magnitude. Now this resemblance is not a third something distinct from the two colors; it is not produced by the intellect in the act of comparison; the perception of it is not a third perception distinct from the perceptions of the two colors, or is not acquired by the change of attention from one color to

the other. The resemblance belongs to the two colors as they stand in juxtaposition within the one consciousness of the indivisible mind. It is as much the property of the two colors, in their connection, as any property is the property of either in separation. The perception of it is no act distinct from the perception of the colors. All the comparative faculty does in the case is simply to observe intently the relation as it already exists between or in the colors. Certainly the resemblance would not be cognized, if the colors did not stand side by side in comparison; but it is not brought or contributed to them by the intellect, as they thus stand; it is brought by or involved in the colors themselves. When any two perceptions are compared, as to resemblance, they form in fact a complex mode of mind; and the resemblance is solely the quality of the complex mode, belonging to its parts as they coexist in the mode; and are contributed from no source whatever distinct from themselves. What has been said of the resemblance of the two colors as to magnitude, may be said, in general, of their difference as to special quality. The difference is not a third something apart from the two colors themselves, the red and the blue, contributed from a different source in the mind; the perception of it is not an act distinct from the perception of them; but the difference is the property of the two colors as they coexist and constitute one complex mode of mind, and is so perceived. The intellect is often called the faculty of relations, and is rightly so called; not because it produces relations or originates the perception of relations in an act distinct from and above and over the complex perception of the things related, but because

it intensely considers and consolidates relations among the original materials of thought.

No relation has been more discussed and is more important than that of cause and effect. Its existence and perception have been by many made especially dependent on a high faculty of intelligence apart from the faculties supplying the materials of thought. How Kant makes it the chief form or category of the understanding, is well known. But every theory which makes the causal relation something primarily distinct from the two terms of the relation, or the perception of it an act, in kind and origin, distinct from and superior to the consciousness or perception of the two terms in their juxtaposition, is but an instance of the arbitrary and erroneous diremption of form from matter, which we have dwelt on above. The relation of causation is given and cognized with the two events bound by it. It is the property of the two events in their coexistence. Our first and fundamental knowledge of causation is of that between events, or cause and effect, within the mind — between a volition and its subjective effect. Now when we perceive an instance of this relation in the mind, it is not because a form of thought has been applied from another mental source to the events, or that a superior, originative act of intelligence invisibly combines itself in its results, in consciousness, with the perception of the two events; but the relation is perceived in the same act with the perception of the events, because it is the original and inseparable property of the two events, or is originally involved in them. The power that reveals itself in causation is the property of the cause or antecedent in itself. The passivity of the effect is the property of the effect in itself. True, the cause

would not be known as a cause apart from the effect, nor the effect known as an effect apart from the cause; they are known as such only in their coexistence; yet not because something is added to them in their coexistence, which does not really belong to or is not involved with themselves. The relation of causation is perceived with them because it belongs to them. The cognition of subjective cause and effect is a complex mode of mind embracing the two events, and the relation of cause and effect is the property of the complex mode, coming from no source other than that of the primary and material elements themselves. The work of intellection, in the cognition of causation, is the careful observation and the intensification of a relation existing in fact before it, and deriving no original contribution, material or formal, from it.

Notwithstanding these various illustrations and proofs of the doctrine that the intellect is only a constructive or synthetic, but not an originaive or creative faculty, the inquiry might be still pressed on us, Are there not ideas, as those of mathematical quantities, and high aesthetic and moral ideals, which have something more in them than is ever found in our elementary experiences? From what experiences, for example, do we derive or construct the perfection of the geometrical straight-line, cube, sphere? I acknowledge that this inquiry has significance, and can not be ignored. These perfect notions do go beyond our actual sense and elementary experiences; nevertheless, they do not require us to take essentially different ground for intellection. I can here only point out in brief the fact that all such notions are reached, or become matters for our use, by a gradual approximation. The mind perceives a gradation of

quality in actual experience. Having become familiar with this gradation, it pursues it beyond actual experience to an idea more perfect than is given in actual experience. However, though the mind thus goes beyond the elementary and real experiences, it would never do so if it had not received direction and impulse from regular gradations clearly given in experience. These gradations serve as plans, rules, schemata, for the guidance and excitation of the intellect; performing an office somewhat similar in character to that ascribed by Kant to the principles or schemata of reason. Kant chiefly errs in entirely divorcing the schemata of reason from the original experiential materials.

The action of the intellect, accordingly, seems to be wholly constructive, contributing nothing original to knowledge. The intellect is simply the mind considered in its chief analytic and synthetic operations with the original materials furnished by sense, emotion, and volition. Out of these materials, presented and represented, without adding of itself anything original, it forms all of our synthetic knowledge. The "matter" of these materials supplies all the matter that enters into any construction of the intellect; and their form, all the form. The construction is purely a close synthesis of their matter, and its form a synthesis of their form or forms; just as a wall of cut stone contains only the matter of the stones built into it, its magnitude being but the composition of their magnitudes.

Intellection makes some very important presuppositions. I proceed, in conclusion, to treat briefly of them. The chief presupposition of intellection is the

unity of consciousness and the mind. All unities and relations of thought are based on the unity of the mind, and by it are made organic and living. We have already seen how strongly Kant emphasized the importance of the unity of consciousness in knowledge, declaring it to be the basis of "the possibility of the existence of the understanding itself," and the highest principle of "all human knowledge." But, unfortunately, by his extreme analysis of consciousness and the mind, — by his diremption of phenomenon from mental noumenon, of form from matter, of intelligence from emotion in ethics and religion, — he also greatly opposed the principle in its full and proper import.

There are three chief stages, grades, or modes of the unity of consciousness. The *first* is the unity of a primary individual affection of mind; as, for example, the spatial unity of a simple sensation of color. This unity is a constitutive property of the simple original sensation, and is of the first significance to knowledge; but seems to be entirely disregarded in its true character by Kant and his school. The *second* mode of unity is the unity which embraces all the different affections of mind, no matter how loosely or transiently related; and consists in the knowledge that these diverse affections belong to, are the modifications of, the one self. It is possible by virtue of the relation that all affections hold to the one mind. The *third* mode of unity is that belonging to the definitive and comparatively permanent groups of the primary affections and elements, which constitute, for example, our sense-perceptions, as of an apple, a house, a horse, and our concepts, as of man, matter. This form of unity is but an advanced stage of the second,

a tightening or intensification of its loose associations: or these aggregates are but crystallizations, fixed groups, within the common consciousness of unity that constitutes the second form. This third mode of unity is intellection proper; and by comparison of it with the others the distinct character of intellection is clearly perceived. The unity of intellection is embraced in the general unity constituting the second mode above mentioned; a fact which Kant recognized in making the "unity of consciousness" the basis of the understanding. Intellection is an elective and intenser unification of the elementary mental affections. It forms into close unities and groups affections already existing in that general or universal unity which holds all affections within itself by reason of their being the affections of the one mind. It is a specialization of unity; it makes unities within unity; but contributes no original matter. The unification of intellection has three grand modes, which include all its units and relations, — the spatial, the temporal, and the causational.

We may here observe how great an error it is to classify the intellect with the faculties of emotion and volition, as if it were coordinate with them. These two faculties with that of sensation, are primary and originative, faculties of original matter; but the intellect is only synthetic. It should not, therefore, be classified with them; but only as a constructive faculty.

Further, intellection presupposes Memory and the Laws of Association which lie at the basis of memory. These, however, are not coordinate with the unity of the mind, but are rather only specializations of it. Without memory there would be no intellection. By

far the larger part of its materials are representations, by memory, of past sensations, emotions, and volitions, and its own past compositions of them. Even our ordinary and apparently immediate perceptions of external objects are, as to their elements, only in part immediate, and often in great part memories. Simple and simultaneous affections of mind have their unity. Memory gives unity to successive affections in representations; and makes the experiences or acquisitions of all our years available for the synthesis of intelligence.

The ideas of the mind are all bound together as the ideas of the one self; but there are besides tendencies in ideas that are often together to form themselves into tenacious unions, so that the recovery of one will bring up with it instantaneously and irresistibly the others. The laws of association underlie all definitive and fixed aggregates formed within the general unity of the mental phenomena. The office of these laws is simply to associate or unite; but a vigorous school of philosophy hold that they have also an originative function, that something appears in or comes out of associations which did not enter with the constituent ideas; and thus give to these laws an office similar to that of Kant's categories. This doctrine, though supported with ability, has hitherto failed to show its warrant. An important question regarding association is, what causes those repeated concurrences that are the condition of strong associations among ideas? Admitting that ideas upon frequent concurrence become inseparably associated, we may yet go back and inquire after the causes of the frequent concurrence. These causes are chiefly the



primary excitants of the affections of the mind, independent of the mind and external.

Again, a primary presupposition for intellection are those antecedent energies or impulses that urge the mind on to synthesis and definite synthesis. The question arises with reference to intellection, Why do not the elementary affections of mind remain in the isolation or loose association in which they originally appear, instead of grouping themselves definitely? The question is identical to some extent with the question of the "causes of philosophy." We must admit some original, innate impulses, as love for unity, satisfaction and relief afforded by the perception of unity, which urge the mind to its intellectual operations. There is in the mind the love of all kinds of unity, as the unity of resembling objects or of classes, the unity of design, the unity of cause and effect. The feeling of delight in unity is one of the original and simple emotions.

But it should be observed that this feeling does not precede and give the impulse to the primary perceptions of unity; it succeeds them. The feeling does not prompt to the primary discoveries of relations. It does not itself discover them nor give any faculty the power to discover them. The feeling follows these discoveries. Instead of exciting to make them, or begetting anticipations of them, it is itself aroused, though not originated, by them when made. Neither the pleasure of unity, nor the principle of anticipation or philosophical presumption, nor any power or instinct, gives the intellect the materials or the impulse to the primitive perceptions of relations, or the power to anticipate relations, simplicity, symmetry, uniformity, unity. But after the first dis-

coveries of unity, and after the emotion has been aroused by these discoveries, it then reacts on the intellectual faculty, stimulates to verification and further discoveries, and helps to facility and the habit of unification and generalization; not however by giving this faculty the power to discover or actually leading it, but simply by impelling it to use its own energies and the materials given it in preceding experience, and also by itself entering at length into the materials of the intellect and becoming a part in the more complex syntheses. By consequence, Sir W. Hamilton seems to be in error when he says, The love of unity "leads us to anticipate in nature a corresponding uniformity; and as this anticipation is found in harmony with experience, it not only affords the efficient cause of philosophy, but the guiding principle to its discoveries";<sup>1</sup> for he appears to imply that the emotion of the love of unity, before and independently of all perception of unity, leads the intellect in the search for and cognition of unity.

The second emotion which impels the intellect is allied to the first. It is the feeling of relief and satisfaction which attends the discovery of similarity and unity. Nature presents such a vast number of objects to the mind of man as not only taxes, but even overwhelms his powers of knowledge, and excites a peculiar feeling of uneasiness and distraction. Any discovery, therefore, of likeness, of species and classes, among the innumerable individuals greatly assists the mind in the comprehension and mastery of them. "The mind," says Sir W. Hamilton, "is finite in its powers of comprehension; the objects, on the con-

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(1) *Metaphysics*, p. 49.

trary, which are presented to it are, in proportion to its limited capacities, infinite in number. How then is this disproportion to be equalized? How can the infinity of nature be brought down to the finitude of man? This is done by means of Classification. Objects, though infinite in number, are not infinite in variety; they are all, in a certain sort, repetitions of the same common qualities, and the mind, though lost in the multitude of particulars, — individuals, can easily grasp the classes into which their resembling attributes enable us to assort these.”<sup>1</sup> This grasp and mastery not only dispel the feeling of distraction in the observation of numerous, at first apparently unrelated, individuals, but produce a feeling of positive satisfaction. For the same reason, any conjecture or image of unity, or of greater unity, among objects arouses this same feeling. The feeling of dissatisfaction, it should be observed, is awakened by the multiplicity of objects which nature offers to the mind. It arises because of the oppression of this multiplicity, before the perception of classes and unities. In the first discovery of classes and unity, the feeling does not impel the mind or lead it in the direction or to the place where they are to be found. Nor is it associated with any craving for unity which is active *a priori*, or before and independently of the original perceptions of unity, anticipating the judgment. The contrary view is apparently received by many, but it seems to be illusory. The feeling of oppression is a blind feeling, and originally can not help itself, but can only await the relief brought by the comparative faculty acting independently of it. But, doubtless,

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(1) *Metaphysics*, p. 466.

when discoveries of similarity and unity in the multiplicity of phenomena are made by the original energy of the comparative faculty itself, and when the feeling of relief and satisfaction arises, this feeling then reacts upon the faculty and impels it to exert itself beyond what it would do of itself. The inherent energy of this faculty would not of itself, perhaps, carry very far forward the work of generalization, if the emotions awakened by the first perceptions of relations did not come to its support and excite it to further perceptions. But certainly neither these emotions nor any *a priori* principles give it the power to perceive or perceive for it. As the perceptions of similarity and generalizations advance, the influence of these emotions on the faculty of relations increases and becomes confirmed in the settled conviction of the uniformity of nature.

The belief in the uniformity of nature is the general form of assurance that attaches itself to universal judgments. This belief has been by some reckoned among the innate cognitive principles of the mind. Its true nature and history appear to be, that it is a feeling aroused in the mind by the perceptions of the uniformity and classes in nature, and grows in strength as these perceptions multiply. It associates itself with the love of unity, and with the feeling of satisfaction which follows upon the discovery of uniformity in multiplicity; and by this association assurance reaches its highest power, confirming the faculties of perception and comparison in their advances and impelling them to farther steps. These feelings, it is then admitted, singly and combined, become in time a great influence behind the generalizing powers of the mind, and play an important part in scientific

advancement. Their influence however is not invariably good. It becomes in cases immoderate and extravagant, out of proportion to the knowledge of facts. The trust in the uniformity of nature, joining itself to the love of unity and to the feeling of relief in discovering unity, flatters the finiteness and imperfections of the mind in its generalizations, and begets a powerful assurance for very incomplete inductions. Judgments are received with full confidence as general, which are far from being established by sufficient observations. Often men hold with the intensest conviction to general propositions which more intelligent persons know to be false. Professor Bain says on this point: "The respectable name 'generalization,' implying the best products of enlightened scientific research, has also a different meaning, expressing one of the most erroneous impulses and crudest determinations of untutored human nature. To extend some familiar and narrow experience, so as to comprehend cases the most distant, is a piece of mere reckless instinct, demanding the severest discipline for its correction."<sup>1</sup>

A third emotion which excites the mind to generalization, and which agrees with the two preceding in the principles of operation dwelt upon, is Wonder. Sir W. Hamilton says of it: "This feeling, though it can not, as some have held, be allowed to be the principal, far less the only, cause of philosophy, is, however, a powerful auxiliary to speculation; and, though inadequate to account for the existence of philosophy absolutely, it adequately explains the preference with which certain parts of philosophy have been culti-

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(1) *Emotions and Will*, pp. 539, 540.

vated, and the order in which philosophy in general has been developed.”<sup>1</sup>

With these chief conditions, — the unity of the mind, memory and association, and the impelling feelings, — and the original materials supplied in indissoluble or simple phenomena, sensations, emotions, and volitions, all the work of the human intellect is accomplished, all its syntheses are formed, without the help of originative association and regulative principles, without forms of thought considered as distinct from the being of the mind and distinct in origin from the “matter” of the primary affections of mind, or as existing and operative between the “matter” of knowledge and the unity of consciousness. Special illustration and proof of these and the other main positions taken in the above general account of the intellect will be given in the chapters on its several faculties and operations immediately to follow, and in the remaining parts of the work.

