The University of Chicago
FOUNDED BY JOHN D. ROCKEFELLER

THE IMAGINATION IN SPINOZA AND HUME

A COMPARATIVE STUDY IN THE LIGHT OF SOME RECENT CONTRIBUTIONS TO PSYCHOLOGY

A DISSERTATION

SUBMITTED TO THE FACULTIES OF THE GRADUATE SCHOOLS OF ARTS LITERATURE, AND SCIENCE, IN CANDIDACY FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

(DEPARTMENT OF PHILOSOPHY)

BY
WILLARD CLARK GORE

CHICAGO
1902

CONTENTS.

NOTE.

THE page references to Spinoza's writings refer either to the translation by Elwes, two volumes, London, 1891, or to the *Opera*, two volumes, edited by Van Vloten and Land, The Hague, 1882–83. When both are referred to, E. designates the translation, and L. the *Opera*. The page references to Hume's writings refer to the *Treatise of Human Nature*, edited by Selby-Bigge, Oxford, 1896.

A COMPARATIVE STUDY OF THE THEORIES OF THE IMAGINATION IN SPINOZA AND HUME.

THE object of this study is to make a specific test, or at least to find an illustration, of the general proposition that philosophy, or metaphysics, and psychology form a logical partnership, an organic unity, which cannot be ignored or dissolved without impairing interests that each holds to be peculiarly its own.

Such a proposition is liable to be greeted either as harmlessly commonplace, or as hopelessly behind the times, or as absurdly premature, according to the local conditions which it chances to encounter. Few would deny, I suppose, that philosophy and psychology are related members of one body of knowledge, and a good deal of philosophizing as to the organic nature of that relationship would doubtless be good-naturedly tolerated even by some who would be the first to resent the logical consequences of this kind of philosophizing. Again, there are those who, granting that philosophy, or "metaphysics," and psychology have been intimately associated in the past, perhaps not altogether to the detriment of the latter in some instances, would at the same time dwell upon the fact that psychology, following the example of the natural sciences, has long made good its escape from the leading-strings of its ancient mother. And, finally, there are those who would assert that a new and real unification of the two disciplines, a recognition of the partnership, would seem to be quite unwarrantable and premature, being without adequate scientific backing from any source, and thus affording a prospect so vague and remote as not to appear worthy of serious consideration.

It is not so much with the intention of verifying the proposition or hypothesis in question as it is with the hope of making it less vague and remote in some particulars, that this critical examination of a narrowly restricted portion of the field has been attempted, namely, the theories regarding the imagination which are found in the philosophies of Spinoza and of Hume. No especial reason need be given for choosing this particular subject-matter, save that it is concerned with psychological specimens which are found growing in philosophical soil; many

other topics would doubtless have served the purpose as well, if not better. The method employed — that of presenting contrasting theories for mutual criticism — is purely subordinate to the end in view, and is rather an after-thought than an essential condition, since it occurred to the writer only after Part I, which deals with Spinoza's theory of the imagination, had taken what is practically its present form.

PART I.

A STATEMENT OF SPINOZA'S THEORY OF THE IMAGINATION.

SPINOZA'S identification of the imagination with the source of all falsehood, error, and confusion—a doctrine which runs in varying forms through nearly all of his works, and which is so fully and consistently worked out, taking it as a whole, that it may fairly be called a theory of the imagination—is not to be intelligently stated or appreciated, it almost goes without saying, apart from the main body of his philosophy. What was the need, the problem, that this doctrine arose to meet? What did it contribute toward the attainment of the end proposed as a solution? In what respects, if any, does it appear inconsistent, or inadequate? and why? These questions openly confess to the assumptions that Spinoza was conscious of a problem, did propose a certain end as a solution, and developed a theory of the imagination as one of the means—not necessarily the only one—of attaining the end. It is believed, however, that these assumptions rest on Spinoza's own statements, especially on those in the autobiographical portion of that propædeutic to his philosophy, the *Tractatus de Intellectus Emendatione*.

SEC. I. THE NATURE OF SPINOZA'S PROBLEM.

Experience, we are told in the *Tractatus de Intellectus Emendatione*, had taught Spinoza that the commonly accepted goods of life are vain and futile; that the all-absorbing ideals commonly conceived to constitute the *summum bonum*—riches, fame, and the pleasures of sense—when realized are found to be uncertain and fleeting, followed by melancholy and a dulled intellect in the case of the pleasures of sense, and by perpetual dissatisfaction with successive attainment in the case of fame and riches.

The same problem is suggested elsewhere in Spinoza's writings. In that earliest of his writings—the *Dialogue between Understanding, Love, Reason, and Desire*, composed probably four or five years prior to his excommunication—there is a trace of the same kind of dissatisfaction. At the beginning of the dialogue Love questions the Understanding regarding the nature and existence of an absolutely perfect being; Understanding answers that such a being and the whole of

nature are one, and Reason is called upon to corroborate this intuitive assertion. Then Desire breaks in with an attempt to point out contradictions in the answers that Understanding and Reason have given; and advises Love to remain content with the things that he, Desire, has shown to her. Love turns on Desire with these bitter words:

You shameless wretch! What things have you shown to me, save those from which would follow my ruin? For if I had ever allied myself to the things which you have shown me, from that hour I should have been pursued by the two arch-fiends of the human race — Hatred and Remorse — and now and then by Forgetfulness. Therefore I turn again to Reason. May he continue, and stop the mouths of those fiends. (Sigwart, German transl., p. 26.)

The same note is struck in the second part of the *Brevis Tractatus de Deo, Homine et Beatudine*, Chap. V, where we are told that we become weak and miserable through love of transient things. To be sure, there is a still harder fate possible for us; for Spinoza concludes this paragraph by saying:

If those who love transient things, which have some degree of reality, are so miserable, how is it possible to conceive the misery of those who love fame, riches, and the pleasures of sense, which have no reality at all!

The essentially objective reference of the dissatisfaction is the important thing to note. Spinoza's pessimism is far from the pessimism of Schopenhauer. It is not a despair born of a sense of the all-devouring, yet perpetually hungry, character of the will itself. It is not a pessimism with reference to the nature of desire itself, but it is a pessimism, or — if that is too strong a word — a deep-seated dissatisfaction, with reference to the ordinary *objects* of desire.

All the objects pursued by the multitude not only bring no remedy that tends to preserve our being, but even act as hindrances, causing the death not seldom of those who possess them, and always of those who are possessed by them.[1]

After mentioning examples of this fatal tendency, Spinoza concludes that:

All these evils seem to have arisen from the fact that happiness or unhappiness is made wholly to depend on the quality of the object which we love. When a thing is not loved, no quarrels will arise concerning it — no sadness will be felt if it perishes — no envy if it is possessed by another — no fear, no hatred;

[1] "Illa autem omnia, quae vulgus sequitur, non tantum nullum conferunt remedium ad nostrum esse conservandum, sed etiam id impediunt, et frequenter sunt causa interitus eorum, qui ea possident, et semper causa interitus eorum, qui ab iis possidentur." (*Trac. de Intell. Em.*, p. 4.)

in short, no disturbances of the mind. All these arise from the love of what is perishable, such as the objects already mentioned.[1]

Let these brief statements, insignificant though they may appear in comparison with the great systematic developments of his thought, be given their due weight, and they will be found to afford some idea, it is believed, of Spinoza's fundamental problem, which was an ethical problem, perhaps *the* ethical problem, the problem as to the nature of the good. Scarcely more than the origin of this problem has been touched upon, its origin in the feeling of intense dissatisfaction with the fleeting and perishable objects, the barren ideals, which are pursued by the multitude, with the so-called goods of this life — riches, honor, and pleasure — with "the worldly hope men set their hearts upon," which —

> "Like snow upon the desert's dusty face,
> Lighting a little hour or two — is gone."

It does not appear, however, that this dissatisfaction had any sentimental or æsthetic interest for Spinoza. Rather was it a stimulus to a solution, to the discovery of a true and eternal good.

Postquam me experientia docuit, omnia, quae in communi vita frequenter occurrunt, vana et futilia esse: . . . . constitui tandem inquirere an aliquid daretur, quod verum bonum, et sui communicabile esset, et a quo solo, rejectis caeteris omnibus, animus afficeretur; imo an aliquid daretur, quo invento et acquisito, continua ac summa in aeternum fruerer laetitia. (*Trac. de Intell. Em.*, p. 3.)

To this positive interest in the problem we now pass.

SEC. II. THE END PROPOSED BY SPINOZA AS THE SOLUTION.

The end or ideal proposed by Spinoza as the solution, and virtually set over against the fleeting, partial goods pursued by the multitude, is that of a true good, a *verum bonum*, an eternal, infinite good, a fixed good (*fixum enim bonum quaerebam*), a good "having the power to communicate itself, which would affect the mind singly, to the exclusion of all else;" a good "the discovery and attainment of which would enable one to enjoy continuous, supreme, and unending happiness." But how is such a good to be obtained? Spinoza says that he made many efforts to arrive at this new principle, or at any rate at a

[1] "Videbantur porro ex eo haec orta esse mala, quod tota felicitas aut infelicitas in hoc solo sita est, videlicet, in qualitate objecti, cui adhaeremus amore. Nam propter illud, quod non amatur, nunquam orientur lites, nulla erit tristitia, si pereat, nulla invidia, si ab alio possideatur, nullus timor, nullum, odium, et, ut verbo dicam, nullae commotiones animi: quae quidem omnia contingunt in amore eorum, quae perire possunt, uti haec omnia, de quibus modo locuti sumus." (*Trac. de Intell. Em.*, p. 5.)

certainty concerning its existence, without changing the conduct and usual plan of his life, but in vain. Compromise was impossible. Either the ordinary pursuits and ideals of life must be abandoned, or else the quest for the *verum bonum*. He felt that he must choose between a possessed good uncertain and transient in its nature, and a good not uncertain in its nature (*fixum enim bonum quaerebam*), but uncertain in the possibility of its attainment.

Further reflection convinced me that, if I could really get to the root of the matter, I should be leaving certain evils for a certain good. I thus perceived that I was in a state of great peril, and I compelled myself to seek with all my strength for a remedy, however uncertain it might be; as a sick man struggling with a deadly disease, when he sees that death will surely be upon him unless a remedy be found, is compelled to seek such a remedy with all his strength, inasmuch as his whole hope lies therein.[1]

Spinoza's logical method, in the largest sense of the word, was conceived in this struggle. The fundamental significance of the logical method was, and is, that it emerged in the course of the struggle, and that it began at once to exercise a modifying influence upon the conflicting elements, transforming the end and discovering the means for its realization. The end is transformed by being stated in intellectual terms. The highest good ceases to be a mystic abstraction set over against the partial, concrete values of the life that now is. Spinoza was forced to recognize that human weakness cannot attain in its own thoughts to the eternal order and fixed laws of nature. At the same time he asserted that a man can conceive a human character much more stable (*multo firmiorem*) than his own, and that such a man sees no reason why he should not acquire such a character, and is led to seek for means which will bring him to this pitch of perfection, calling everything which will serve as such a means a true good.[2] The highest good is that a man should arrive, together with other individuals if possible, at the possession of this character.[3] And now comes Spinoza's statement of what this character is, a statement which, in virtue of its formulation in intellectual terms, opens the way to a

[1] "Assidua autem meditatione eo perveni, ut viderem, quod tum, modo possem penitus deliberare, mala certa pro bono certo omitterem. Videbam enim me in summo versari periculo, et me cogi, remedium, quamvis incertum, summis viribus quaerere; veluti aeger lethali morbo laborans, qui ubi mortem certam praevidet ni adhibeatur remedium, illud ipsum, quamvis incertum, summis viribus cogitur quaerere, nempe in eo tota ejus spes est sita." (*Trac. de Intell. Em.*, p. 4.)

[2] "Incitatur ad media quaerendum, quae ipsum ad talem ducant perfectionem: et omne illud, quod potest esse medium, ut eo perveniat, vocatur verum bonum." (*Ibid.*, p. 6.)

[3] "Summum autem bonum est eo pervenire, ut ille cum aliis individuis, si fieri potest, tali natura fruatur." (*Ibid.*)

logic, to an account of the means for attaining the end. This character, Spinoza says, is the knowledge of the union existing between the mind and the whole of nature.[1]

This, then, is the end for which I strive, to attain such a character myself, and to endeavor that many should attain to it with me. In other words, it is a part of my happiness to lend a helping hand, that many others may understand even as I do, so that their understanding and desire may entirely agree with my own.[2]

SEC. III. THE MEANS FOR ATTAINING THE END.

I shall not attempt to make a very systematic statement under this heading, for fear of forcing an interpretation of Spinoza's philosophy. One of the most significant features of that philosophy is that it does not differentiate to any considerable extent between logical, psychological, and ethical categories. Chiefly for the sake of convenience, then, as the field to be covered is exceedingly broad and diversified, I will partition it, with reference to the treatment of the imagination involved, into —

I. The *Tractatus de Intellectus Emendatione*, which works out a logical method ;

II. The *Tractatus Theologico-Politicus*, in which the theory of the imagination is effectively applied, and at the same time is much more fully developed ; and

III. The *Ethica*, where further developments of the theory of the imagination are to be noted, especially on the more distinctively psychological and ethical sides.

I. *Tractatus de Intellectus Emendatione.*

Spinoza first pointed out that, in order to attain the ideal character, which is a unity of self with the whole of nature, it is essential both to understand and to form a social order such as is most conducive to the attainment of this character by the greatest number with the least difficulty and danger. He then enumerates the following somewhat more specific measures: Moral philosophy, and the sciences of education, of medicine, and of mechanics. "But before all things," he continues, "a means must be devised for improving the understanding and purifying it, as far as may be at the outset, so that it may apprehend things without error, and in the best possible way." In other

[1] "Quaenam autem illa fit natura ostendemus suo loco, nimirum esse cognitionem unionis, quam mens cum tota Natura habet." (*Ibid.*)

[2] "Hic est itaque fines, ad quem tendo, talem scilicet naturam acquirere, et, ut multi mecum eam acquirant, conari; hoc est, de mea felicitate etiam est operam dare, ut alii multi idem atque ego intelligant, ut eorum intellectus et cupiditas prorsus cum meo intellectu et cupiditate conveniant." (*Ibid.*)

words, it is a logic that Spinoza seeks to develop as the first and fundamental means of controlling science and thus arriving at the ideal. To this task alone Spinoza addresses himself in the rest of the *Tractatus de Intellectus Emendatione*, and with it emerges his conscious logical method as distinguished from the larger logic of the situation, which I have attempted to follow up to this point.