The faculties or functions of the intellect are Perception, Imagination, and the Logical Faculty or the faculty of concepts, judgments, and reasoning, called also the faculty of Elaboration.

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(1) *Metaphysics*, p. 55.

## CHAPTER II.

### PERCEPTION.

Descending from the consideration of the general nature of intelligence to that of particular faculties and operations, let us begin with Perception. By perception is meant the faculty, and the action, by which we form our notions of external individual realities and the external world. It is the intellect considered as the framer of these notions. The sphere of perception is extensive, but definite. It is to be understood as including not only our notions of material objects, but also our notions of objects possessing both mental and material properties, as animals, men. My notion of another person in his full character as a complex material and spiritual being, is a perception proper. No doubt the knowledge of the two classes of properties involves distinct stages of knowledge; the knowledge of the corporeal precedes and is the medium of that of the spiritual; but the resulting concrete individual notion of the different and successively cognized properties, is rightly called a perception. The term *sense-perception* is often used to denote a large part and the whole of what is here called perception; but this compound term is somewhat objectionable, because the first part of it, *sense*, recognizes sensations as if they were the only elements of perceptions, and overlooks all other elements. Sensations certainly hold a very important and conspicuous place in perceptions; but their place does not warrant us in distinctly noticing them, and in leav-

ing other elements as distinctly unnoticed. Even in the perception of a mere material object, as an apple, or a stone, there is an important element which sense does not supply. That element is the idea of power. The notion of every material object includes the idea of power; for we only know such an object as an external cause and resistance. Now this important element is given, not by sense, but by our volitional faculty. The muscular sensations are indeed very closely associated with the idea of power, and by association and proportionate variation become a measure of internal volitional exertion and of external resistance; but this idea is not originally involved in or given with these sensations as a constitutive element; it comes from the will alone. Our notions of the simplest external things thus involve more than sensations, and can not with entire precision be called *sense-perceptions*. Into our notions of the more complex external realities, as our fellow human beings, enter yet other elements. The full notion of another person holds elements contributed by sense, will, and the emotions.

We shall now go on to consider the properties of the elementary materials of perceptions, especially of the sense-elements, sensations. Sensations are the first affections of consciousness, and by their contributions and excitations the mind proceeds to its most advanced and comprehensive inferences and views regarding all external realities. It should be distinctly remarked, however, that in our present discussion the elements of perceptions and perceptions will be considered simply in their pure character as subjective modes, or in themselves; their relation and reference



to extra-mental objects, of which they are the representative notions, being left for the most part without special notice.

1. *General Nature and Classification of Sensations:*

Sensations are those states of consciousness which are occasioned in the main by the action of external things, and generally have their seat in distinct organs. In being thus excited by the operation of external things upon particular organs, they differ, as already said, from emotions, which are mostly subsequent to and dependent upon complex cognitive states and processes, and are not distinctly localized; although particular emotions reveal themselves by peculiar bodily manifestations, as the smile, pursed brows, tears. In short, sensations are occasioned by the condition of the physical organ, as this is produced by external affection, or by internal change, as depletion, nourishment, disease; emotions are occasioned by cognitions. Sensations and emotions agree in being both pleasurable and painful; although some of both kinds are indifferent.

There are two main classes of sensations. *First*, sensations of Common Sense or *Scusus Vagus*, including those associated with the digestive, circulatory, and respiratory systems, as hunger, thirst, warmth, suffocation, dull pain, those having their seat in the muscular tissue, called the muscular sensations, and others. These are mostly deep-seated. *Secondly*, sensations of the Five Senses, — smell, taste, hearing, touch, sight. These are peripheral, and the most distinctly localized. In the multiplicity, variety, and discrimination of its sensations, the human mind is a marvel.

*2. Sensations are Pure Modes of Mind.*

I have already had occasion to announce and emphasize the pure mental character of sensations. I have done this in opposition to monists, and also to certain leading dualists, Sir W. Hamilton and his school. Sir W. Hamilton says: "Sensation is an affection neither of the body alone nor of the mind alone, but of the composite of which each is a constituent; and the subject of Sensation may be indifferently said to be in our organism (as animated) or in our soul (as united with an organism). For instance, hunger or colour are, as apprehended, neither modes of mind apart from body, nor modes of body apart from mind." <sup>1</sup> According to this statement, sensation is as really and fully dependent upon the body as upon the mind. It is not simply dependent upon the body as its objective occasion, while deriving its entire constitution from the mind; but derives from the body some of its constitutive material. This view issues, as I have before remarked, in the negation of the duality of human nature as consisting of mind and body. For, if we begin by making the individual sensation an affection of both mind and body, we can not in the end deny that mind and body are but one entity. In affirming unity and individuality of coexisting mental and material phenomena, we have no ground left for affirming duality of entities.

Though this doctrine of composite sensation, when closely considered, is found to negate dualism, yet it has been upheld by these philosophers altogether in

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(1) Edition of *Reid's Works*, p. 884.

the supposed interests of dualism. They make it the corner-stone of dualism. The end in view is to bring the properties of body or matter, as those of mind, within the sphere of consciousness, and, therefore, of absolute certainty; and entirely out of the sphere of uncertainty, probability or inference. They shut out idealism or monism, they suppose, by giving consciousness the same hold upon the qualities of matter as it has upon the qualities of mind, and the full power to distinguish, or the inability to confound, the two classes of qualities. But their effort is futile. They effect not the establishment, but only the confusion, of dualism. Their fundamental principle obliterates that most important line, the line between what we are conscious of and what we are not conscious of, or between what we know immediately and what we know only mediately. We are not conscious of any properties of matter. To attempt to introduce such properties into consciousness is sheer violence. The child and the savage are most clearly conscious of sensations, but are altogether ignorant of possessing a brain, or nerve vesicles, fibers, or currents — those physical elements that are commonly believed to be in proximate relation to mind. The same is the case with every one, until he has learned, in a roundabout way, of his internal physical possessions. Sir W. Hamilton and his followers suppose that we are conscious of a property of matter in sensation, because in sensation we are conscious of extension. They hold, in the words of the chief, that "in the consciousness of sensations relatively localized, and reciprocally external, we have a veritable apprehension, and, consequently, an immediate perception of the affected

organism, as extended, divided, figured, etc.”<sup>1</sup> We are conscious, there can be no doubt, of extension in sensation; but it is not the extension of the material organism, it is the extension of the sensation itself as a pure mode of mind. The extension of the material organism we are not conscious of, but can know only mediately. In attributing the extension, of which we are conscious in sensation, to the body, these philosophers separate, not merely in thought, but in fact, the properties of the same individual sensation, assigning one property to the mind and another to the body. Their action is quite arbitrary. They pronounce against the express deliverance of consciousness. Consciousness reveals in the same individual modes of mind, sensations, extension joined with the other constituent qualities; and what consciousness thus gives as joined in the same original individual mental mode, must not be put asunder.

{ Leading monists hold that sensation is not a pure mode of mind considered as an entity distinct from matter, but is one side or face of the same change of which the molecular motion of the nervous matter is the other face. Underlying this view is the doctrine that mind and matter are but modes of the same “ultimate reality,” or constitute a “double-faced unity”; which fact indicates to us the monistic issue of the doctrine of composite sensation as taught by the above-mentioned dualists.

That sensation and nervous action are but the inner and outer aspects of the same change, and that mind and matter are sides of the same unity, is held on the observed correspondence between mental and

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(1) Edition of *Reid's Works*, p. 884.

nervous changes. Important facts showing the close relation of mental and physical action have been always open to common observation; 'as, the contemporaneous development of mind and body; the physical expression of feelings; the effects of intoxicants, narcotics, poisons, and impurities; the phenomena of insanity. In later times this relation has been unfolded with much scientific precision and thoroughness, being the special subject of the "new psychology." As to sensations, much light has been thrown on their dependence upon the condition of the nervous structure as respects exhaustion, the amount and richness of the nourishment furnished it through the blood, and so forth. There is enough in these facts to put the close relation and correspondence between sensation and nervous change beyond question. But there is not enough to prove that sensation and nervous change are two sides of the same identical event.

As to this question, the important fact must be admitted, that we are conscious of sensations, but are not in the least conscious of nervous changes or of the nervous elements; that sensations are within consciousness, but the nervous elements and their changes without. No person ever cognized immediately, or straight across, any part or change of the nervous matter, by means of the immediate or near relation that mind is generally supposed to hold to nervous matter. Every person is clearly conscious of sensations; but discovers that he possesses nervous elements as the conditions of sensations, not in the sensations themselves, but mediately by them and other affections. I do not, for instance, immediately know by the tactile feeling, of which I am conscious

in the point of my finger, that there are nerves and touch corpuscles there; but can know them only by a roundabout knowledge, or mediately, through the assistance of the eye armed with a microscope, or of the testimony of another observer, or of reasoning from post-mortem observations on others; and their changes I can know only less directly yet.<sup>1</sup> It is therefore unquestionable that the nervous elements and changes are outside of consciousness.

And they are not only outside of consciousness, but outside of, or existentially separate from, mind. This is proved by the marked difference between the nervous structure and molecular motions, as these are commonly conceived, and conscious sensations; and also by the marked resemblance between the nervous molecular motions and the molar and molecular motions of material realities which are clearly cognized to be spatially exterior to and apart from the mind. No events can be more unlike than the supposed motions or oscillations of nervous molecules and sensations. This is true as respects the special quality, and also the spatial extent and memory, of sensations. How dissimilar are the vivid consciousness of the sensation of heat and molecular vibration!<sup>2</sup> That the consciousness of the spatial exten-

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(1) "Sensation," says Taine, "is perceived directly, completely, and at once, but the action of the nervous system is proved indirectly, incompletely, and very slowly." (*On Intelligence*, p. 101.)

(2) Mr. H. Spencer, while distinctly favoring the doctrine of the "twofold aspect," yet says: "Can we then think of the subjective and objective activities as the same? Can the oscillation of a molecule be represented in consciousness side by side with a nervous shock, and the two be recognized as one? No effort enables us to assimilate them. That a unit of feeling

sion and unity of sensation, and the atomicity of nervous matter, should coexist as the properties of the same entity, appears wholly impossible. Equally impossible appears the like coexistence of the memory and association of sensations with the atomicity and constant mutability of the nervous matter. These important differences between sensation and nervous structure and action seem positively to forbid the theory of the "twofold aspect," and to favor dualism. They forbid the marked supremacy often given by advocates of this theory to the "objective" aspect, by which the theory comes to be but disguised materialism. They certainly forbid the supposition based on the "continuity of faith," or on any mode of inference, that sensation is a derivation, evolution, or transformation from nervous molecular motions. They, on the contrary, warrant us in holding that, notwithstanding the close relation and remarkable parallelism between nervous changes and sensations, these are the qualities of different entities; or, that nervous matter and organization contain from the first very much more than mere nervous matter and organization.<sup>1</sup>

What is proved by the great dissimilarity between

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has nothing in common with a unit of motion becomes more than ever manifest when we bring the two into juxtaposition." (*Psychology*, I., p. 158.) The difference is too great to subsist in a "double-faced unit."

(1) Some hold indeed that in the elements of matter there are elements of mind, elements or beginnings of sensibility or consciousness, or, in the words of Professor Clifford, "pieces of mind-stuff" (*Lectures and Essays*, II., p. 83); and that with the organization of the elements of matter into the brain there goes a corresponding organization of the elements of mind into the human mind, — and with the dissolution of brain, a corresponding dissolution of mind.

the molecular motions of the nervous substance and sensations is confirmed by the great similarity between these motions and the motions of objects which by perception we know to be external to and absolutely severed from the mind. We clearly perceive many objects that are detached from our organism, that often neither affect it nor are affected by it. The elements and elemental changes of the nervous matter are as much like those of some of these objects, as they are unlike the sensations or changes of the mind: we may therefore well conclude that the nervous matter should be put on the side of these external objects, and apart from the agent of sensations or the mind; that, though the nervous matter is closer to the mind than they are, its existential separation from the mind is as real as theirs. So long as we perceive sensate and insensate objects that are clearly severed from our mind and organism, and from one another, so long at least may we hold that the nervous matter is an entity different from the mind or subject of sensations, and is not only a mode, face, or part below consciousness, of the same entity.

The two views (1) that sensations are complex modes, as being modes of both body and mind, and (2) that they are sides or faces of double-faced unities, seem therefore both alike to be unwarrantable assumptions. Sensations are neither the individual modes of two entities, nor parts or sides of the modes of one entity. The two entities do not share in the same individual modes; and the one entity can not have modes of such extremely unlike faces. The former view can end only in the identification of mind and matter; the latter preserves a semblance of duality, which, however, is only an illusion, a mere shadow of



the real duality of being. Sensations are pure modes of mind, holding in their composition no elements from matter. The properties of matter are outside and existentially separate from them. Sensations are bright subjective appearances, and as such are cognized by all; their supposed objective aspects have never been directly cognized by any one. Sensations are cognized immediately in their integrity. We have, no doubt, good grounds for inferring physical changes corresponding to sensations; but these changes must be held to be existentially different from sensations, because they are so unlike sensations, and so like changes of things well known to be spatially apart and detached from mind. Dualism and the doctrine of the pure subjectivity of sensations have not yet been logically displaced by monism, double-faced or simple.

Idealistic monists suppose that they largely escape the troubles and the controversy regarding the relation of sensation to nervous matter, by their doctrine that only mind is known immediately; that all so-called matter can be known only mediately through the modes of the mind; that physical facts exist for our intelligence, and apart from our intelligence would be as if they did not exist, or be really without existence; that matter is but the idea and composition of the mind.<sup>1</sup> According to this doc-

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(1) "Here now we see why it is all but indifferent whether we speak of a mental or physical organization, and therefore we might so often use the neutral expression; for every physical organization, even if I can demonstrate it under the microscope or with the knife, is still only my idea, and can not differ in its nature from what I call mental." (Lange, *Hist. Materialism*, Thomas tr., III., p. 205.)

trine, mind has the same supremacy over matter that materialists give to matter over mind;<sup>1</sup> matter can not be independent of or coordinate with mind, or material actions with mental actions, and most certainly mind can not be a derivative from the material motions and groupings. — can not be a face, or a coordinate, or derivative, of its own ideal formation.<sup>2</sup>

As to the facts that the mental phenomena are immediately known, that all material realities and events can be known only mediately by them, that all percepts, as to elements and composition, are of the mind, are as purely subjective as any phenomena whatever, that the knowledge of mind and its modes, as it is the most direct, is the most certain of all knowledge, we have, as has become plain from what has been already said, no controversy with the idealists. These facts we fully admit. But to admit them does not imply the admission of idealistic monism, or the doctrine that sensations have no independent and purely

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(1) "To the assertion that thought is a modification of matter we may always, with equal right, oppose the contrary assertion that all matter is merely the modification of the knowing subject, as its idea." "The whole world exists only in and for knowledge, and without it is not even thinkable." (Schopenhauer, *The World as Will and Idea*, Haldane and Kemp trs., I., pp. 35 and 38.)

(2) "If the unity of intelligent consciousness be the 'other side' of the succession of tremors, it is certainly not its product, nor that of the force by which this succession is explained, but the *prins* or presupposition of their existence, as an existence for us; in short, while every other 'many-in-one' is a many-in-one for consciousness, consciousness is a many-in-one for itself, which can not logically be derived from those combinations of phenomena which, alike as phenomena and as combined, only exist for it." (Green's *Philosophical Works*, p. 445. See pp. 466, 467.)

objective excitants. It is a fundamental fact of knowledge (though a fact at present very far from receiving just recognition), that pure modes of mind may represent, and may be known to represent, things distinct and absolutely severed from themselves; that even the same mental mode may give an immediate knowledge of itself and a mediate knowledge of something different and apart from itself, and that a sufficiently clear demarkation can be made between what is thus given immediately and mediately. The clear percepts and ideas thus acquired of realities outside of mind stand as firmly against idealistic monism as against the theory of the "twofold aspect." Each of these theories has to this time altogether failed to interpret these percepts and ideas into consistency with itself: and for this reason, in part, has failed to overthrow the dualism that they appear to sustain. Further consideration of the fact of representative knowledge just referred to, which is the main principle of the perception of the external, must be postponed until we come to that part of this work devoted especially to it.

As we contended against the theory of composite sensation, and that of the "twofold aspect," on behalf of the pure subjectivity of integral sensations, so we thus likewise contend against idealism, on behalf of the pure subjectivity of sensations coexistent with the pure objectivity of realities that excite them, but admitting that objective activities are closely related to, are the conditions of, the subjective sensations. Sensation, though purely subjective, has not that supremacy over the associated physical action which idealism claims, just as the physical action has not

that supremacy over sensation claimed for it by materialism; but the mental and physical actions are distinct as operations of different entities.

### 3. *The Qualities of Sensations.*

Sensations are individual, or existentially simple; but they have properties or characteristics which are clearly discriminated. The chief of these characteristics are Special Quality, Pleasure and Pain, Time or Duration, and in many cases Spatial Extension.

(a) As to Special Quality, there are marked differences among the sensations. Tastes, touches, colors, feelings of muscle, are clearly unlike. These differences are primary, and can not be made plainer than they are to every one's consciousness from the first. Their diverse conditions in the mind may be contemporaneous with the origin of the mind.

(b) Of Time it is common to enumerate Duration, Succession, and Simultaneity, as three modes. All these modes are revealed by sensations. But time is a universal quality of the mental states. Other states possess it as really as sensations. The latter are peculiar only in the great distinctness, and in the frequency and prominence in intellection, of their time modes.

When a sensation or any state of mind continues unbroken, we are cognizant of its duration. This is a simple foundation fact of mind. When a sensation is broken and repeated, or when different kinds of sensations follow one another, at long or short intervals, we are cognizant of a temporal series or of succession. When different sensations run in parallel lines, without break, or with equal breaks, we are cognizant of simultaneity.

Duration or Time is a property of sensations themselves, and of all other mental affections. It is not a mere form originating in a different source in the mind, which is imposed upon the special quality of sensations, or receives the special sensations, tastes, sounds, colors, into itself; but originates with the sensations, from the same source, and is inseparable from them. From the real duration of sensations and of our other affections, the intellect forms, by composition, conceptions of duration many times longer than our personal experience. The intellect would have nothing to do with time, if it were not for the real times of sensations and the other primary modes of mind. These are the, so to speak, elementary times of cognition.

The duration of the mind itself is the *a priori* condition of the duration of sensations. Duration being a property of the mind itself is necessarily a property of its faculties and of their special modes or productions. The doctrine that duration is a form of sense, originating in the mind, or existing in the mind as a precondition of actual sensation or experience, but yet not a property of the mind in itself, — belonging only to the mind's thinking and not to the mind's being, — is, as before observed, one of the results of the Kantian dissection; but seems to be a thoroughly arbitrary and unintelligible supposition. There is, indeed, much regarding time which we can not understand; we are altogether unable to conceive its beginning or its end; the perception and measurement by the mind of its own duration, the embrace of the past and present of a sensation in a unitary cognition, is a fact of knowledge standing coordinate in its simplicity and inexplicability with the fact of self-consciousness; but

for all this, there is no sufficient ground for considering duration as something apart from the substance of the mind, or from the mind in itself, or to suppose that the mind holds within itself the form of time, but is yet in its own being timeless.

A sensation is known as enduring, or as being successively broken and renewed, on the primary condition that the mind, or what amounts to the same thing, the faculty which produces the sensation in its special quality, possesses duration. Duration is the *a priori* property of the faculty, or belongs to it before sensation or consciousness begins. When, therefore, any faculty or sense produces a sensation, it imparts to the sensation duration. The sensation is a mode of the faculty, and possesses and reveals the duration of the faculty of which it is a mode. If the sensation be interrupted and renewed, the succession of the interruptions and renewals is known by the unbroken duration of the faculty successively producing the sensation. The permanency of the mental substance is then, as we have before argued, the precondition in a manner which will never probably be understood, of our knowledge of the duration and succession of sensations and all mental affections. The duration of a sensation, however, is its own inseparable quality. Duration is not something phenomenal or real contributed or conveyed to it from some source in the mind different from its own, but is combined with it in indivisible origination and existence.

Our original and primary knowledge of time and our standard of the measurement of time are derived from the sensations and other modes of the mind. Although time is a quality of all realities, subjective and objective, yet our first and most immediate knowl-

edge of it is as an attribute of the mind and its affections. Locke remarks on this: "It is evident to any one who will but observe what passes in his own mind, that there is a train of ideas which constantly succeed one another in his understanding, as long as he is awake. Reflection on these appearances of several ideas, one after another, in our minds, is that which furnishes us with the idea of succession; and the distance between any parts of that succession, or between the appearance of any two ideas in our minds, is that we call duration."<sup>1</sup> Having acquired the idea of time originally in this manner, we can mediately apprehend the time of extra-mental things.

It is a question whether the mind can measure the time interval between two sensations or mental states, without having the interval filled up with other states connecting them; in other words, whether the cessation of all mental activity between two sensations an hour apart would make the perception of the time between them impossible. If it should, this would seem to establish the doctrine that the mind is always active. It is, however, conceivable that the mind may learn to measure intervals which were not filled with thoughts, by intervals which were: making the measurement by means of the comparative vividness and distinctness of the remembered or remote terms.

It should be remarked that sensations reveal not only duration, but real or absolute duration: or, in other words, furnish an absolute unit or measure of time. This point it is especially necessary to consider, owing to the confusion introduced into the science of perception by forms of the doctrine of the relativity of

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(1) *Essay*, II., xiv. 3.

knowledge. It is held by some that sensations give only relative knowledge of time, or comparative duration, but not real duration. This appears to be a capital error. True, sensations do afford the notion of relative time — *i. e.*, one sensation is known by comparison as longer or shorter than another, or equal to it. But sensations may be known and are known in their real or absolute duration. Even if a sensation, as was remarked in a preceding chapter, is known or distinguished in consciousness only by comparison with another or others, and therefore its duration, like every other attribute, is known only by comparison with that of another or others, yet this relative knowledge does not exclude the possibility and the fact of the knowledge of its real duration. With the notion of longer, shorter, and equal duration, gained in comparison, there is simultaneously gained also the notion of the real duration of a sensation. The cognition of comparative length does not contradict, interfere with, or exclude, the cognition of real length.

We do not forget here the fact that the mind varies to some extent in its estimates of the experiences of the same duration; that, for example, a pleasant series of sensations often seems shorter than an unpleasant one of the same real duration. But the mind can correct and unify its time estimates by means of its own ordinary experiences. It calls to its aid various instruments, as the hour-glass and the clock; which means that it calls in its space measurements to help it in its time measurements; and we do attain to the uniform measurement of time. However, it always remains true that the perception of the duration and of the real



duration of the subjective states is a primary condition of the use and worth of every external aid or instrument, from the crudest to the most perfect. The unaided sense is remarkably acute with many persons in time discriminations. It can distinguish between the times of the right and left swings of the pendulum of a clock not standing plumb, when the ticks differ by only one-thirtieth of a second. Astronomers divide seconds accurately into tenths.

(c) Let us pass to consider the Extension and Place of sensations. Extension, spatial extension, is an attribute of sensations; but it can hardly be called a universal attribute; at any rate there are great differences among the senses in definiteness of estimation. The sensations of touch and sight surpass all others, revealing precise and distinct spatial dimension. Sensations of the other special senses and of the organic sensibility reveal at best only very indefinite spatial diffusion and limitation. One ground of this diversity in regard to extension is, doubtless, a difference in the physical conditions of sensations. The visual and tactual senses are gifted with very remarkable nervous plexus and expanses, which would seem to favor more definite diffusion and discrimination than are found in the other senses.

But though extension, at least precise extension, is a less universal quality of sensations than duration, it is as real a quality. The extension revealed by a tactual sensation, as when a silver coin is laid or pressed in the palm of the hand, or the extension of a color, is a real quality of the sensation, inseparable from it in origin and existence, though in a manner separable by abstraction. It is no addition or appendage to the sensation, coming from some other source,

or power, or place in the mind or out of it, but is an attribute of the sensation. It is not a form that is imposed upon the quality or matter of the sensation, but is associated with, and is a real quality of the matter, from the first. Proof of this is the testimony of consciousness. We are conscious of the sensation and its extension in union; we are never conscious of them in separation; and there is no reason for holding them as being ever apart.

Probably many who would grant that duration is an original attribute of sensations, would deny that extension is. Psychologists generally have assumed an important difference between the relation of duration and the relation of extension to the mental affections. It has been held apparently by many that duration is revealed primarily and immediately only by the pure subjective modes, but extension certainly not. Duration is referred to the internal sense, extension to the external. "Time," says Kant, "is nothing else than the form of internal sense — that is, of the perception of ourself and our internal state. For time can not be a determination of external phenomena." <sup>1</sup> "Space is nothing else than only the form of all phenomena of external sense — that is, the subjective condition of sensibility, under which alone external perception is possible to us." <sup>2</sup> But as according to Kant's principles, and in reality, both the external and the internal sense, both outward and inward phenomena, are in their whole contents and form purely internal or subjective in place and origin, duration must be a quality of so-called outward phenomena, and extension of inward. Kant himself says: "Time is the formal con-

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(1) *Kritik d. r. V.*, p. 67.

(2) *Ib.*, p. 61.

dition *a priori* of all phenomena whatsoever. Space, the pure form of all external perception, is limited as an *a priori* condition merely to external phenomena. But since all representations, whether they have external things as objects or not, still belong in themselves, as determinations of the mind, to the internal state, and since the internal state itself comes under the formal condition of internal perception, *i. e.*, time, it follows that time is a condition *a priori* of every phenomenon. It is the immediate condition of internal phenomena (our souls) and thereby also the mediate condition of external phenomena."<sup>1</sup> But if the real subjectivity of both "internal" and "external" phenomena in themselves makes time the form of "all phenomena whatsoever," including the "external," it also as certainly makes spatial extension the form of internal phenomena, so far as those internal phenomena which reveal it are concerned. All phenomena, "outward" and "inward," being in their nature purely subjective or mental, not duration only, but both duration and spatial extension in equal reality, are subjective or mental qualities. No adequate argument can be produced to show that extension is less a real and original attribute of sensations than duration. The cognition of the extension of a visual or tactual sensation is surely as immediate, clear, and certain, as that of the duration. It is even more so, for in a single moment we are conscious of the whole extension of at least small sensations; but the past of

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(1) *Ib.*, p. 67. "Time," says Sir W. Hamilton, closely following Kant, "is a notion even more universal than space, for while we exempt from occupying space the energies of mind, we are unable to conceive these as not occupying time." (*Metaphysics*, p. 528.)

a sensation we can not be said to be conscious of, but to know only representatively. Kant, however, on the contrary, gives great superiority to the idea of time over that of extension, even making it in instances, apparently, the condition, basis, or original, of the idea of extension.

But if duration and extension are both attributes of sensations, they differ greatly as attributes. Duration is not a constituent quality of sensations, like extension. It adds nothing to the sensation; it forms no real element of it. Duration is nothing but the continuance of the sensation, contributing no element to its being or inner nature. Extension, on the contrary, is a constituent quality of the sensation. Without it the sensation could not be what it is at any moment.

The tactual and visual sensations, as was above observed, reveal spatial extension and measurements most distinctly. Some who deny that extension is an original quality of sensations, make a special point of color and extension; holding that while color always appears extended, and can not be thought apart from extension, this is the result of an acquired association. Our inability to separate color and extension is unquestionable. It is true that we may be more intent at one time upon the color, at another upon the extension: but there is no real separation in thought of color from extension. And that color and extension were ever separate in being and thought is a surmise which does not appear to have a glimmer of evidence. As far as there is evidence, the connection between color and extension in present thought is but the expression or continuation of an original union

between them. That color is associated with the notion of distance out, is, we may suppose, the result of successive experiences, but that it is associated with superficial extension is an original, unacquired connection. Color was never separate from extension, and therefore was never welded to it by association. Color itself is extended. Extension is its original constituent property.<sup>1</sup>

The primary condition of the extension of sensations is the extension of the mind itself. The mind can not, with reason, be regarded as, in its own being, extensionless, and yet as containing within itself extension or space as a mere *a priori* form of its thought. Rather, extension can be and is a form or condition of thought or sensation, because extension is an original property of the mind's being or substance. On the view that extension is a property of the mind's substance, it is intelligible that extension should be an *a priori* condition of perception; but apart from this view, the assumption of such an *a priori*, innate condition must always appear arbitrary. The doctrine of Berkeley and others that extension is in the mind as "idea" only, and not as "attribute," is thoroughly pedantic and mystical. It has never been shown that there is any more difficulty for us in the mind's being extended than in the mind's thinking extension.