What might fairly be called his logical theory falls into two main divisions. The first of these divisions corresponds pretty closely to the larger logic of the situation, which I have just referred to, and leans toward a genetic view of logical processes. The second is devoted to logic or method in the narrower sense of the term — that is, logic as a body of rules. I will try to state his position far enough to make it clear where the treatment of imagination enters and plays its part. Under the first division, Spinoza discriminates three stages: (1) The end, to which we wish to direct all our thoughts. ("Habuimus hujusque primo Finem, ad quem omnes nostras cogitationes dirigere studemus," p. 15.) (2) The mode of perception best adapted to attaining the end; corresponding, I believe, to what we should call the most effective attitude of mind. (3) The discovery of the best way to begin, namely, the use of every true idea as a standard. This corresponds in a way to what we should term the discovery of a working hypothesis, though for Spinoza there was absolutely nothing of a hypothetical character about the true idea.

I will state more fully what Spinoza means by the standard idea, because it is in connection with the methods of determining it that the treatment of the imagination emerges. The standard idea is its own test of truth, because it is an instrument created by the native strength of the intellect. There is no test of truth for the intellect extrinsic or back of itself. A *regressus ad infinitum* is out of the question. "In order to know, there is no need to know that we know, much less to know that we know that we know . . . . for, in order to know that I know, I must first know." Spinoza's famous hammer illustration comes in here: "It would be as foolish to argue that men have no power of working iron because they must use a hammer, which in turn must have been made by another hammer, and that by another or by other tools, and so on to infinity, as it would be to argue that the mind could not know truth as truth." And again: "The reality of true thought does not acknowledge the object as its cause, but must depend on the actual power and nature of the understanding." Furthermore, not only does a true idea necessarily first of all exist in us as a natural

instrument, "but it is absolutely correlative with its physical object;" this is, of course, a fundamental assumption with Spinoza.

Under the second division, Spinoza states his more specific principles of logic:

1. The means of distinguishing a true idea from all other perceptions.

2. Rules for perceiving unknown things according to the standard of the true idea. We might be led to suspect that Spinoza had anticipated what in principle corresponds to the technique of modern laboratory procedure, but he confined himself to a warning against "confounding what is only in the understanding with that which is in the thing itself," and to a discussion of the conditions to be met in framing a good definition.

3. An order which enables us to avoid useless labor (this corresponds to classification).

4. The perfection of method, which would be when we had attained to the idea of the absolutely perfect being. "This is an observation which should be made at the outset, in order that we may arrive at the knowledge of such a being more quickly."

The treatment of the imagination becomes immediately involved only in the discussion of the first of these four principles, namely, the means of distinguishing a true idea from all other perceptions.

Should the reader raise the question, "Why did Spinoza need to propose means of distinguishing a true idea from all other perceptions, after the true idea had been declared to be its own witness of its truth?" an answer will be found in what Spinoza has to say concerning the validity of reasoning about the test of truth itself. He admits that, if "by some happy chance" anyone had stumbled upon the true idea, "in his investigations of nature," that is, if he had acquired new ideas in the proper order, according to the standard of the original true idea, he would never have doubted the truth of his knowledge, "inasmuch as truth, as we have shown, makes itself manifest, and all things would flow, as it were, spontaneously toward him." But this rarely or never happens, Spinoza continues. This order of thinking, though "adopted by men in their inward meditations," is rarely employed in investigation of nature, because of current misconception, because it demands keen and accurate discernment, and, lastly, because "it is hindered by conditions of human life, which are, as we have already pointed out, extremely changeable." I have quoted this partly for the sake of showing in what form the original problem persists. It is

at this particular point that the treatment of the imagination becomes explicit.

There are three types of ideas which the mind, according to Spinoza, must be kept from confusing with true ideas. These three types are: fictitious, false, and doubtful ideas. All of these originate in the imagination, "that is, in certain sensations fortuitous (so to speak) and disconnected, arising, not from the power of the mind, but from external causes, according as the body, sleeping or waking, receives various motions."

Spinoza perceives that he has appeared to beg the question, and requests that no one be astonished that "before proving the existence of body and other necessary things he has spoken of the imagination of the body and of its composition." The view taken is immaterial, he continues, so long as we know that the imagination is something *indefinite*, that it is essentially *different* from the understanding, that the mind with regard to it is *passive*.

We can know "the true idea because it is simple or compounded of simple ideas," because it is clear and distinct. But a "fictitious idea" cannot be clear and distinct. It is necessarily confused, "because the mind has only a partial knowledge of the object, and does not distinguish between the known and the unknown, and because it directs its attention promiscuously to all parts of the object at once without making distinctions." "Fiction never creates or furnishes the mind with anything new; only such things as are already in the brain or imagination are recalled to the memory, when the attention is directed to them confusedly and all at once." The mind in imagination is at the mercy of its world. Chance associations rule. 'For instance, we have remembrance of spoken words and of a tree; when the mind directs itself to them confusedly, it forms the notion of a tree speaking." Again, we can know a true idea because it shows how and why something is or has been made. Imagination introduces the irrelevant. "If an architect conceives a building properly constructed, though such a building may never have existed, and may never exist, nevertheless the idea is true; and the idea remains true the same whether it be put into execution or not." But imagination asserts, not the essence, but the existence, of a building — to adapt Spinoza's illustration — without knowing whether the building really exists or not. So the true idea of a sphere is the concept of its construction by means of the revolution of a semicircle on the diameter. But imagination affirms something not contained in such a concept, as

motion or rest of the semicircle apart from the relation of a semicircle to the production of a sphere.

When the imagination and the understanding, or the perception of true ideas, appear to be associated, the danger is especially great, giving rise to complete deception. This occurs when certain things presented to the imagination also exist in the understanding. Then true and false ideas become confused. Spinoza instances the Stoics, who "heard that the soul is immortal, yet imagined it only confusedly; they imagined, also, and understood that very subtle bodies penetrate all others, and are penetrated by none. By combining these ideas, and being at the same time certain of the truth of the axiom, they forthwith became convinced that the mind consists of very subtle bodies; that these very subtle bodies cannot be divided, etc. But we are freed from mistakes of this kind, so long as we endeavor to examine all our perceptions by the standard of a given true idea." In another, though similar, way we confuse the intellect and the imagination. We think that what we more readily imagine is clearer to us; that what we imagine, that we understand. Thus we violate the true deductive method, "the true order of progression"—putting first what should be last.

There are other grave errors arising through not distinguishing accurately between the imagination and the understanding: such as "believing that extension must be localized; that it must be finite; that its parts are really distinct one from the other; that it is the primary and single foundation of all things; that it occupies more space at one time than any other; and other similar doctrines, all entirely opposed to the truth, as we shall duly show."

Finally, an idea is stated, though not developed very far, in this *tractatus*, which is one of the fundamental ideas of the Spinozistic philosophy. The imagination is affected only by "particular, physical objects, and thus perceives things in a determinate number, duration, and quantity;" whereas the understanding perceives things not so much under "the condition of duration as under a certain form of eternity and in an infinite number."

To put the substance of the matter in a sentence or two: The theory of the imagination furnishes a negative test of the standard idea. Let no trace of the imagination be found in it. Let no influence from any external and particular object or time contaminate it. Let no confusion enter into it from without through the gates of sleeping-awake—for error is the dreaming of a waking man. "Error autem est vigilando sominare." Let the standard idea be the instru-

ment created solely "per vim nativam" of the mind itself working according to fixed and eternal laws, the fulfilment of which is freedom.

Assuming that we now have before us a fairly complete statement of the theory of the imagination as it is worked out in the *Tractatus de Intellectus Emendatione*, the true critical question that arises is: To what extent will it be found a useful means in attaining the end proposed, in solving the original problem? Recall the nature of that problem—the fleeting, perishable, finite character of the commonly accepted goods of this life; the sham, the self-deception of it all. What has Spinoza done save to identify this problem with the nature of the imagination, and then by rejecting the imagination to get rid of the problem—a solution by exclusion, by excommunication? Infinitely more! it will be said. Has he not pointed out the way to the goal—the formation of that perfect character which is the knowledge of the unity of itself with the whole of nature—by showing how the individual himself, any individual who thinks, is by virtue of the very act of thought a creator of the instruments of truth with which to attain the goal? True, all this may have been won for the individual—but only at the cost of the essence of individuality itself. All spontaneity, all initiative, all variability, all progress is ruled out. "For the soul," Spinoza says, "acts according to fixed laws and is, as it were, an immaterial automaton."[1]

II. *The Tractatus Theologico-Politicus.*

The object of the *Tractatus Theologico-Politicus* is closely related to the general problem, because it aims to secure perfect freedom in carrying out the solution of the problem—freedom to think. The theory of the imagination worked out in this *tractatus* is one of the instruments with which to eliminate conflicting elements from the situation. In its application it receives further development and definition.

It is possible to overemphasize the influence on Spinoza's life and thought of his excommunication. "This compels me," he is reported to have said on receiving the news, "to nothing which I should not otherwise have done." (Pollock, *Life of Spinoza*, p. 19.) Nevertheless, the excommunication has an important significance, in that it was an overt expression of a deep-seated conflict between the old and the new, between sacred tradition and ritual, and the spirit of growing scientific

[1] "At ideam veram simplicem esse ostendimus, aut ex simplicibus compositam, ut quae ostendit, quomodo et cur aliquid fit aut factum sit, et quod ipsius effectus objectivi in anima procedunt ad rationem formalitatis ipsius objecti; id quod idem est, quod veteres dixerunt, nempe veram scientiam procedere a causa ad effectus; *nisi quod nunquam, quod sciam, conceperunt, uti nos hic, animam secundum certas leges agentem, et quasi aliquod automa spirituale.*" (Italics mine.) (*Trac. de Intell. Em.*, p. 29.)

thought and political freedom. Spinoza was not indifferent to this conflict. His principal works, particularly this *tractatus*, show that he was keenly alive to it.

This conflict finds here its most concentrated expression in the separation of theology from philosophy, of obedience from freedom to think. The separation is explained and justified, to a very large extent, by means of an analysis of the gift and function of prophecy, and by a psychological distinction between the imagination and the understanding, developing with the analysis and at the same time controlling it.

The analysis of the gift and function of prophecy, which occupies the first two chapters of the *tractatus*, follows two somewhat different lines of argument, and brings out clearly two different aspects of the imagination. A comparison of the introductory sentences of each chapter will serve as a statement of the contrast, and will also set before us (*a*) the definition from which the first line of argument proceeds, and (*b*) the conclusion which the second line of argument aims to support by empirical data:

Prophecy, or revelation, is a sure knowledge revealed by God to man. A prophet is one who interprets the revelations of God to those who are unable to attain to sure knowledge of the matters revealed, and therefore can only apprehend them by simple faith.[1]

It follows from the last chapter that, as I have said, the prophets were endowed with unusually vivid imaginations, and not with unusually perfect minds.[2]

(*a*) A theory of the imagination becomes involved in the first of these two lines of argument as soon as the principle is laid down that the imagination is one of the three ways in which *certa cognitio* was revealed by God to man in the Scriptures, the other two being the *vera vox* that spoke to Moses, and the immediate communion of Christ with God — mind to mind. To be sure, Spinoza expressly states that the ordinary knowledge which we acquire by our natural faculties depends upon our knowledge of God and his eternal laws; that the feeling of intellectual certainty is of the nature of a divine revelation — an idea elaborated in Chap. IV, and destined to be of transcendent importance in the *Ethics*. But with reference to prophecy, in all instances, save those of

[1] "Prophetia sive Revelatio est rei alicujus certa cognitio a Deo hominibus revelata. Propheta autem is est, qui Dei revelata iis interpretatur, qui rerum a Deo revelatarum certam cognitionem habere nequeunt, quique adeo mera fide res revelatas amplecti tantum possunt." (Cap. i.)

[2] "Ex superiore Capite, ut jam iudicavimus, sequitur, Prophetas non fuisse perfectiore mente praeditos, sed quidem potentia vividius imaginandi, quod Scripturae narrationes abunde etiam docent." (Cap. ii.)

Moses and of Christ, the imagination is the sole instrument of divine revelation. Toward the close of the argument the deepest significance attaching to this instrument is made to depend on a *quatenus*, which in turn involves the moral character and peculiar power of the prophets, and finally depends upon the nature of a prophecy, as defined in the first paragraph of the chapter, quoted above, thus completing the circle and identifying imagination with the mind of God. More in detail, Spinoza enters upon a full discussion of the various meanings of the Hebrew word for "spirit," with the end in view of determining the relation between spirit and prophecy, as illustrated in such scriptural phrases as: "The spirit of the Lord was upon a prophet," "The Lord breathed his spirit into men," "Men were filled with the spirit of God, with the Holy Spirit," etc. Such phrases mean, he concludes, "that prophets were endowed with peculiar and extraordinary power, and devoted themselves to piety with a special constancy; that thus they perceived the mind or thought of God; for it has been shown that God's spirit signifies in Hebrew God's mind or thought, and that the law which shows his mind and thought is called his spirit; hence the imagination of the prophet, in so far as (*quatenus*) through it were revealed the degrees of God, may equally be called the mind of God, and the prophets be said to have possessed the mind of God."[1] *Quatenus*, if it reduces the possibility of divine revelation to zero, makes the original definition of prophecy a mere form of words for a thing that has never existed. If, on the other hand, there has been such a thing as prophecy in the scriptural sense — and Spinoza never goes so far as to express a doubt of this assumption — then "in so far," *quatenus*, the imagination of the prophets and the mind of God were one.

It is worth noting that in the paragraph immediately following this part of the discussion, Spinoza confesses his ignorance of the particular way in which communication between the mind of God and the imagination of the prophet was effected, and declares the irrelevancy of any attempt at explanation.

(*b*) The second line of argument develops and endeavors to substantiate by evidence drawn from the Scriptures, and by an appeal to

[1] "Nihil enim aliud significant, quam quod Prophetae virtutem singularem et supra communem habebant, quodque pietatem eximia animi constantia colebant. Deinde, quod Dei mentem sive sententiam percipiebant; ostendimus enim, Spiritum Hebraice significare tam mentem quam mentis sententiam, et hac de causa ipsam Legem, quia Dei mentem explicabat, Spiritum sive mentem Dei vocari; quare aequali jure imaginatio Prophetarum, *quatenus* per eam Dei decreta revelabantur, mens Dei etiam vocari poterat, Prophetaeque mentem Dei habuisse dici poterant." (Italics mine.) (*Trac. Theol-Pol.*, cap. i, p. 390.)