The separation of either duration or extension, or both, from the special quality or matter of sensation,

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(1) Some valuable remarks on the association of color and extension are made by Stumpf, *Ursprung der Raumvorstellung*, p. 108 et seq.

as forms or content, having a very different origin from that of the matter, and as essentially distinct from it, is entirely untrue to the facts of mind. The further analysis which ascribes these forms to the mind's thought and denies them to the mind's being, is but a rude divorcement of the modes of the mind from the mind itself. A singular and stubborn delusion of modern psychology is the supposition that the notion of extension must be accounted for at all hazards in some other way than as being an original, constitutive property of sensation itself, and of sensation as expressing in this particular a property of real mind.

The very decided opposition of many to the doctrine that sensations are in themselves extended, and have the basis of their extension in the extension of the mind, arises from various grounds; as, the supposed difficulties presented by the structure and action of the nervous organism, and others. It is believed, on facts pertaining to the structure and action of the nervous organism, that the mind is seated only in the brain or the internal nervous masses, and that therefore sensation, sensibility, or consciousness occurs only in the brain; that there is no sensibility in the nervous expanses of the external sense organs, but that the irritation of these expanses is conveyed to the ganglia of the brain and there excites sensation; that the extended irritation of these expanses, in penetrating to the brain, loses, so to speak, its extension, or converges to excite unextended sensations. It is held that out of unextended sensations excited in this manner the unextended mind constructs the notion of

extended sensation, or, on occasion of the stimulation, creates and supplies the notion of extension.<sup>1</sup>

We must grant it hardly admits of question that the mind is chiefly concentrated within the brain, and that its chief synthetic and highest operations are carried on with the instrumentality of the brain. It is probable even that without the cooperation of the mind in the brain there can be no consciousness and no knowledge at all, no sensation most indefinite as to quality, duration, and place, at any extremity. Sensations distinct as to these properties appear to require the operation of the brain, and of the mind in this "general center of nervous connections" from whence it may hold relations best with all points of the body, and where it exercises in full its powers of comparison, discrimination, and synthesis; — which facts, however, do not disallow the diffusion and continuity of the sensitive agent in the external sense organs and expansions, and the immediate experience or con-

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(1) "All those geometrical relations which exist among the sense-stimuli and among the nervous excitations they occasion must completely disappear in the moment when they pass over into the soul; for in its point of unity there is no room for their expansion. . . . In the unity of consciousness these spatial divisions no more exist than the rays of light which fall from various points on a converging lens continue to exist side by side in the focal points at which they intersect. . . . The single impressions exist together in the soul in a completely non-spatial way and are distinguished simply by their qualitative content, just as the simultaneous notes of a chord are heard apart from one another, and yet not side by side with one another, in space. From this non-spatial material the soul has to re-create entirely afresh the spatial image that has disappeared." (Lotze, *Metaphysic*, pp. 484, 485. See H. Spencer's *Psychology*, I., p. 25; and Hartmann's *Philosophy of the Unconscious*, I., p. 335.)

sciousness in them of simple affections of extended sense.<sup>1</sup> The relations of the mind to the centers of the brain, or of mental changes to the molecular changes of these centers, are not known so well, or in such a manner, as that they are known to exclude the possibility of the presence of the mind in the outer nervous extremities. If mind may dwell in the cells of the brain, or if it may be in immediate relation to the currents along the brain fibers, why may it not be also in immediate relation to the outer ends and masses of the same fibers and the same matter?

Let us descend to particulars. As to the retina and ocular sensibility, it is held that the sensitive principle can not be present and diffused in the retina, for the reason that when the optic nerve is cut blindness follows, the retina though sound and perfect gives no sign of sensibility; and besides, when the stump of the interior portion of the nerve is irritated, flashes of light are experienced. It is further said, and truly, that when the retina or the eye has been extirpated, flashes of light, and even more definite and regular sensations, are experienced on irritation of the optic nerve; and the inference is drawn therefrom that the centers of the brain are alone the organs and seat of

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(1) Sir W. Hamilton remarks: "There can be no doubt that the whole organism of the sense, from periphery to centre, must co-operate simultaneously in perception; but there is no reason to place the mind at the central extremity alone." (Ed. of *Reid's Works*, p. 248.) That the sensibility of the retina is qualified by the action of the cerebral centre of vision seems to be proved by certain facts of the so-called consecutive images and of the mixture of colors. It has been suggested by a French writer that "there exists a sort of cerebral retina each point of which is in intimate connection with corresponding points of the peripheral retina."



visual sensibility. It is held, moreover, that various facts of visual perception, as erect and single vision, apparent magnitudes, the filling of the "blind spot," show the work of a high "psychical" or "creative" faculty, above mere sensibility.

But these and the like conclusions have been too hastily drawn, and are apparently unwarrantable. The fact that sensibility is entirely absent from the retina after the severance of the optic nerve, does not prove that it was entirely absent before the severance. Such loss of sensibility we might expect. So serious a dismemberment of the nervous apparatus as the severance of the optic nerve (or commissure, as it may be called) amounts to, may well be supposed to lead to the loss of sensibility in the retina. Sensibility ceases in the retina, and continues in the brain, because the retina is the external and inferior organ, and is not, instead of the brain, the grand central one collecting the mental energies towards itself. If a limb be cut from a body, the body continues to live, but the limb dies. It ceases to participate in the life of the body. Likewise, the retina, when severed from the nervous system, ceases to participate in the sensibility of its system. Again, if one hemisphere of the brain be paralyzed or destroyed, all the mental functions may be carried on by the instrumentality of the other. <sup>1</sup>

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(1) "When one hemisphere is removed or destroyed by disease, motion and sensation are abolished unilaterally, but mental operations are still capable of being carried on in their completeness through the agency of the one hemisphere. The individual who is paralyzed as to sensation and motion by disease of the opposite side of the brain (say the right), is not paralyzed mentally, for he can still feel and will and think, and intelligently comprehend with the one hemisphere. If these functions are

This certainly does not prove, as all will admit, that the paralyzed hemisphere was never a seat and organ of consciousness; just as little does the fact that after the detachment or extirpation of the retina we continue to experience certain visual sensations, prove that there never was sensibility in this "expanded ganglion." The definite and regular sensations that we have with the retina, compared with the flashes and indefinite ones that are had without it, indicate the importance of the instrumentality of the retina.

The conclusion that the filling of the "blind spot," the phenomena of erect and single vision, the vast apparent extensions of visual perceptions, are not consistent with the view that we are capable of extended definite sensibility in the retina, has not been verified. The great magnitudes which we perceive by vision are easily and fully explained by the association of the visual sensations with the tactual and muscular. The small real extension of the retinal sensations excited by external light from large objects, becomes, by association with the tactual sensations excited by the same objects, representative of the extension of the tactual sensations; and by association with both the tactual and muscular sensations, helped by the conviction of the existence and importance of external objects, sight measures all objects by the standard of touch. For these reasons we do not think of the real extension of retinal sensations, but only of the real extension of touch and the external objects represented by them; just as we do not

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not carried on with the same vigor, they at least do not appear to suffer in respect of completeness." (Ferrier, *Functions of the Brain*, p. 257.)

think of colors as existing in the mind where they really are, but as the properties of external objects.<sup>1</sup>

As the influence of the tactual and muscular sensations, and of the inferences made from them, upon vision, accounts for the representation, by the small retinal sensations, of the great magnitudes of external things, so this influence, if not entirely sufficient, goes a long way in the explanation of erect and single vision. As touch brings vision to adopt its standard of measurement for objects, or to translate its own magnitudes into the magnitudes of touch, so touch brings vision to adopt the number and posture it assigns to objects, and to neglect the number and posture of its own sensations.

The filling up of the "blind spot" is placing extended sensation where there really is no sensation, and has been assumed to be the work of a creative psychical activity. But this phenomenon seems to be adequately accounted for, if regarded as a work of the imagination, founded on the real continuity of the remaining parts of the image, the movement of the eye, and the conviction of the continuity of the external reality.<sup>2</sup>

The remarkable discrete nervous elements of the retina, or the fact that these are separated from one

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(1) Berkeley erroneously held that visible and tangible ideas and magnitudes are absolutely different, that the visible are, by an "arbitrary connexion," "signs" of the tangible. But whatever may be the difference between the real extensions of visual and tactual sensations, and whatever may be the agreement notwithstanding as to standard of measurement, the retinal and tactual surfaces yet are alike in the primary fact that each is an original seat of superficial sensibility. This fact is a primary condition of the remarkable association between the two senses.

(2) See Stumpf, *Ursprung d. Raumvorstellung*, p. 82.

another by elements not nervous, might seem to oppose the possibility of extended or continuous sensation in the retina.<sup>1</sup> But these discrete elements, essential to fine space-discriminations, can not be assumed to make a spatially continuous sensation impossible. The nervous expanse must be supposed to perform the extraordinary double office of affording the conditions of both a *discretum* and a *continuum*, of both discrete and continuous sensation. Where the nervous elements are apart, sensation is continuous; and indeed continuity is absolutely necessary to the knowledge of all discontinuity; but we must admit that microscopic observation on the outside, as introspection on the inside, does not enable us to discover the ultimate conditions of the diffusion and spatial continuity of the sensitive agent and sensation in the retinal tissues.<sup>2</sup>

None of the facts which we have been considering appears to oppose or to be out of harmony with the possibility of extended sensibility in the retina, or to authorize the assumption that sensation takes place solely in the brain, and can not also take place, in any manner or degree, in the retina. Favoring the reality of this sensibility is the sameness in constituent elements between the "expanded ganglion" of the retina

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(1) Wundt, *Physiologische Psychologie*, 2nd ed., II., p. 69.

(2) An instance of the extreme discrimination of retinal sensibility is the fact that "the figure of a man six feet high, seen at the distance of ten yards, makes at the cornea a visual angle of 11 deg. 30 min., and forms upon the retina an image which is less than half a millimetre (one-fiftieth of an inch) in length; and yet an abundance of details are distinctly perceptible within this space." (Dalton's *Human Physiology*, p. 626.) And with the "abundance of details" we have as clearly and immediately also the spatial continuity of the image.

and the internal ganglia. It is surely as reasonable to believe that extension is the property of sensation in the retina, as that it is the creation of a punctual or unextended agent amidst a similar nervous mass within the brain. Further, this sensibility seems to be positively required by the remarkable correspondence between the visual sensations and the figures delineated on the retina by external light.

As to tactual sensibility, it is supposed by many that, though tactual sensations appear to be situated and to be extended at the superficies, they only appear so, and are not really so. This conclusion, as to localization, is thought to be supported by the fact that sensations are projected to the outer ends of hairs and nails, to the outer end of a stick held in the hand, and to the extremities of lost limbs, — to places where they certainly can not in reality be. These false projections, it is assumed, prove that placing sensations at the superficies is a false projection. I have treated of these facts at some length in my work on *Perception*. They can not annul the positive consciousness of tactual sensations situate at the periphery. Sensations would very probably never be projected to the place of a lost limb if they had not been previously often experienced in the limb. Projections to the outer ends of insensible parts, or of sticks indenting the superficies, seem to be possible only on the condition that sensibility is in the superficies. There would be no knowledge of these parts and objects, and consequently no projection of sensations, including visual sensations, to them, without original extended sensibility in the superficies. The causes of such projections are not hard to understand.

Our clear consciousness of extended sensation at the periphery is the condition of the fallacious projection of sensations beyond the periphery; but criticism has not hitherto succeeded in showing that this consciousness of peripheral sensation is itself fallacious projection. <sup>1</sup>

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(1) Even if sensation is not felt in the organ, *e. g.*, a finger, until excitation has been conveyed from it through the nerves to the brain, the fact still remains that the sensation is felt as if in the finger. It is impossible to prove that this localization of sensation in the finger is a delusive projection from the brain, effected through the visual or through any other sense distinct from the tactual. Apparently the only tenable view therefore is that, be the physical conditions what they may, sensation is localized in the finger because it is in the finger.

It is the theory of some that the tactual sensations are localized by the muscular sensations of our moving organs. This theory supposes, in effect, that sensations, which, differing in intensity, if not in quality, are all in themselves or originally without extension and known spatial position, are able to give extension and position to other sensations, or to cause them to appear as extended, separate, and localized. This is to suppose that spatial extension and place are derived from temporal succession and place, and is perfectly idle. There is no such sudden and marvelous development in knowledge of a perfectly new thing. Besides, if the muscular and other motor sensations are, as all others are thought to be, but pure unextended experiences solely within the brain, it would seem to be quite impossible for them to localize extended tactual sensations in limbs distant from the brain. How can they point to places which are so far away and which they themselves can not immediately know?

Many, who hold that sensations, including the tactual and muscular, occur only in the brain, say that we project sensations to the places at the periphery where the nerves normally terminate and are irritated by external excitants. But they never give a satisfactory and tenable account of how we acquire our first knowledge of the peripheral localities, and the external excitants, or have in that knowledge an occasion or guide for the projection of sensations, or how we come first to project sensations to them. That failure is fatal to their theory.

Our primary cognition of trinal extension occurs with cutaneous and deep sensation at the periphery, the primary physical condition of which are probably the sensory nerves distributed to skin and muscle. Pressure upon the surface or the grasping of the flesh occasions this cognition. It is not probable that the idea of trinal extension is originally derived from the idea of superficial extension and sensations accompanying the movements of our limbs.

Because of the facts of projection above considered, and other phenomena, many psychologists hold that extension is no original quality of sensation as it appears to be, but is a quality supplied to sensations by a creative act of mind, or is the product of "psychical synthesis" in the brain. <sup>1</sup>

Kant seems to teach that the perception or representation of even the shortest line is the act or result of figuring a succession of units. <sup>2</sup> This doctrine

(1) "As in the synthetic judgment a new predicate is given to the subject, and as in chemical synthesis from certain elements a composition arises with new properties; so also psychical synthesis furnishes, as a new product, the spatial arrangement of the sensations entering into it." (Wundt, *Phys. Psychologie*, 2nd ed., II., p. 28. The same author's *Theorie d. Sinneswahrnehmung*, p. 444.)

Lotze regards the notion of extension as a "reaction" and "creation" of the unexhausted but inscrutable nature of the soul, occasioned primarily by external sense-stimulus. (*Metaphysic*, p. 476.) He says again: "What is the reason that the soul, receiving from things manifold impressions which can only be to begin with unextended states of its own receptive nature, is obliged to envisage them at all under the form of a space with parts outside each other? The cause of this marvelous transfiguration could only be found in the peculiar nature of the soul, but it never will be found." (*Ib.*, p. 207.)