common experience, the contrast between imagination and reason implied in the first sentence in Chap. II, quoted on p. 17. The most significant feature of the argument—a feature which not only anticipates the contrast between inadequate and adequate ideas in the *Ethics*, but also touches the core of Spinoza's philosophic method—is the nature of the distinction between the imagination and the understanding. It is a distinction between particulars and the universal; between particulars as expressed in terms of opinions, biases, mental images—in short, the capacities of the private, subjective individual as such—and the universal as it necessarily follows from the nature of the thing perceived or seen. Out of this distinction grows on the logical side a distinction between two kinds of certitude, two kinds of validity—moral and mathematical. One line of certitude, the kind which the prophet experienced, is afforded by signs extrinsic to the revelation itself: "Simplex imaginatio non involvat ex sua natura certitudinem." Instances are given of the verification of prophecy by signs, which show "Prophetas semper signum aliquod habuisse, quo certi fiebant de rebus, quas Prophetice imaginabantur." (This statement is subsequently qualified: "Praeterea concedere possumus, Prophetas, qui nihil novi, nisi quod in Lege Mosis continentur, prophetabant, non indignisse signo, quia ex Lege confirmabantur.") The important point is that both sign and revelation varied according to the capacity and disposition of the individual. Numerous examples are given of the ways in which revelations may vary according to the mood, culture, and ideas of the individual prophets. Yet, differing as widely as they may in all these respects, there is one trait that true prophets share in common—high moral character. This affords the surest guarantee of certainty. "Nam Deus pios et electos numquam decipit." To give Spinoza's summary of the discussion with reference to the criteria of prophecy:

> The whole question of the certitude of prophecy was based on these three considerations:
>
> 1. That the things revealed were imagined very vividly, affecting the prophets in the same way as things seen when awake.
>
> 2. The presence of a sign.
>
> 3. Lastly and chiefly, that the mind of the prophet was given wholly to what was right and good. (Chap. II. This summary is repeated and expounded further in Chap. XV.)

Set over against prophetic certainty, or moral certainty, is mathematical certainty. The nature of this kind of certainty is intrinsic

and deductive, self-involved and self-evolving. "Prophetica igitur hac in re naturali cedit cognitioni, quae nullo indiget signo, sed ex sua natura certitudinem involvit" (p. 393). The distinction between the two kinds of certitude is imbedded in a remarkable sentence, which may be quoted as a summary of the principal points brought out thus far:

> As, then, the certitude afforded to the prophets by signs was not mathematical (*i. e.*, did not follow necessarily from the perception of the thing perceived or seen), but only moral, and as the signs were only given to convince the prophet, it follows that such signs were given according to the opinions and capacity of each prophet, so that a sign which would convince one prophet would fall far short of convincing another who was imbued with different opinions. Therefore the signs varied according to the individual prophet. (Chap. II, E, p. 29, and L, p. 393.)

From this discussion of the first two chapters of the *tractatus*, involving points which, as Spinoza states at the close of the second chapter, are the only ones bearing on the end in view, namely, "ad separandam Philosophiam a Theologia," it is evident that we have to consider, on the one hand, two aspects of the imagination, two apparently irreconcilable aspects: (1) imagination as the sole instrument of the divine revelation of sure knowledge, *certa cognitio*, in all prophecy (save in the case of Moses and of Christ), as one with the mind of God; and (2) as a particular, in the sense of private, variable, subjective, partial, embodiment of moral law. On the other hand, we have to consider understanding, *intellectus* "claris et distincta idea," which is its own witness of the truth. It is difficult to see how there can be any opposition between the first aspect of imagination and the understanding. It is also difficult to see how it is any easier to reconcile the two aspects of imagination with each other than it is to reconcile the second aspect with the understanding itself. In short, the analysis gives us a two-faced imagination *versus* the understanding or *intellectus*.

But this is not the place and time for a criticism as to logical consistency. Return we first to the problem itself and see how far the results of Spinoza's psychological and logical analysis will meet the situation successfully. Tradition, based on prophetic revelation, is at war with growing scientific and speculative thought. The conflict constitutes the problem. What Spinoza proposes as a solution is a cessation of hostilities. He aims to define the province of each, so that each must remain within its own, and so that there will be no future possibility of conflict. To theology he assigns far the larger area —

practically the whole of moral education and spiritual guidance. Theology is given jurisdiction over the many-headed multitude, over those who are untrained in "the deduction of conclusions from general truths *a priori*," and who "seek each for himself his own selfish interests, with no thought beyond the present and the immediate object." To them theology or religion — both as worship and as exponent of the highest moral law — can make its appeal, not in the form of reasoning deductively from axioms and definitions, but only in terms of concrete human experiences. The law must be incarnated in particulars so vivid and personal that it becomes a living reality to him whose mind cannot grasp a clear and distinct generalization. The law can be effective only as it becomes some particular fragment of the individual's fragmentary life. Hence the function of prophecy was the function of adapting the universal moral law and will of God to the clouded and finite intelligences of the vast majority of humankind. "Propheta autem is est, qui Dei revelata iis interpretatur, qui rerum a Deo revelatarum certam cognitionem habere nequeunt, quique adeo mera fide res revelatas amplecti tantum possunt." It is hardly necessary to state that according to Spinoza the function of prophecy and of theology was not to promote religious ecstasy; its function was social, moral — to effect through obedience to the law, as felt by the individual, a secure and permanent organization of society. Of especial significance in this connection are the chapters on the vocation of the Hebrews, and the Hebrew theocracy, which declare that vocation to have been a monopoly neither on virtue nor on intelligence, but the establishment of a highly perfected and long-enduring social organization, in which religious, moral, and political control was one in the spirit of reverent and joyful obedience to laws divinely revealed.

To philosophy, on the other hand, Spinoza assigns the narrow territory of the deductive or mathematical method of developing the divine law from clear and distinct ideas — narrow, because this rational insight into the divine nature of things is the blessed possibility of only a few. It, too, however, leads to salvation.

> Even he who should be ignorant of Scripture narratives, but who should know by natural reason (*lumine naturale*) that God exists, and who should have a true plan of life, would be altogether blessed — yes, more blessed than the common herd of believers, because besides true opinion he would possess also true and distinct ideas.

It was most essential, however, not merely to assign different provinces to theology and philosophy, but to establish boundary lines that

could never be infringed upon; to show how the two could never again, from the nature of the case, be at war with one another. There were three instruments with which Spinoza endeavored to bring this about: (1) a theory of the imagination, (2) historical-biblical criticism, (3) a theory of the state. It would be difficult, perhaps irrelevant, to decide which of the three was of the most fundamental importance. All I shall attempt to do is to point out the function of the first, namely, of the theory of the imagination. The divinely revealed subject-matter of the Scriptures is the only subject-matter and body of doctrine, according to Spinoza, that theology can have; for it is doubtful whether there have been any latter-day prophets. That subject-matter was given and retained solely in terms of the imagination (excepting, always, in the case of Moses and of Christ). To speak more explicitly, that subject-matter was given and retained in terms of private, individual imaginations, flatly contradicting one another in mood, in training, and in matters of rational knowledge and belief. Therefore, the content of theology is embodied in individualistic terms, and is partial, variable, beclouded, and wayward. There is *moral* agreement between the particular, individualistic terms, a practical social unity to which they contribute, but no necessary *intellectual* agreement, no rational unity. The imagination is so arbitrary, so subjective, so partial—in both senses of the word—that it acquired certitude, validity, in prophecy, only through the presence of an objective, corroborating sign or witness. And even this sign or witness was not purely objective and rational, but varied with the character of the individual prophet. The very nature of the imagination, and the very nature of the unrationalized individual who exercised it in prophecy, determine in themselves — or in itself, for both are one — the limits of theology. Beyond its particular and concrete content theology cannot logically pass. Its law was given by revelation, not derived by reason. Its law was revealed unto the flesh, not born of the spirit. Theology can read its data backward, but not forward — backward to the source, but not forward to a new generalization. Contradictory particulars may reflect the law, but the law cannot originate with them. It is just as possible for the logically discrepant particulars of the imagination to generate a universal as it is for the differing rays of light from "the many-colored dome of glass" to become what they once were, "the white radiance of eternity."