(2) "I can not represent to myself any line, however small

stands in direct contradiction to the fact. By vision, in the instantaneous light of a single electric spark, in a time too short for the eye to move or the mind to draw or construct anything, we clearly cognize lines and surface. There is no real evidence that the cognition is the result of present or past synthesis or creation. By touch also we cognize short lines instantaneously, without drawing, synthesis, or memory. As to long lines, however, Kant's doctrine of synthesis is no doubt true. The notion of a long line is the result of picturing a succession of units. But of what kind of units? Not ultimately of non-spatial or unextended, as the punctualists assert, but of extended. The notion of a long line is constructed out of the original and simple notions of short lines. There is thus no creation of spatial length out of nothing, or out of pure succession; but short lengths are known in simple sensations and in single moments of time; and long ones are known by the memory and synthesis of short ones. The first simple cognitions of extension, lineal, superficial, and trinal, are only of small quantities, not of the whole body, nor of the whole of limbs, and are also vague. From these small portions, with the aid principally of the muscular and other sensations attending the motions of the locomotive organs, especially the arms, the mind advances rapidly to the definite unitary knowledge of the whole volume of the body.

A primary condition of all is the presence of extended sensibility in the extended sense-organ.

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it may be, without drawing it in thought, that is, without producing from a point all parts successively, and thus for the first figuring this intuition." (*Kritik d. r. V.*, p. 156.)



Irritation is no doubt transmitted to the brain in the cognition of extended sensation; but sensibility is not only in the brain, it is also in the external nervous expanse; and extensions corresponding to the extensions of external irritations are known and localized at the periphery by the extended sensitive agent. They are not created within the brain out of non-spatial sensations and projected by this agent considered as punctual and situate in the brain alone. That the percipient agent regarded as non-extended can construct out of intensive unextended sensations the notion of extension, or can from its own non-extension furnish either extension or the thought of extension and space, must, we believe, be given up in the end as something wholly mystical and incredible. It seems to be necessary to begin the science of knowledge with the assumption of the notion of extension as an original and simple element of knowledge; not, however, by making this notion, as Kant did, a form of thought as distinguished from the matter of thought; but by making it a quality of the matter of thought itself, and repudiating the Kantian separation of sense-form from sense-matter.

In recapitulation, I remark especially regarding the cognition of the extension of sensations, that it is original, simple, and absolute.

1. The cognition of the extension of sensations is original and not derived. It stands coordinate in this respect with the notions of time and force. It is as certainly a primordial element of knowledge as either of these latter notions; and is at least of equal importance. Many labored attempts, however, have been made to show that the idea of extension is derived

from the idea of time or from the ideas of time and force. The efforts of the English psychologists, Brown, Bain, Mill, and Spencer, to this end, I have examined at some length elsewhere. The reasoning of these writers on this subject is a striking instance of fallacious assumption and procedure, a curious travesty of scientific thinking. Their theory reduces the idea of extension to the mere memory of a time series; with some, the memory especially of a time series of muscular sensations or "sensations of force." Time is, in brief, declared to be an irreversible, extension a reversible, *sequence*. But all the proof we can have against any doctrine concerning the mind, is against this one. The consciousness of the extension of sensations is as early, original, and emphatic, as the knowledge of the duration, succession, and simultaneity, or the time, of sensations. The quality of extension has indisputably testimony of at least equal worth to that of time; there is no warrant for declaring it not equal, and giving the superiority of originality, or even of precedence or clearness, to the idea of time. The doctrine of derivation is, in truth, a primary assumption of the systems of identity or pantheism and dialectic development; as, on the other hand, that of originality is a fundamental principle of dualism. The denial of the originality of the cognition of spatial extension and separation, takes along with it the denial of plurality of beings, or the assumption that all things and phenomena are but the changes or transformations of the same spaceless unit. But as far as the logic of the derivativists is concerned, the doctrine of originality stands firmly intact on these two facts: *first*, the consciousness of extended sensation;

*secondly*, the absolute failure of all attempts hitherto to prove that this consciousness is derived from the consciousness or experience of time or of the unextended.

2. Our primary cognitions of extension are simple. There can be no question that our notions of large extensions or objects and spaces, and even of large tracts of our superficies, are compound, being combinations made by putting together simultaneously or successively original and simple extensions. A simple retinal sensation may represent the combination of many tactual sensations. But it must be accepted as a primary principle, that our notions of great extended wholes can not be formed out of unextended simples, as the notions of mathematical points; but must be formed out of simple notions of small extensions. They are formed from a succession, but it is a succession of extended elements or parts. Furthermore, simplicity is not inconsistent with ideal divisibility. One can not think of a limit to the divisibility into parts of any extended thing; but simplicity may remain while conceivable divisibility goes on. The extended sensation produced by the pressure of a piece of silver in the palm of the hand is a simple sensation, is not the result of simultaneous or successive combination of parts; but yet is ideally divisible; not compounded of parts, it is separable ideally into parts. Moreover, sensations of less extension may be excited in the palm by objects of less extension, these varying simple extensions being possible on the common basis of the unity of the mind itself in extension.

3. It is to be remarked of extension, as it was of time, that our cognitions are not of relative quantities

only, but also of real or absolute quantities. We discern the relative extension of a lineal tactual sensation, that it is shorter than one, longer than another; but with these relative perceptions, touch gives also perceptions and a unit or standard of real extension. The real extension of a sensation is known contemporaneously with its comparative extension. The knowledge of the latter can not be said to be more necessary to that of the former, than the knowledge of the former is to that of the latter. The comparative knowledge is not more certain than the real, and can by no means exclude it. Many psychologists and physiologists have strenuously argued against this view. The experiments of the German Weber, and of others who have followed him, with the tactual sensibility, are supposed to prove that there is no perception of real magnitude by touch, because touch shows, on different regions of its surface, great diversity in fineness of spatial discrimination and in estimation of the same real extension. It may be confidently maintained, regarding the diversity in the estimates of the same real distance, that more has been deduced from the Weberian experiments than they at all warrant; and the doctrine that the tactual sense is in general uniform in its measurements, and affords the cognition of real extension and an absolute unit or standard, meets with no serious opposition from them. <sup>1</sup> Great uniformity of tactual measurement is certainly a fact of actual experience, and a very important element in the unity of individual and social life; and there is no proof that this uniformity is dependent essentially on

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(1) I have treated of Weber's experiments in my work on *Perception*, pp. 275-288.

any faculty other than the tactual sense itself. We may conclude, then, that in touch we have sensations of absolute spatial extension, possessing at least the same degree of uniformity and perfection as was claimed for our perceptions of real time; and, in the science of knowledge, may start with them as being among the original elements or units of knowledge.

So much for sensations. We have given this somewhat extended consideration to them because of their variety, and in order to ascertain their true character. It is far too common with psychologists to mistake the character of sensations, and to attribute some of their chief properties to other actions of the mind; and, for this reason, our discussion is not likely to escape the charge of altogether lacking philosophical insight and comprehension, from those especially who find no fault with the arbitrariness of the transcendental or the derivatist analysis and synthesis of the intellectual phenomena.

But notwithstanding the prominence and importance in perceptive intelligence of the sensations, especially of the tactual, visual, and muscular, they are not more important than the notion of force, which is supplied by the will; for, although we may be cognizant of subjective extension apart from the experience of force, we can have no notion of external extended realities without the notion of force. And if we take perception with the breadth given it above, as including the notions of real external composite, material and mental, beings, then it is indebted to the emotions for significant contributions. Our notion of a man in his integrity as a concrete individual, possessing corporeal and mental attributes, contains the ideas of his magnitude, color, and of his volitional and emo-

tional powers; or, in other words, contains representative elements from our own sense, volitional, and emotional experiences.

Perception, in itself, as a process, is the synthesis or construction of these diverse subjective elements into notions of external individual things and the external world. The elementary materials, coexisting primarily in the loose relations of general consciousness, in which all affections of mind are known as belonging to the one mind, are combined into close and permanent groups, forming special unities within the general unity of consciousness. A foundation condition of every perception is the frequent association of the sense and other elements that enter into it. They adhere more closely to one another, and less closely to other modes of mind, because they have been often occasioned together. Through frequent simultaneous association they have come to form a complex mode or to cohere, so that when any one of them occurs it immediately recalls the others. No peculiar or distinct principle of unity is needed to account for the perceptive grouping. It is but a special unification in the unity that embraces all affections of mind by virtue of the unity of the mind. Perceptive intellection is thus not a voluntary, or designed, but an involuntary, grouping. The cohesion of the groups is simply persistent association of elements that were originally brought together, not by the purpose of the mind, but by the concurrence of external occasions.

But though perception is synthetic, though it may be properly said "to make," or "actively to construct," our notions or representations of external realities, yet it is not originaive; it can not be properly said to con-

tribute of itself anything to the matter of notions, or to make them, even partially, out of materials not supplied to it in the simple original elementary experiences. Perception does not contribute extension and duration to its complex notions. These properties belong to the materials before and independently of perception proper. Every notion of a large extension is but a complex formed of notions of small simple extensions given in sensations. The tactual sensation produced by a stone laid in the palm, and which forms part of the elementary matter of the perception of the stone, is, as such, before it enters firmly into the notion of the stone, a primary extended unit. All the unity of a perception in its extension is but the unity of an elementary simple extended sensation or of a combination of such sensations.

The office which memory performs in perceptive intellection is a very important one. Without memory there would be little or no perception proper; because perceptions are combinations of present and remembered affections. My perception of yonder tree is such a combination. The present affections are ocular, both retinal and muscular; the remembered affections are recalled, through association, by the ocular, and are in part tactual sensations and muscular and other of the motor sensations. But such recall of past affections by present, implies their previous coexistence and association. Memory is not, however, as we should still bear in mind, necessary for the perception of small extensions, but only of large. A small extension may be perceived, as to all points, simultaneously or in a single moment. Large extensions are perceived by a succession of sensations, and therefore by the aid of memory. The eye, at perfect

rest, can perceive in a moment a great expanse; although it is true that, while the perception of extension is original to the eye, in its retinal impressions, and is possible in an instant, without memory, yet the retinal perceptions are always interpreted, as to the external expanse which they represent, by the tactual sensations and by the muscular sensations of the locomotive organs. <sup>1</sup>

We add, in conclusion, that perceptions are, in themselves, purely mental or subjective. This follows from the fact that the elementary affections of which they are composed, are purely subjective. The reference of perceptions to external realities is also a purely subjective addition to them. But though our perceptions are entirely subjective, and though they are all that we have immediately to do with in external cognition, this does not support the idealistic view that there are no real objective things which our perceptions correspond to or represent. My perception of a distant tree with its varied foliage is purely subjective; still there certainly exists at that place a real objective tree independent of the mind, invested, so to speak, in my subjective perception projected to it, through which it is known. The mind makes our notions or representations of nature, but it does not make nature; and the fact that these notions are made, or are composite, does not prove that they can not be

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(1) A notable fact is the vividness of the represented elements in percepts. Sully remarks on this: "Our perceptions though really compounded of sensations and ideational elements, take on, *as a whole*, the superior sensuous vividness of the former." (*Human Mind*, I., p. 191.) He asserts again that it is of the essence of the percept to appear "as a perfectly-welded whole." (*Ib.*, p. 210.)



true representations in important respects of external things.

Sir W. Hamilton seems to deny the pure subjectivity of perceptions. He thus distinguishes sensation proper from perception proper: "*Sensitive Perception*, or *Perception* simply, is that act of Consciousness whereby we apprehend in our body, (a) Certain *special affections*, whereof as an *animated* organism it is contingently susceptible; and (b) Those *general relations of extension* under which as a *material* organism it necessarily exists. Of these Perceptions, the former, which is thus conversant about a *subject-object*, is *Sensation proper*; the latter, which is thus conversant about an *object-object*, is *Perception proper*." <sup>1</sup> By being "*conversant* about an *object-object*," he means more than an immediate and decided reference to the material object. Consciousness of the object is implied; and with this, apparently, that perception proper contains a real objective element. But this doctrine Sir W. Hamilton certainly never made good. Sensation and perception are alike in their pure subjectivity, and neither can embrace the consciousness of an object-object. Perception has a reference to external things, but does not give them immediately; it contains the consciousness of extension, but the extension is of a sensation or sensations that enter into it, and not of an object-object. In his view of perception, Sir W. Hamilton seriously, though subtly, confounds the spheres of subject and object, of consciousness and inference.

The contrast between sensation and perception, as to subjectivity and objectivity, is again more particu-

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(1) Edition of *Reid's Works*, pp. 876, 877.

larly set forth by Sir W. Hamilton in his well-known view, "that, above a certain point, the stronger the Sensation, the weaker the Perception; and the distincter the perception the less obtrusive the sensation; in other words, though Perception proper and Sensation proper exist only as they coexist, in the degree or intensity of their existence they are always found in an inverse ratio to each other." <sup>1</sup> Those who make subject and object a distinction within mind or thought bring out the distinction most prominently in the discussion of perception. In the following we have Professor Bain's adaptation of the principle just quoted from Sir W. Hamilton regarding the comparative strength of sensation and perception: "In sensation we are subject and object by turns. We are *object* when attending to the form and magnitude of a conflagration; we are *subject* when we give way to the emotional effect of the luminous blaze. Now, although the name Sensation is used for both states, Perception is the better word for the object attitude."<sup>2</sup>

The varying intensity of sensation and perception is a fact of experience; but it is not to be interpreted, either in accordance with the dualist's or the monist's theory, on the supposition that perception is, in itself, any more objective than sensation. This inverse intensity is a difference between elements of the same pure subjective states. I may be more attentive to the pleasure, or pain, or special quality of a sensation or perception, than to its extension or external reference; or more to the latter than to the former;

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(1) Edition of *Reid's Works*, p. 880.

(2) *Emotions and Will*, p. 583.

neither entirely excludes the other from consciousness. But the extension, or the reference to external things, of a sensation or perception, is as purely subjective, in itself, as any element or attachment of the perception, as its pleasure, or its pain, or special quality. Real objects, object-objects, are extra-mental. To put subject and object, as varying elements, within the percipient act, or to attribute real objectivity to the act, as an act, or to any element of it, is the fundamental error of monism.

## CHAPTER III.

### IMAGINATION.

Imagination is, like memory, a mode of the representative power of the mind, of the power that is primarily representative of our past subjective experiences. Its special range or work has been variously defined, and variously contrasted with that of memory. In comparison with one another, these two faculties may be defined, in general terms, thus: Memory is the faculty of Literal Representation; Imagination is the faculty of Constructive Representation. Memory represents past presentations or experiences as they occurred; Imagination represents past experiences, not as they occurred, but in new and original forms and combinations.

It is very common to classify both imagination and memory as intellectual faculties. But taking the intellect with the definition above given of it, as especially the synthetic power proper of the mind, only the imagination can be strictly denominated intellectual, and not memory. Imagination and memory have close kinship in that both are representative faculties; but the distinct analytic and constructive action of the former makes it distinctly intellectual. It might indeed be said of memory that, while not in itself constructive like imagination, but at most only representative of syntheses already formed, it may be justly called intellectual, in so far as it represents the syntheses of the intellect including those of the imagination; yet from its more general character as the repre-

sentative of all past experiences, primary and intellectual, simple and complex, it can not be rightly classed as intellectual, but must be put with the most general faculties of the mind. Accordingly, I have treated of it in near association with consciousness. Memory is the recovery of all past experiences, simple and complex; as consciousness is the cognition of all present experiences, simple and complex.

Imagination being, as appears in contrast with memory, a faculty of intellect, the next step is to determine its distinct character as such, especially in comparison with the intellectual faculty already considered, Perception. Imagination is intellectual because, in general, from the reproductions of memory it selects qualities and parts, and combines them into new wholes. And it not only selects and then unites the different elements, but very often refines, diminishes, enlarges them, and by this means makes of them highly idealized syntheses. The representations of the imagination are all individual notions, and nearly all concretes. Here there is an important agreement between perception and imagination. Perceptions are of singles, as of a tree, a house, an expanse of country, the starry sky. The constructions of the imagination are singles, as ideal trees, ideal scenes, characters, models, standards, etc. Both faculties plainly distinguish themselves in this respect from the faculty of general notions.

As to the materials which it employs in its constructions, the imagination is universal; that is, it employs all the elementary materials of knowledge, sensations, emotions, and volitions. Memory reproduces all these materials, and imagination uses them all. The name of the faculty gives special promi-

nence to the visual sensations; but though the visual sensations are very conspicuous in very many of the ideals of the imagination, other sensations are used; and not sensations alone, but all the primary experiences of the mind. Imagination may form an ideal man, a Liliputian, limiting itself to sense or corporeal qualities; but it need not so limit itself; it may work into its ideal many elements from all the faculties of original matter. The ideal of Iago is not formed simply of such qualities as might strike only the eye and the senses: but also of hypocrisy and treachery, of concealed and vile motives and volitions; the passions and impulses which the corporeal motions and attitudes indicate, must be reckoned as part of the ideal. And by the medium of his drama the poet enables our imaginations, to some extent at least, to construct from sense, emotional, and volitional experiences, the complex character in his own mind's eye. Milton's Satan is not purely a being of huge bulk, stretching "many a rood" upon the burning lake, but a being possessing or claiming also

"th' unconquerable will,  
And study of revenge, immortal hate."

From the whole range of the primary experiences, conserved and reproduced by memory, the imagination forms its varied and wonderful constructions, artistic, poetical, mathematical, the conjectures of the inventor, the models of character and taste, etc. In the universal character of the materials used, imagination and perception have a point of agreement. They agree also in the entire subjectivity of their syntheses. The elements employed by both faculties being purely subjective, their synthetic products are also purely subjective.

In the important facts, that it employs elements from all our primary experiences, and that its productions are individual notions and wholly subjective, imagination resembles perception. There are important facts in which it does not resemble perception. In the first place, imagination employs only represented materials, but perception presented. It is true that, as we noted above, perception uses, along with its presented, also represented materials, the reproductions of memory; but if it were not for the presented materials, perceptions would not be perceptions, but rather only memories. Imagination uses represented matter alone, the reproductions furnished to it by memory.

There is a marked difference between the two faculties in the decided reference to external things which accompanies perceptions, and is absent from imaginations. Perceptions are, it is true, as purely subjective, and as much compositions by the intellect, as imaginations; but in the firm belief that they represent real external objects, they have a very important adjunct that imaginations lack. Perceptions being as purely mental in their elements, and as really synthetic, as imaginations, it becomes an interesting question how they come to differ in regard to external reference. To discuss this question fully would require us to go farther into the subject of external perception than we can go at this point; but it may be remarked that, between a perception and an imagination, the mind is conscious of the primary and fundamental difference between a sensation and the idea of it, between a presentation and a representation. Further, and more particularly, the mind is conscious of its own agency far more in the composi-

tion of imaginations than in the composition of perceptions. I do not say that imaginations; as, for example, the conjectures and presumptions of the inventor and discoverer, and the ideals of the artist and poet, are the products of the will working through the imagination. For what we construct by volition must exist beforehand in idea; and therefore, if imaginations are the constructions of the will, they must have existence before they are formed; nevertheless, in the rise of the syntheses of the imagination, there is voluntary, and often very close and continuous, application of the mind to the materials which associate themselves in these syntheses. Upon this indirect action of the will imagination is far more dependent than perception. In perception the mind knows itself as much more dependent upon agencies beyond consciousness and distinct from itself.

Such are the main characteristics of imagination as to its materials and products, and in comparison with the faculties of memory and perception. It is a secondary faculty, like memory; but is narrower, being a special mode of the intellectual power. It is constructive, while memory is only reproductive. Like perception it concerns itself only with individuals; but its highly artificial concretes are without supposed or known correspondence to external and real objects.

The presuppositions or antecedent conditions of imagination are worthy of some consideration. I have already remarked on the dependence of imagination upon memory. All the materials employed by the imagination are the reproductions of memory; and memory is therefore a fundamental condition of imagination, as it is of all other intellectual processes. The office of the imagination is to effect special forms



and compositions out of the materials given by memory.

The laws of association play an important part for imagination. The operations of the imagination are, no doubt, as was above observed, to some degree under the influence of the will; but they are more under the involuntary laws of association. One element draws another to it by some law of association, and thus the works of the imagination grow to completeness.

Imagination requires, again, the work of analysis, partition, and selection or abstraction. It does not simply combine into larger wholes the wholes furnished by memory; but selects parts and qualities obtained by analysis of these wholes and by abstraction, and makes therefrom special constructions. Imagination may stop with the refinement of an entity or element gotten by analysis or abstraction, and not go on to synthesis: as, for example, in the case of the geometrical straight line, the notion of which is individual, but not strictly concrete.

The rank of the imagination among the intellectual powers, and its practical importance, are high. In the ideal refinements, expansions, and combinations which it effects, it is truly a remarkable power. It holds a primary place in the series of faculties which forward our thought from its simple and primitive elements and beginnings to its most elaborate constructions and farthest reaches. Imagination, following perception, takes the representations produced by memory in conformity with the original experiences, and by analysis, selection, refinement, combination, presents a whole realm of ideal individual products, giving a great diversification and expansion to our

cognitive life. Any one may readily see how much imagination contributes to our intellectual experiences, by considering how confined these experiences would be if we were limited in our representations to the verisimilar reproductions of memory.

Imagination is concerned in every science and in every human interest. The fine arts are peculiarly its creations; but the severest sciences, mathematics, mechanics, ethics, are greatly dependent on it. In no department of science and practical art does the mind push forward aimlessly or labor blindly, but is lead by ideals. It follows the course of an imagined track. It works under the light of an ideal model. There have been instances, it is true, of the mind's making progress by mere accident or stumbling; but there is very little progress for which the imagination does not deserve the credit of leadership. It is not denied that the imagination sometimes leads into the mazes and bogs of error, and causes the waste of energy and life in the pursuit of vagaries and the attempt of impossibilities; but with all proper abatement, it yet remains true that in most cases of advancement in science and art, in invention and reform, the imagination has taken the initiatory steps by supplying ideals of possible accomplishments.

But it does not come within the purview of this chapter to enter into a detailed treatment of the relations of the imagination to the sciences, of its office as leader, and of other important though subordinate questions. Our treatment must be restricted to the chief characteristics of the faculty. We now pass, therefore, to consider the fundamental and interesting question, Whether the imagination in any degree creates anything, or contributes from itself to the

materials supplied in the reproductions of memory; or whether its products and syntheses have no constituents whatever in them beyond the elements from memory? Both sides of this question have had advocates. Some have contended that the highest constructions of the imagination contain nothing except what is given in the memory of presentations. Others have contended that in at least some of the products of imagination there are manifestly characteristics that were never given in any presentations. They instance, among other ideals, mathematical figures, lines, surfaces, solids. It is admitted, of course, that we perceive through the senses lines, surfaces, and solids; but it is claimed that by no analysis of them and rearrangement of elements can the perfect, idealized figures of geometry be formed.

As to the question of the creative ability of imagination, it can not be maintained that the imagination strictly originates any matter; that it supplies from itself, besides arrangement, something which the presentative powers do not supply. Imagination is not a presentative power. As to materials, it must be ranked with the secondary or representative faculties of the mind. Yet, on the other hand, it can not be denied that the ideals of the imagination, in cases, possess properties, besides mere synthesis, which can not be said in strictness to have previously appeared in experience. This is true not of geometrical figures alone; and apparently requires for the imagination creative energies.

We must allow to the imagination the peculiar power to follow a tendency, a course of variation, a clew perceived in experience, beyond what it was ever known to reach. This unquestionable power to fol-

low a variation manifested in experience, by some property or properties of things, farther than it has ever been actually cognized, is sufficient to account for all the apparent originations of the imagination.

The idealized figures of geometry afford a marked instance of this peculiar faculty. Take the straight line. Strictly speaking, the geometrical straight line is not a composition of the imagination, but a refinement of the straight lines of perception. The straight lines we perceive are really elongated solids, and are not perfectly straight. But we are furnished in them with all the material that ever goes into the most idealized or perfect line. The work of the imagination is not the origination of matter, but is abstraction and refinement wrought on the gross matter of perception. From the straight line of perception the breadth and depth are taken, and the length is left; and its crooked places are made straight. The work of the imagination here is progressive; but, let it be observed, it is a progression that simply pursues a course of progression clearly revealed already in our experience. We have the distinct experience of perceiving lines which vary in thickness to extreme fineness. But experience never furnishes lines that have only length. Here imagination comes in, and, pursuing the course of variation or gradation in fineness clearly revealed by perception, carries this variation to a point, to a limit, which was never cognized by perception. The same principle is true of straightness. What we call straight lines in experience, are not perfectly straight. We do not perceive such lines; but such lines we employ in geometry. The imagination attains to the geometrical straight line by following a gradation, which is clearly seen in experience, to a

length that is never seen in experience, supporting itself by the perceived line. We have constant experience of lines varying in crookedness, and reaching to almost absolute straightness. The imagination following this course of variation is able to go a step beyond experience, to the geometrical limit, — supporting itself, however, necessarily and always by the grosser perceived line. If the imagination does not actually picture the geometrical straight line in its perfection, it still, at the least, makes it possible for us to employ this line, in demonstrations, with the greatest ease.

The idealization which transforms perceived figures into geometrical ones is in all cases of the character which has just been described. It depends upon the power of the imagination to follow a clew or order of variation a stage further than is cognized by perception. This power constitutes the originality of the imagination. The imagination does not contribute to the materials of its idealized lines or entities. It contributes only to the form. And in this its contribution is suggested by perception or experience; it only follows along a course of variation, in a road, in a direction, distinctly pointed out by real experience. It simply completes an approximation or process which was nearly completed by perception. It does not advance to the idea of perfect straightness independently, of itself, without guidance; but does it by following a line of gradation clearly and fully revealed to it by sense. If now we consider what imagination owes to experience of both matter and guidance, it is plain that there is nothing left which entitles this faculty to claim real originality. If it

produced the idea of perfect straightness by its own motion and original procedure, without having set before it by experience the gradation that carried us nearly to perfect straightness, and without the constant support of perceived lines, then it would be said with some right to be creative; but as the case stands, imagination is rather only a remarkable copyist.

Here rises an important question as to the action of the imagination regarding mathematical figures: What moves the imagination to its work of idealization? why do we not stop with the figures of experience? why go on thus beyond the reach of experience? The movement is undoubtedly excited, in part at least, by manifest convenience, by practical advantage or necessity.

In our ordinary experience, mechanical convenience or necessity often leads us to form as fine and straight a line, or as perfect a surface, as possible; and by successive efforts we may make a marked improvement on our first attempt. A carpenter by repeated and careful effort can plane to a straighter edge, can make a surface nearer and nearer a level. Thus we not only may observe the gradation of straightness in lines, or of perfection in surfaces, but are often led or compelled by our experience to the distinct consideration and appreciation of it. The advantages of going as far as we can, in perfecting figures, do not cease to be apparent when we have done our best, but continue apparent; and thus form a stimulant to the imagination to push on beyond the range of experience, in the direction which experience reveals, to the geometrical limits. The very limits of experience excite adventures beyond them. In cases, it is mani-

fest that imagination has to take but a step, and not a very long step, beyond experience.

The imagination carries on such idealization in every department of its work, and not in the mathematical only. Its office is not simply reconstruction or rearrangement, but also the construction of the elements given to it in more perfect forms than they ever appeared in experience. It is so as to aesthetic and moral ideals. But this idealization, in its farthest and most perfect advances, is made in lines clearly indicated by experience. Imagination goes beyond experience because experience itself distinctly points out the road; and while imagination is, as was remarked above, a leader of thought and life, yet it is itself led in this manner, primitively, by experience. Thus imagination derives from experience both materials and direction; and on these two gifts all its productions are dependent. It possesses no originality distinct from them.

In regard to the causes of the idealization of the imagination or the impulses behind it, they are the same, in general, as those to knowledge. The love of unity, and wonder, move imagination as they move our original acquisitive powers. The conveniencies and necessities or interests of life are, as was above noted, to be considered. Subjects and events that are important in history as causes or effects, or have marked moral qualities, attract the imagination. The *Iliad* is probably based on great real events. The importance and interest of these, together with the impulse to give them unity, to fill up the vacancies of tradition, and to glorify the whole, moved the poetic imagination. *Paradise Lost* is based on events of the

greatest moral significance. The aim of the poet was the highest, to

"assert eternal Providence  
And justify the ways of God to men."

Taking the limited revelation of events and characters given in the Scriptures, he has wrought them into a grand idealized whole, filling up the picture from his own imagination. The limits of our knowledge of important objects and events excite the imagination to make excursions beyond them and to supply what appears to be wanting.



## CHAPTER IV.

### LOGICAL THOUGHT.

The intellectual processes which have occupied our attention to this point are concerned chiefly with the formation of individual concrete notions. Percepts and imaginations are the representations of individual things or collections of individuals taken as aggregates. We now advance to the consideration of the most complex and highest operations of the intellect, namely, those concerned especially with the comparison of individuals and the formation and application of general abstract notions or concepts.

The significance of this advance in intellection is manifest. To form concrete notions out of the primary individual affections of mind is the first and lower stage of intellection. As a stage it has great distinct importance. It carries us from the infinite multiplicity of the single phenomena of mind to definite and fixed groups. But above this stage of intellection is another. Though our concrete individual notions constitute a remarkable sum of groups of our primary experiences, still these groups or congeries, the syntheses of perception and imagination, are themselves so numerous and various as to confound and oppress the mind. From this plane, then, the mind rises to a higher range of synthesis, to the collection of our concrete notions under concepts or class notions, or the objects represented by them into classes. This second remarkable move of the intellect brings the greatest relief to the mind by the

comprehension and mastery it makes possible of the infinity of objects or our concrete notions of them. Intellection accordingly has two main stages. Beginning with our diverse primary simple experiences, sensations, emotions, and volitions, it, in the first place, combines them into congeries more or less permanent, the notions of distinct objects; in the second place, it combines these concrete notions of objects under concepts, or collects their objects into classes.