The success of Spinoza's theory of the imagination is apparent, if we accept his premises. The theory simply disarms theology of its

weapons of attack upon philosophy — or rather shows that theology has never possessed any logical weapons of attack upon the province of rational knowledge. Logically, theology must either abandon its own province altogether, renounce its revealed doctrine, and abdicate its authority over the hearts and the morals of the community; or else it must keep strictly within its broad territory, and make no attempt to limit the freedom of philosophic thought. Take into account as well the reinforcements which the theory of the imagination receives both from Spinoza's discussion of the authorship of the Scriptures — in which he anticipates the standpoint of modern biblical scholarship — and from Spinoza's theory of the state, which aims to show that the safety of the state lies in "the rule that religion is comprised solely in the exercise of charity and justice, and that the rights of rulers in sacred, no less than in secular, matters should merely have to do with action, but that every man should think what he likes and say what he thinks" — take all this into account, and it is difficult to see that theology has not been excommunicated from philosophy as absolutely as Spinoza was excommunicated from the synagogue, only dispassionately and with no breathing of curses.

Yet may we not fairly ask: Is this a solution *sub specie aeternitatis?* How long will a two-faced imagination be at peace with itself? How long can the imagination and the understanding get on without each other?

III. The *Ethics.*

The theory of the imagination involved in the *Ethics* is the same theory as the one involved in the two *tractati*, but with further developments and applications. The *Ethics* may be regarded as a more complete fulfilment of the logic worked out in the *Tractatus de Intellectus Emendatione.* In harmony with that logic, its movement may be described as the deductive evolution of the standard idea of an absolutely perfect being; and its goal may be described as the intellectual unity of the self with nature, with humanity, and with God — the complete rationalization of existence. "Spinoza's greatness," says Höffding (*History of Mod. Phil.*, Vol. I, p. 314), "consists in the resolute carrying out of the thought that existence must be rational; from which he concludes that its essence must be identity — absolute unity." Now, opposed to such a unity, to such a goal, is the imagination. Though rejected, it is still a lion in the path. For, as stated in the appendix to Book I of the *Ethics*, and as has been stated in the previous *tractati*, the imagination is found to be the source of all

confused, erroneous, and inadequate ideas — these being the indices of personal prejudices, of individual capacities and limitations. This may be taken as an extremely condensed form of the theory of the imagination in the *Ethics*, in its resemblance to that of the *tractati*. The following are the important additions to the theory, or developments of points previously implied:

1. A physiological explanation of the origin of the imagination.

2. A psychological explanation of the imagination as the source of error.

3. Imagination the correlate of the body rather than the representative of the object.

4. Relation of the imagination to the emotions.

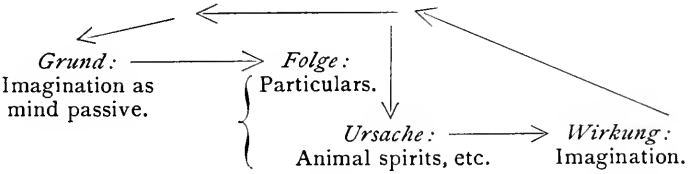
5. Teleology and freedom as illusory.

1. Spinoza gives a physiological explanation of the imagination on the hypothesis of animal spirits (II, 17, Cor. Proof). The statement is perfectly clear so far as it goes. But a comparison of this passage with I, 15, Sch., brings out an interesting contradiction. The animal-spirits hypothesis, according to which Spinoza explains the origin of the imagination, involves the assumption of the existence of particular things: (1) external objects; (2) animal spirits, or the fluid parts of the human body; (3) the softer parts of the human body. In I, 15, Sch., however, he explains the origin of particular, finite things on the basis of the nature of the imagination as opposed to the intellect. In the former case we imagine because we are particularized, so to speak — we are acted upon by particular, finite things; in the latter case, on the other hand, we particularize because we imagine.[1] A remark let fall by Hume is pertinent here: "The same principle cannot be both the cause and the effect of another; and this is, perhaps, the only proposition concerning that relation, which is either intuitively or demonstratively certain" (p. 90). There is one way out of the contradiction involved in Spinoza's analysis of the imagination: regard it as self-caused. But that will never do, for that would identify it with Substance.

This apparently fatal circle of reasoning is not to be dismissed as a logical curiosity. It points to a deeper consequence; it frames and defines the nature of the underlying problem. This eddy in the current of Spinoza's stream of thought is a witness alike to the logic of rejection and to the ideal of unity. It marks a point at which the

[1] My indebtedness to Professor Dewey for this point is specific. See his article on the "Pantheism of Spinoza," in *Jour. of Spec. Phil.*, Vol. XVI, p. 249.

identity between *Ursache* and *Wirkung*, and *Grund* and *Folge*,[1] breaks down; neither series is complete; each borrows from, and lends to, the other. The categories may be diagrammed thus:



2. Closely related to what I have called a physiological explanation of the imagination is the explanation of why the imagination is a source of error and confusion (II, 40, Sch. 1). Both rest on the assumption of animal spirits and all that it implies. Spinoza conceives the body to be capable of forming only a certain number of images within itself at the same time. If the number be exceeded, the images will begin to be confused. If this number be largely exceeded, the images will become entirely confused with one another. In all this the mind parallels the body. Spinoza would not agree with Plato (*Theaetetus*, 194) that "the wax in the soul of anyone could be sufficiently deep and abundant, smooth and perfectly tempered," "pure and clear," so that "the impressions which pass through the senses and sink into the heart of the soul" could be retained as "true thoughts" "not liable to confusion." For Spinoza every soul would be, in this respect, essentially limited in the amount, if not in the quality, of its "wax." Like Plato, however, he would ascribe indistinctness and confusion to a multitude of impressions, "all jostled together in a little soul, which has no room."

The point of the explanation was its application. And the application was made in accounting for the origin of general or generic terms, such as "being," "thing," "man," "horse," "dog," etc. "They arise, to wit, from the fact that so many images, for instance, of men, are formed simultaneously in the human mind, that the powers of the imagination break down, not indeed utterly, but to the extent of the mind losing count of small differences between individuals, *e. g.*, color, size, etc., and their definite number, and only distinctly imagining that in which all the individuals, in so far as the body is affected by them, agree" (II, 40, Sch. 1).

[1] *Cf.* MAX RACKWITZ, *Studien über Causalität u. Identität als Grundprincipien des Spinozismus* (Halle, 1884).

All that Spinoza has said with reference to this point is practically an indictment of empirical or "inductive" logic. It is an indictment of any logic that regards generic ideas as common elements abstracted from particular instances, or made after the fashion of a composite photograph.

So far as the whole theory of the imagination is concerned, however, the most significant feature of this particular explanation is its bearing on Spinoza's concept of the individual — a concept whose fundamental importance becomes more and more apparent as our discussion proceeds. Although the generic term is formed by abstracting the common element, and by losing track of differences, it does not follow that a generic term possessed by one individual will be identical with the generic term of the same name possessed by any other individual. This for the reason that the images from which the term is abstracted are never alike in any two individuals. "We must, however, bear in mind that these general notions are not formed by all men in the same way, but vary in each individual according as the point varies whereby the body has been most often affected, and which the mind most easily imagines or remembers" (II, 40, Sch. 1). In so far as we, as individuals, "form our general notions by abstracting them from particular things represented to our intellects fragmentarily, confusedly, and without order, through our senses," we have the kind of knowledge that may be called opinion or imagination (II, 40, Sch. 2).