This second and advanced intellection which we have now to examine is the work of what is called the Logical Faculty, Judgment, or the Faculty of Comparison. The operations of this faculty are commonly divided into three species, closely related and interdependent, viz., Conception, Judgment, and Reasoning. The first has to do with the formation of general notions or concepts; the others, in general, with the comparison of attributes, concretes, and concepts, and the detection of agreement or some relation among them. These three operations, however, are fundamentally the same; they are all forms of judgment. Judgment, in general, is the comparison of things and the cognition of resemblance and difference. Logical conception, judgment, and reasoning are modes of comparison.

But as comparison or judgment seems to be a condition of consciousness, and to be required in every species of knowledge, it becomes important to determine the special character of logical judgment. It has been already seen that our primary experience, the consciousness of the elementary individual affections of mind, implies judgment. Consciousness seems to awake in the act of discrimination. We are conscious of an affection in the consciousness of its

difference from another or others. The single affection does not owe its character to the contrast; it has its own original, independent character, and thereby makes comparison on one side possible; but it is known in its independent character only as it is contrasted with others. In the consciousness of *this* affection of mind, we tacitly judge it is not *that*. When we pass from the elementary states of mind to concrete ones, perceptions and representations, we find that comparison, discrimination, and judgments take place likewise in the consciousness of them.

The comparison or judgment required in the consciousness of the elementary experiences, and of the perceptive and representative syntheses, has this peculiarity: it regards the differences of things rather than the resemblances. Its tendency is not to combine the things compared, but to perfect their individualization: Every primary affection, and also, therefore, every complex, has its own character, which it reveals in, but does not derive from, comparison. Some comparison being necessary for the consciousness of the simple and complex modes, continued comparison of them, especially as to their differences, brings out their independent character fully, separates them distinctly from one another, makes their bounding lines clear — in a word, intensifies the consciousness of their individuality.

The judgment strictly of the logical faculty differs from that of the primary consciousness and intellection in having respect to the resemblances of objects rather than to the differences. True, the cognition of resemblance always accompanies that of difference, and of difference that of resemblance; but logical intellection does not mark the differences or disagree-

ments of things so much as the agreements. It does not tend to individualize, but to assimilate, or to combine individuals by their common qualities. Accordingly it unites objects, on the basis of their agreement, into classes; and from known agreements infers unknown.

Let us proceed to consider more particularly the processes of the logical faculty, according to the common classification of conception, judgment, and reasoning. It should be first remarked that the logical faculty has to do immediately only with the simple and complex modes of mind, not with the external things or the things represented or revealed by them. There is, no doubt, the assumption that the subjective modes, in very many instances, resemble or correspond to external things; we speak of the things as if they were immediately considered; but we in fact immediately consider only the modes of the mind, conscious at the same time of their reference to things. With the truthfulness of this reference, however, or the degree and manner of the correspondence of the subjective states to things, the logical processes in general have nothing directly to do; although indeed the external reference is, in itself, one of the most important and extraordinary acts of the logical faculty, a most remarkable leap of the mind from the known to the unknown. Locke's definition of knowledge, as being "the perception of the connexion and agreement or disagreement and repugnancy of any of our ideas," is more fitly the definition of logical intellection.

But though the subjective modes or notions are the things primarily considered in logical intellection, as in intellection in general, we must yet recognize

also, in addition to the confident objective reference of very many of these notions, the fact that words, like signs in algebra, are very often employed in logical thought when there is a faint or very inadequate consciousness of the notions signified by them. Words are used, as signs, for notions. Among *words*, *thoughts*, and *external things*, there are certain intimate and very remarkable relations. Thoughts are formed to things, words to thoughts, and the sciences of the three mingle with one another in a curious and interesting manner. "Signs, thoughts and exterior objects," says Professor Jevons, "may be regarded as parallel and analogous series of phenomena, and to treat any one of the three series is equivalent to treating either of the other series." <sup>1</sup>

Conception is the cognition of a quality or qualities in which a number of things agree, or as common to them. The product of the cognition is called a general notion or a concept. For example, we observe the different kinds of triangles, equilateral, isosceles, scalene, and cognize the common property, three-sidedness, with the inseparable property, triangularity. The cognition of these properties as common to the different triangles, is conception. The result is the concept triangle, the notion constituted by the two inseparable properties.

There are three main species of notions which should be distinguished from one another, in order clearly to cognize each of them. These are the individual abstract notion, the individual concrete notion, and the general notion or concept; or the notion of an attribute, the notion of a concrete object, and the

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(1) *Principles of Science*, p. 9.

notion of the attribute or attributes in which a number of things are seen to agree. The concept implies a reference to a plurality of things.

Conception requires comparison and abstraction. We cognize the common properties of a number of objects only by comparing the objects. In comparison we discern these properties. By fixing attention upon them they are abstracted in thought from the other properties of the concrete things compared, and especially unified. The result is a concept. As to abstraction, however, we must not affirm that there is absolute severance in thought of the attributes comprehended in the concept from the attributes not comprehended; but only that attention is chiefly concentrated on the former. The mind can distinguish attributes which are inseparable in existence and thought, and attend to one more fully by partial neglect of the others. The concept being in this manner the product of comparison, may be regarded as a condensation of judgments, into which it may be again explicated.

It should, however, be carefully observed of concepts that, though they are spoken of as distinct notions of distinct attributes, they can not be pictured; represented, or realized in thought, in this separate character, or as absolute. A concept can be realized in thought only as the notion of an attribute or attributes of one of the individual things classified by it. The concept triangle can be pictured only as a part of the concrete notion of some particular triangle.

Connected with the formation of concepts is the significant fact of naming them. The importance of names consists chiefly in giving permanency to concepts. On this Sir W. Hamilton remarks: "The

concept thus formed by an abstraction of the resembling from the non-resembling qualities of objects, would again fall back into the confusion and infinitude from which it has been called out, were it not rendered permanent for consciousness by being fixed and ratified in a verbal sign.”<sup>1</sup> These verbal signs are class-names.

It has been long an important matter of controversy among philosophers, in what the generality of concepts really consists. Of later philosophers, some have held that, as a concept can not be represented in thought as something separate or apart, but can only be a portion of the representation of one of the individuals belonging to its class, concepts have no generality at all, and that the only general things are names. Mr. J. S. Mill says: “General concepts, therefore, we have, properly speaking, none; we have only complex ideas of objects in the concrete; but we are able to attend exclusively to certain parts of the concrete idea; and by that exclusive attention we enable those parts to determine exclusively the course of our thoughts as subsequently called up by association; and are in a condition to carry on a train of meditation or reasoning relating to those parts only, exactly as if we were able to conceive them separately from the rest. What principally enables us to do this is the employment of signs, and particularly the most efficient and familiar kind of signs, viz., Names.”<sup>2</sup> A name may call up any of the individuals of the class denoted by it, but forms a specially close association

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(1) *Logic*, pp. 97, 98.

(2) *Exam. Hamilton*, II., p. 65.

with the common attribute or attributes contained in the concept of the class.

This theory makes no essential difference between an individual abstract notion and a concept. The concept is but an abstract notion of one or more attributes of an individual thing. This view does not seem to answer to the facts. A concept must be allowed to possess a species of generality in itself. It has a manifest reference not only to a single thing, but to a plurality. And it is only the generality of concepts that can lead to, or account for, the generality of names. Names, no doubt, greatly support thought in the retention and use of concepts, and in successive ascents in generalization; but yet they follow the lead of thought. They do not become general without thought, but only because of the generality of thought. A name is made general as the effect and the sign of the generality of thought.

"Their whole generality," says Sir W. Hamilton of concepts, "consists in this, — that though we must realize them in thought under some singular of the class, we may do it under any." "Concepts have only a potential, not an actual, universality; that is, they are only universal, inasmuch as they may be applied to any of a certain class of objects, but as actually applied they are no longer general attributions, but only special attributes." "They fall back into more special determinations of the individual object in which they are represented." <sup>1</sup>

As to the fact that a concept can only be actually represented as a part of the notion of some individual of its class, there appears to be general agreement.

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(1) *Logic*, pp. 92, 97, 96.



The chief matter is, what is the character or power of the concept when so represented? The concept, though picturable only as a part of the representation of an individual, is distinctly something more than a mere part of the individual notion, or than an abstract idea. It is still truly a general abstract idea. It is so because it bears a positive reference to other individuals besides the one in the notion of which it is included. It not only may be, but actually is, applied to others. In the representation of a concept, there is, with the image of some individual owning the qualities comprehended by the concept, at the same time the consciousness, faint it may be, but certain, of images of other individuals owning the same qualities with perhaps differences of mode. The concept realized in the notion of a particular individual refers to, or recalls, with more or less distinctness, notions of other individuals possessing the common qualities; recalling with more vividness the common qualities with their differences of mode. The concept may not only be realized in any one of its singulars, but when realized recalls others of the singulars. The concept triangle may be represented in the image of a particular equilateral triangle; but with the representation, there is simultaneously the consciousness of other individuals of the class, and especially of their quality of three-sidedness with diversity of mode. The concept or general abstract notion differs from the individual abstract in thus reviving in representation the association of an individual of a class with its fellows, calling special attention to the class-qualities; and this generality of concepts is the necessary ground of the generality of names.

What are the requisite conditions and the occasion of forming general notions? All the conditions are given in experience and the ordinary powers of the mind. The matter of concepts is supplied from the notions of individual concretes. Concepts are made of the common qualities of individuals. The unity of concepts has nothing more mysterious in it than the unity of perceptions. The cognition of the relations among individuals, of the resemblances and differences, is no extraordinary intellection. Generalization is a distinct advance in synthesis beyond perception and representation; but it requires no faculty to supply new material to thought, no high "*a priori*" regulating law or laws, no forms which impart extraordinary attributes to thought. In generalization the mind is commonly impelled to the work. What impels, however, is emotion, and not any extraordinary regulating, divining, knowing principle or instinct. The emotions that concern themselves with generalization are the same as those already-noticed as standing behind intellection in general, — the love of unity, the relief to the mind in acquiring-mastery of the multiplicity and variety of objects presented to it, etc. But no emotion impels or leads the mind in the first acts of conception and generalization. These acts are, so to speak, pure intuitions, the direct recognitions of the relations of presentations and representations; not made or occasioned by any impulse or directive law, but exciting, when made, emotions which act in turn on the logical processes and confirm and urge them on. Even abstraction has been referred by some to a "native" intellectual impulse. Such an assumption seems gratuitous. Making a particular attribute of an individual, or a common

attribute of a number of individuals, a special object of attention, is only ordinary, experiential action of mind.

The reverse of the common doctrine of the general notion or concept is held by Hegel. He contends that the notion, instead of being derived from individuals, is itself, on the contrary, the prius and entity from which individuals are evolved by dialectic development. The notion is not an abstraction from individuals, but individuals are the product of the self-active evolving notion. "It is a mistake," he says, "to suppose that by the operation of abstraction, and by colligating the points possessed in common by the objects, our agency frames the notions of them. Rather the notion is the genuine first, and things are what they are through the action of the notion, immanent in them, and revealing itself in them." <sup>1</sup>

We pass to the consideration of Judgment. "To Judge," says Sir W. Hamilton, "is to recognize the relation of congruence or of confliction, in which two concepts, two individual things, or a concept and an individual, compared together, stand to each other. This recognition considered as an internal consciousness is called a *Judgment*; considered as expressed in language, it is called a *Proposition* or *Predication*." <sup>2</sup>

Judgment, as was above observed, is implied in all consciousness and intellection, because we know an elementary affection of mind or any synthesis of such affections, only by discriminating it from others. We cognize that this or that is an affection of mind or that this or that is the quality of an individual. Such judgments may be simple perceptions or representa-

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(1) *Logic* (Wallace, 1st ed.), p. 253.

(2) *Logic*, p. 159

tions; they may tend only to make the character of individuals more distinct, or to perfect their individualization. Logical judgment, strictly so-called, does not emphasize or perfect the individuality of the things considered in it, and keep them apart; but holds them together in comparison, regarding especially their relative character.

Judgments announced are propositions. To propositions, it is affirmed by many, truth and falsehood belong; or, that the terms *true* and *false* are applicable to the relations of our notions to one another, rather than to the relations of our notions to the things which they represent. This is in conformity with the principle noticed already, that the logical faculty is concerned immediately with the modes and representations of the mind, and not with the represented realities; although the correspondence of subjective modes with outer realities is confidently assumed. We may conveniently distinguish between logical or formal and real truth; regarding the former as the conformity of notions to one another, the latter as the conformity of notions to realities.

Reasoning is a special mode of judgment; it is, in general, the comparison of two notions by means of a third. There is especially in reasoning the supposition of an agreement or relation which has not been observed, on the ground of an agreement or relation which has been; and the proof or verification of the supposition. Two kinds of reasoning are commonly recognized, Induction and Deduction. The former is reasoning from particulars to generals; the latter is reasoning from generals to particulars. They are very closely related. It has been maintained that a

third, and the fundamental, type is reasoning from particulars to particulars. "All inference," says Mr. J. S. Mill, "is from particulars to particulars."<sup>1</sup>

A primary mode of valid reasoning is as follows: A number of things that have the attributes A, B, C, have also the attribute D. A certain other thing agrees with them in having the attributes A, B, C; it therefore has the attribute D. The distinctive characteristic of this and of every instance of reasoning is the leap of thought from the observed to the unobserved, from the known to the unknown. Judgment may concern itself with what has been observed; but in reasoning judgment advances from observed agreements or relations to unobserved, or, in general, from the known to the unknown. From the comparison of the observed fall of bodies near the earth with the observed fall of the moon, the mind of Newton sprang to the supposition that the motion of the remote body was governed by the same force and law as that of the near ones. This supposition and the verification of it, together with the farther inferences to which it immediately led, are reckoned the most extraordinary achievement of human reason. From the observed similarity of the appearances of lightning and electricity, Franklin made and verified the happy conjecture that lightning is electricity.

Here rises an interesting and important question for epistemology: What is the cause, ground, prin-

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(1) *Logic*, 8th (Amer.) ed., p. 146.

"The most general type of reasoning is to infer from one particular fact to another particular fact of the same kind; the likeness being both the means of suggestion and the justification of the transfer of properties." (Bain, *Logic*, p. 8.)

ciple, of this peculiar movement of the mind in reasoning, — of the leap of thought, the anticipation, the presumption, going beyond the known to the unknown? On this question, Sir W. Hamilton remarks: "When our experience has revealed to us a certain correspondence among a number of objects, we are determined, by an original principle of our nature, to suppose the existence of a more extensive correspondence than our observation has already proved, or may ever be able to establish. This tendency to generalize our knowledge by the judgment, — that where much has been found accordant, all will be found accordant, — is not properly a conclusion deduced from premises, but an original principle of our nature, which we may call that of *Logical*, or perhaps better, that of *Philosophical, Presumption*." <sup>1</sup> Mr. J. S. Mill says on the same question: "We conclude from known instances to unknown by the impulse of the generalizing propensity." <sup>2</sup> By "logical presumption" and the "generalizing propensity," these writers seem to mean the same thing, namely, the belief in the uniformity of nature.