3. Imagination the correlate of the body, rather than the representative of the object.

This point is simply a phase of the two preceding points. "The imagination is an idea which indicates rather the disposition of the human body than the nature of the external body; not indeed distinctly, but confusedly; whence it comes to pass that the mind is said to err" (IV, 1, Sch.). Spinoza would differentiate clearly between the idea of Peter which constitutes the essence of Peter's mind, and the idea of Peter which is in another man, say Paul. The first is a true representative idea. The second is quite likely to be imagination; it indicates rather the disposition of Paul's body than the nature of Peter (II, 17. Sch.). If we ask Spinoza how an individual can ever form an idea that does not indicate the present disposition of his body, rather than the nature of the object, we are, of course, referred to the parallelism of attributes. Or, if we pursue the matter and ask why the parallelism of attributes will not assure to the correlate of the body the validity of a representative of the object, we shall come upon the

doctrine of error as privation (II, 23, 25, and IV, 1, Sch.). To use his illustration, when we look at the sun and imagine it to be but two hundred feet distant from us, the error does not lie solely in the imagination *per se* (*cf.* II, 17, Sch., last part), but in the fact that we do not yet possess the true knowledge of its distance. In other words, the error consists in taking the appearance for the reality. Error is, so to speak, negative reality.

4. Relation of the imagination to the emotions.

When Spinoza, in a "General Definition of the Emotions" (conclusion of Part III), states that "emotion, which is called a passivity of the soul, is a confused idea," etc., it is evident that emotion and imagination have been brought into close relationship to one another. What, then, we ask, is the nature and significance of this relationship? I doubt the relevancy of entering upon a detailed discussion of Spinoza's theory of the emotions, and I therefore submit with little argument the following propositions: What the imagination is to knowledge, the emotions are to conduct. In other words, what the imagination is to the understanding, the emotions are to the will. According to II, 49 Cor., the understanding and the will are identical. Is there any distinction to be made between imagination and emotion? Höffding calls attention to a contradiction between II, 49 Cor., and III, 9, Sch. According to the latter reference, knowledge is made dependent on will. However this may be, Spinoza appeared to regard the emotions, particularly desire, as presenting more of the active element of the mind than the imagination, which he repeatedly characterizes as the mind passive. "Desire is the actual essence of man, in so far as it is conceived, as determined to a particular activity by some given modification of itself . . . . By the term 'desire,' then, I here mean all men's endeavors, impulses, appetites, and volitions, which vary according to each man's disposition, and which are therefore not seldom opposed to one another, according as a man is drawn in different directions, and knows not where to turn" (III, "Definitions of Emotion," I). Put this with the definition of emotion (III, Def. III), and with the important *Nota Bene*, and the nature of the distinction between the emotions and imagination, and also the correspondence of one with the other, will be evident:

> By emotion I mean the modification of the body, whereby the active power of the said body is increased or diminished, aided or constrained, and also the ideas of such modifications. *N. B.:* If we can be the adequate cause of any of these modifications, I then call the emotion an activity, otherwise I call it a passion, or a state wherein the mind is passive.

Emotion, thus viewed, partakes of the nature of both understanding and imagination, of both adequate and inadequate ideas. A good deal depends, of course, upon the "if" in the *Nota Bene*. In the last two books of the *Ethics* it is Spinoza's problem to show how it is truly possible for emotion to be an activity of the mind. A principle of activity is postulated in the emotion which may become its salvation. This view of emotion is due, I believe, to the fact that Spinoza kept in mind and emphasized the physiological side of emotion. "By emotion I mean the modifications of the body, whereby the active power of the said body," etc.; whereas the physiological explanation of the imagination appears to have been developed after the logical and psychological sides had already been worked out. The word "emotion," then, is used in two senses : (1) as an activity corresponding to, if not identical with, the activity of intelligence ; (2) as passion, corresponding to the imagination.

Emotion as passive is akin to imagination in two important aspects: (1) It represents the element of individual variation, in the sense of haphazard discrepancy—"impulses, appetites, and volitions, which vary according to each man's disposition, and which are therefore not seldom opposed to one another," etc. We have seen this element of spontaneous variation to be also a prevailing characteristic of the imagination, both in the *tractati* and in the *Ethics*. It is a form in which Spinoza's earliest problem persists, and which he is continually endeavoring to get rid of. (2) It represents the fact that the individual finds himself overpowered by causes external to him. Man is a prey to his passions. (Preface to IV; also IV, especially 2, 3–6.) The individual as such is conditioned to act by another finite thing, and that by another, and so on to infinity (I, 28). "The force whereby a man persists in existing is limited, and is infinitely surpassed by the power of external causes" (IV, 3). The whole doctrine of finite modes is involved. (*Cf.* I, Def. V, and proof to I, 28.) "Hence it follows that man is necessarily always a prey to his passions, that he follows and obeys the general order of nature, and that he accommodates himself thereto as much as the nature of things demands" (IV, 4, Cor.). Passion results from the feeble struggle of the activity of the self against the overwhelming odds of nature. So feeble is the resistance offered by the self that the whole being appears to be helplessly swept along in the irresistible flood of passion. "We are in many ways driven about by external causes, and, like waves of the sea driven by contrary winds, we toss to and fro, unwitting of the issue and of our

fate" (III, 59, Sch.). All this is in principle equally true of the imagination, though it is stated in the more remote and colorless terms of logical theory. The physiological explanation of imagination and of the way it forms abstractions from data — literally data — as discussed above, on pp. 24, 25, bears out the point.

5. Teleology and freedom as illusory.

Other aspects of the theory of the imagination in the *Ethics*, such as the illusion of freedom and the doctrine of final causes, though of great importance, do not demand a full discussion here, for they are simply inevitable applications of the theory as it has been repeatedly stated. Self-conscious freedom and the doctrine of final causes represent for Spinoza wholly gratuitous projections of personal prejudices into the realm of natural law, self-deceptive attempts to derive a whole from discrepant and variable fragments (*cf.* I, Appendix; also III, 2, Sch.).

The scope of this discussion does not include the *Tractatus Politicus*, for the reason that this *tractatus* contains no mention of the imagination. But the fact itself is sufficiently important to mention. The rôle played by the imagination in the writings discussed above is assigned to the passions in the *Tractatus Politicus* — the passions *versus* reason. And the passions of the *tractati* are the passions of the *Ethics*, which, as we saw, correspond closely to the imagination. (*Cf.* Chaps. I, 5; II, 5, 6, 8, 14, 18; III, 6; VI, 1; VII, 2, 4.) Men are led more by blind desire than by reason. The passions to which men are prey make them enemies of one another. In the state of nature, every man, of course, has the right to do exactly as he pleases; that is, the individual as natural is a sovereign — he can do no wrong. But his right to do exactly as he pleases is limited by his might, which in turn is so limited by the natural forces of which he is but a part, and by other hostile individuals, that his right is practically a nonentity, "existing in opinion rather than in fact." Hence there gradually emerges some form of co-operation among men, some attempt to live according to reason, which is the law of common welfare (*cf. Ethics*, IV, 35, and Sch. 1 and 2).

Spinoza's political theory readily lends itself to a statement in physical terms. Every individual is an atom possessing two qualities — the power of repelling all other atoms, passion; and the power of attracting all other atoms, reason. As a gas becomes a solid, so does the state of nature become a commonwealth. But Spinoza in his quest for unity would reject the passions altogether, as mere empty space, and keep only the solidarity of the atom.

This is not intended to be a fair or adequate statement of Spinoza's political theory. The theory of the imagination or of the passions does not receive in the *Tractatus Politicus* a new development that would warrant an attempt to discuss the matter fully, but perhaps enough has been said to indicate the general drift of the political theory and the part assigned to the externally conditioned individual.