There appear to be two principal causes of the presumption in reasoning. The first cause are the laws of association of ideas, especially the laws of resemblance and contiguity; the second is the con-

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(1) *Logic*, p. 450. In the following, Sir W. Hamilton appears to identify the principle of "Logical Presumption" with the "instinctive" belief in the uniformity of nature: "Applied Induction rests on the constancy, the uniformity of nature, and on the instinctive expectation we have of this stability. This constitutes what has been called the principle of Logical Presumption." (*Logic*, p. 451.)

(2) *Logic*, p. 154.

viction of the uniformity and constancy of nature. Our first inferences are probably solely the suggestions of association; and in such a manner as this: A concrete individual, B, is perceived to resemble another concrete, A, in the possession of certain attributes. We surmise, without perceiving, that B resembles A also in the possession of some other particular attribute, which we have already observed A to possess, and which is probably, for some cause, conspicuous or notable. The surmise is the effect of the laws of association. Having really perceived the particular attribute in A, in association with the attributes common to both A and B, when we perceive B the thought of the particular attribute is called up because the attribute has been already perceived in association with the common attributes as existing in A. The central part or act in inference is the spontaneous association of ideas.

The second great cause of the presumption in reasoning or inference is the belief in the uniformity and stability of nature. There is a significant difference among psychologists as to the character or origin of this belief. Some, as Sir W. Hamilton, regard it as an innate or original tendency of the mind; not as dependent upon, but as independent of, the experience or perception of the uniformity of nature, and as therefore leading us in particular instances to expect or anticipate uniformity before uniformity has been perceived. Others hold that the belief rises out of, or is wholly occasioned by, the experiential knowledge of the uniformity of nature; that it is not an original principle of the mind operating before or independently of such knowledge, and leading us to presume

or anticipate uniformity, but arises upon the knowledge of uniformity, and grows in strength with the increase of knowledge.

The latter theory seems to be in greater harmony with the facts. That nature is uniform, becomes indeed a powerful conviction of the mind; but it is a conviction which is excited and developed by the previous frequent cognitions of the similarity and agreement in nature. It does not precede all such cognitions and lead or urge the mind on to them, or enable the logical faculty to make them, or make them itself; but is itself excited first by them; though when thus excited it becomes an impelling force to the making of inferences. The first cognitions of the uniformity of nature are purely experiential. We cognize resemblances simply as they exist, and because they exist, by the pure experiential intuition and synthesis of the comparative faculty. The mind at first perceives instances of the uniformity of nature, without being in the least influenced by any instinctive expectation of uniformity. The discovery or inference of the similarities of nature is, therefore, at first a pure act of comparison and association, to which the feelings of pleasure, relief; assurance, attach themselves.

The great fact of the uniformity of nature we soon begin in our experience to observe. We rapidly perceive that "objects though infinite in number are not infinite in variety"; that there is not total diversity in the qualities and relations of things, that the world is not a chaos of unlikenesses and fortuitous concurrences, but that there is much uniformity and permanence of quality and conjunction. Then, on occasion



of these experimental cognitions, rises the propensity to expect, anticipate, presume, uniformity where it has not been perceived or greater uniformity than has been perceived.

## CHAPTER V.

### LANGUAGE AND SYMBOLS.

Language is not in the strict sense the product of a peculiar faculty of mind and knowledge; but its relations to the chief intellectual operations are of such importance that it deserves consideration by the side of these operations.

The most conspicuous use of language is as a medium for the communication of thought. But it is of equal importance, as already in part indicated, to the inner processes of thought, especially in their most advanced stages. The relation of language to the subjective operations will be chiefly considered here.

1. The first service of language to be noticed is the great support it gives to memory in the preservation and reproduction of knowledge. The names of general ideas especially become by association closely attached to the ideas, and are used by memory as signs and registers of the ideas. To such terms cling a great many concrete ideas.

2. Language greatly abbreviates thought. This it does by giving us symbols which we may use for perceptions and concepts without thinking of their content, or of anything more than a small part of their content. Thought would be very laborious and slow, if we were obliged to bring up the whole or most of the matter of our ideas when we employ them, or could never think securely and safely without doing so.

3. But the greatest service of language is the aid

it gives to thought in its farthest reaches and advancement. Language is not necessary for the existence of thought. We can perceive, remember, imagine, generalize without it; but the highest operations of the imagination and the generalizing faculties are impossible without it.

Let us observe, first, how language and symbols support the imagination and enable us to handle in thought objects which imagination may partially, but not wholly, represent. There are objects which the imagination may picture in part, but not wholly, either because of their great extent, or because of their great complexity or multiplicity of parts. Space and time are examples of the former; a chiliagon, or polygon of a thousand sides, of the latter. The imagination may employ also more perfect things than it can actually or perfectly picture; as mathematical figures. The imagination can easily picture a volume of space. The largest representable volume is difficult to tell; it doubtless varies with the imaginative capacity of individuals; but, in any case, it is very small compared with the vast spaces that are taken account of by all minds of ordinary cultivation. Men talk intelligently of the dimensions of the earth, of the distance of the moon, of the sun, of the fixed stars; and yet it is beyond the power of any human imagination to picture these great lengths. Imagination may run out along these lines, but with its utmost struggles to proceed, to hold on to what it has gone over, and to reach over more, it soon finds its limits. The same may be said of it in regard to time. We talk of ages and long stretches of time; while the largest capacity to imagine duration is limited to a comparatively small number of years. Likewise with

objects of numerous parts or phases, and large collections of individuals. We can easily picture a polygon of a few sides. But increase in the number of the sides does not proceed far until it passes beyond the capacity of representation. And yet we reason correctly and securely about any polygon until its sides become by division infinite in number and infinitesimal in size, and it is transmuted, if it be a regular one, into a circle. It is beyond the power of the imagination to picture a very considerable number of parts or individuals of any kind; as a thousand coins, horses, acres.

Now, as there is nothing more common in life than to deal with or reason about magnitudes and numbers of individual objects which are greatly beyond the reach of our imaginative or representative power, it becomes an interesting question to consider how the mind is able to do this. The answer to this question is the aid language and signs, especially the signs of arithmetical numeration, give to the mind.

It is to be remarked, first, that our power to handle immeasurable quantities is always dependent chiefly upon our power to picture small quantities. We go from the imaginable to the unimaginably great or the infinite. For instance, we can deal intelligently and easily with unpicturable space or spaces and magnitudes only on the basis of our pictures of limited ones. From such basis, then, the mind must in all cases proceed. How does it proceed? By the aid of symbols and the law of numerical notation. Grant that the mind can picture an expanse of a thousand miles in diameter, such as might be seen from the top of a very high mountain, and that this is the limit of the imaginative power. The mind is yet

capable of dealing in thought with an expanse of 10, 100, or 1,000 thousand miles in diameter, by means of these symbols and the decimal law with which they are arranged. Any space or dimensions increasing regularly by a certain principle can be followed by thought in its increase to any extent after this increase ceases to be picturable. Thought is supported in its flight by the numerical symbols and law. The mind does not picture the increase, but clearly sees its rate. It reasons confidently of the increase, however great it may be, because it knows that it is the regular multiplication of an imaginable quantity denoted by a certain symbol; and may be itself imaginable if taken in parts, one part at a time. In other words, the largest magnitudes are easily thought of, because the symbol or figure which stands for an imaginable part of them holds a very definite, clear and intelligible relation, in position and value, to the symbol or figures which stand for them.

The same principles apply to our thought of great lengths of time, and of objects having many identical parts, and large collections of individuals. In all its extreme flights representative thought supports itself by a system of notation in which the characters have a perfectly distinct and most easily intelligible relative place and value. It deserves to be remarked here that these flights should not be called the operations of pure thought. They are possible only on the ground of our actual experience. They have in all cases the support of the perceptible and imaginable. They are the repetitions of experience arranged in a series in one direction. So much for the importance of symbols to our thinking of individuals possessing unpic-

turable dimensions, or innumerable parts or phases, and of multitudes of individuals.

We pass to notice, in the second place, the importance of symbols to the judgment and generalizing faculty. Here language is of primary importance to the preservation, abbreviation, and advancement of thought. Language is not indispensable to the generalizing power; but advanced generalizations are impossible without its aid. The first step or steps in classification take the mind from the familiar and clear region of the concrete, into the region of the abstract and general. Now if thought had no means of fixing its act or movement, it could hardly make a permanent advance. It would lose its step and fall back to the place of the original concretes from which it started. But if by some symbol or word the mind pretty accurately marks the advance, it makes it more certainly a possession of the memory. Further, the word becomes a means of great abbreviation, because it enables us to deal with the general or class at once without going through the long labor of calling up all or many members of the class; and, especially by registering and abbreviating thought, makes possible progress in a long ascending series to the highest notions. On this subject I take the following passage from Sir W. Hamilton's *Logic*, pp. 98, 99: "A sign is necessary to give stability to our intellectual progress, — to establish each step in our advance as a new starting-point for our advance to another beyond. A country may be overrun by an armed host, but it is only conquered by the establishment of fortresses. Words are the fortresses of thought. They enable us to realize our dominion over what we have already overrun in thought; to make every intellectual con-

quest the basis of operations for others still beyond. Or another illustration: You have all heard of the process of tunnelling, of tunnelling through a sand-bank. In this operation it is impossible to succeed unless every foot, nay almost every inch in our progress, be secured by an arch of masonry, before we attempt the excavation of another. Now, language is to the mind precisely what the arch is to the tunnel. The power of thinking and the power of excavation are not dependent on the word in the one case, on the mason-work in the other; but without these subsidiaries, neither process could be carried on beyond its rudimentary commencement. Though, therefore, we allow that every movement forward in language must be determined by an antecedent movement forward in thought, still, unless thought be accompanied at each point of its evolution, by a corresponding evolution of language, its further development is arrested."

We have now considered intellection in its different stages of perceptive, imaginative, and logical synthesis. The original elemental materials of all intellection are the primary affections of mind — sensations, emotions, and volitions. The wholes of perception, the wholes of imagination, and the wholes of logic, are formed entirely out of them present and represented.

First, perception employing these elementary materials in their simplest forms, combines them into our notions of material and external things. Secondly, imagination, selecting attributes and parts from the perceptive concrete notions, and using all the primary mental affections, forms many and remark-

able representative and ideal compounds, which become the permanent possession of the race as they are embodied in works of literature, art, and invention. Next comes the logical faculty. By this classes are formed by selecting a common attribute or attributes from the primary experiences and concrete percepts and representations, and the mind advances to surprising and very extensive generalizations of all the objects and events of experience. When thought has reached the farthest point possible by its unaided power, it takes language and signs to its assistance; and is thereby able to handle, with perfect ease, individuals and collections that, in their magnitude or complexity and number, many times surpass the compass of the perceptive and representative powers; and is further able to rise to notions of universal comprehension, and thus to get and hold a marvelous mastery over the infinity of the individuals of experience, reasoning of them rapidly and safely.



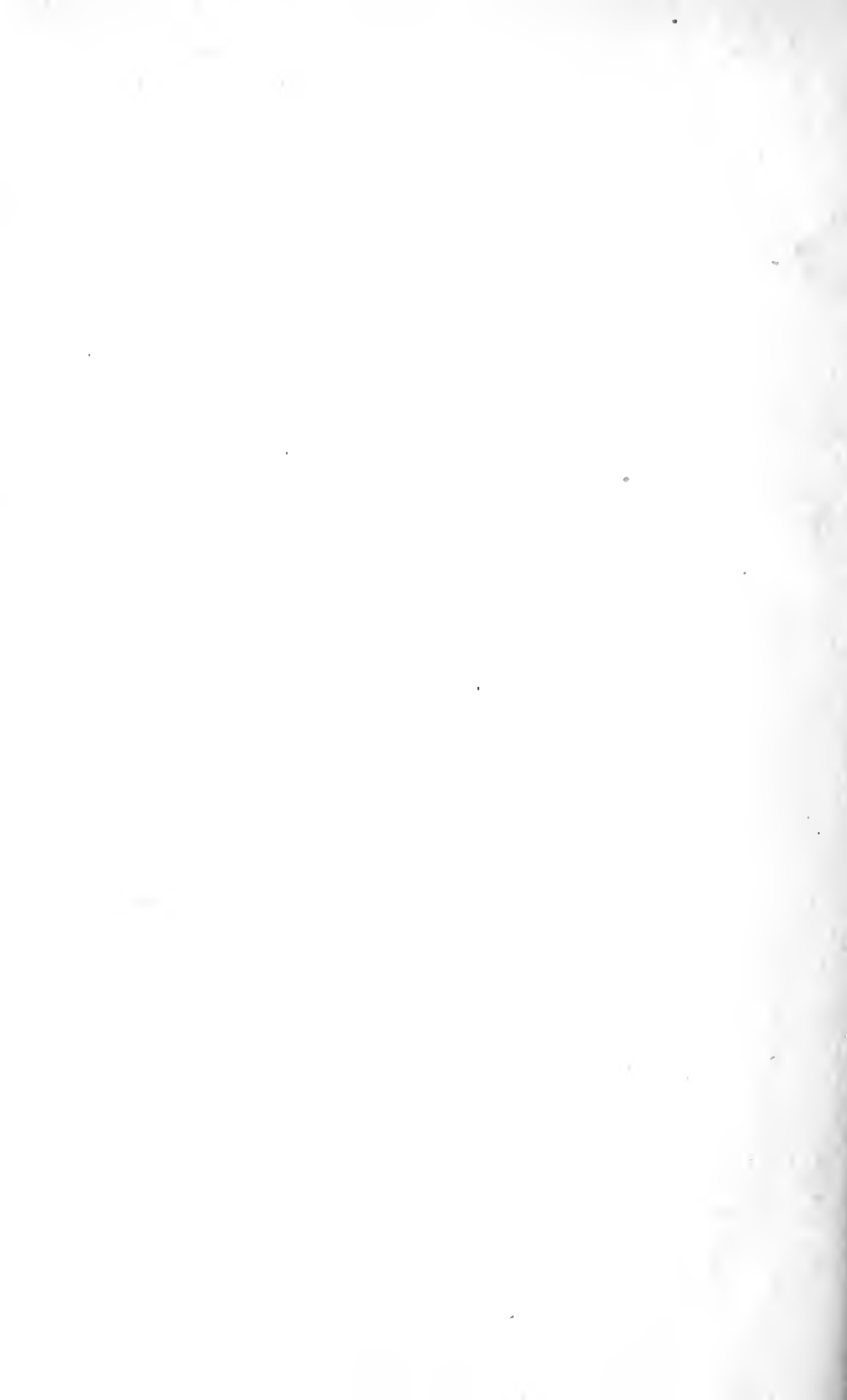














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