SEC. IV. SUMMARY OF THE STATEMENT OF SPINOZA'S THEORY OF THE IMAGINATION.

It must be evident that the dualism into which Spinoza has fallen cuts far deeper than the psycho-physical dualism of Descartes. The dualism finds expression in the following forms:

Imagination *vs.* understanding.
Theology *vs.* philosophy.
Inadequate *vs.* adequate ideas.
Causes external *vs.* causes immanent.
Passions *vs.* reason or virtue.
Time *vs.* eternity.
Finite quantity *vs.* infinity.
Multiplicity of modes *vs.* unity of substance.
Necessity *vs.* freedom.

It is evident that the dualism may be approached from a psychological, ethical, logical, or metaphysical standpoint. I shall endeavor to keep within close range of the psychological standpoint.

Spinoza's problem, as we have seen, took its rise in a dissatisfaction which, though undoubtedly an expression of his character and training, was given an objective reference; it was a dissatisfaction with the commonly accepted goods of life — riches, fame, and pleasure. The end proposed as a solution, that *verum bonum*, was also given an objective reference. It was that object which a man might love and never find wanting. In the process of getting from the uncertain and fleeting objects of the present to the contemplation and love of that fixed, supreme, and eternal object, a psychological mechanism had to be invented and worked out. The self was found to be made up of imagination and appetites, on the one side, and of understanding or reason, on the other. To the world of uncertain and fleeting objects corresponded the imagination and the appetites. To the unity of the whole world of nature corresponded the reason. The problem was solved in its very statement — solved, that is, by identifying the imagination with things finite (in the *Ethics* we saw how this identification

was effected through the circular reasoning that made the imagination the cause of things finite and things finite the cause of the imagination), and then separating the imagination from reason. Much as the early Christian monks treated the world, the flesh, and the devil, so did Spinoza treat the imagination; only that he rejected it, not for the sake of an other-world salvation, but for the sake of salvation in the eternal present of this world. It is perhaps impossible to overestimate the importance of the fact that Spinoza finally brought a psychological analysis to bear upon his problem. To so great an extent, however, was the analysis simply a reflection of the two kinds of objects with reference to which it was made that the self which he dissected out fell into two parts, quite as antagonistic and irreconcilable as the two kinds of objects given in the first place.

Many critical questions have suggested themselves throughout the discussion, and still persist. They may be concentered in these two:

1. How far can manifold, fragmentary, finite particulars and the imagination be identified?

2. How far can reason and the imagination be dissociated? What becomes of the individual when cut in two in this fashion?

PART II.

HUME'S THEORY OF THE IMAGINATION.

I HAVE been able to discover no finer or more suggestive answers to the questions just raised than the development of English sensationalism, which was among other things a criticism, though an unconscious one, of Spinoza's theory of the imagination. The very elements rejected by Spinoza as sources of error and confusion became the foundations, the unquestioned data, of the philosophies and psychologies of Locke, Berkeley, and Hume.

It will probably be sufficient for our purpose to examine only Hume's theory of the imagination. For Hume recapitulates the sensationalism of his predecessors; at the same time frankly shearing away all inconsistent assumptions, and thus coming unawares upon inconsistencies in the central assumption itself.

I shall attempt to show that Hume's unconscious criticism of Spinoza has a twofold significance:

1. As revealing the value of an instrument that Spinoza criticised and discarded; and

2. As revealing, also, the difficulties in the way of elevating this instrument, as Hume proposed, to the rank of a supreme epistemological principle; or, to use Hume's words, to the rank of "the ultimate judge of all systems of philosophy" (p. 225). In a sense Spinoza was a critic of Hume, as well as Hume of Spinoza.

SEC. I. THE NATURE OF HUME'S PROBLEM.

Unlike Spinoza, Hume left behind him no explicit statement of the nature and origin of his problem. The nearest approach to such a statement is doubtless to be found in that sentence which Professor Huxley, in his work on Hume, regards as the keynote of the treatise:

> I found that the moral philosophy transmitted to us by antiquity labored under the same inconvenience that has been found in their natural philosophy, of being entirely hypothetical, and depending more upon invention than experience: everyone consulted his fancy in erecting schemes of virtue and happiness, without regarding human nature, upon which every moral conclusion must depend.[1]

[1] Huxley: *Hume, with Helps to the Study of Berkeley* (New York, 1894), p. 11.

But this sounds more like Bacon than like Hume. The problem with which Hume came to be concerned was not so much how philosophy may be founded on experience as how experience itself is constituted. Just what this problem was, or at least what one important phase of it was, will become evident, I believe, in the course of the following discussion of Hume's theory of the imagination. I will make only a brief preliminary statement with reference to it.

In shearing away all the inconsistent and metaphysical assumptions of his predecessors, Hume reduced sensationalism to sensations. The problem was how to build up out of these sensations the coherent and rational wholes of experience. It was in a way Kant's problem that Hume had to struggle with — the problem of how an individual experience is constituted, of how intrinsic relations are to be discovered and maintained, in place of the extrinsic metaphysical entities that had been begged or assumed in sensationalism up to that time. I shall attempt to show how Hume, in the straits of his problem, finally resorted to the imagination as the sole instrument capable of meeting the demand for a coherent and forward-moving individual experience.

SEC. II. SENSES IN WHICH HUME USES THE WORD "IMAGINATION."

The word "imagination" recurs frequently throughout the *Treatise of Human Nature*, and in different senses. Hume acknowledges at least three different uses of the term: (1) when opposed to memory; (2) when opposed to reason; (3) when opposed to neither, *i. e.*, when "it is indifferent whether it be taken in the larger or more limited sense," or when "at least the context will explain the meaning" (p. 117, note). In this sense it is usually equivalent to "fancy."

I. Imagination distinguished from memory.

Imagination and memory are alike in that they are both repetitions of impressions, reproductions of past perceptions. They differ in two respects: (1) "The ideas of memory are much more lively and strong than those of the imagination." Ideas of memory approach the vivacity of the original perceptions. Those of the imagination have lost that vivacity and have become perfect ideas. (2) Memory reproduces the arrangement of the original perceptions. Imagination is free to recombine them. "The imagination is not restrain'd to the same order and form with the original impressions; while the memory is in a manner ty'd down in that respect, without any power of variation." (Book I, Part I, sec. 3, and Part III, sec. 5.)

But Hume is too good a psychologist to allow these two distinctions to stand as hard and fast realities. In fact, he practically abandons both of them when he comes to the discussion of belief. In spite of the fact that memory preserves the order and arrangement of sense-perceptions, while imagination freely transposes them, we can never on that basis tell an idea of the memory from one of the imagination, "it being impossible to recall the past impressions, in order to compare them with our present ideas, and see whether their arrangement be exactly similar." Since, therefore, the memory is known neither by the order of its *complex* ideas nor by the nature of its *simple* ones—it being borne in mind that both memory and the imagination "borrow their simple ideas from the impressions, and can never go beyond these original perceptions"—it follows that the difference between it and the imagination lies in its superior force and vivacity. "A man may indulge his fancy in feigning any past scene of adventures; nor would there be any possibility of distinguishing this from a remembrance of a like kind, were not the ideas of the imagination fainter and more obscure" (p. 85). It now becomes difficult to see how the second distinction mentioned in the preceding paragraph can have any value whatsoever. Even if it be a true distinction, it is one of which we can never be directly aware; it must always rest upon an uncertainty: *if* our ideas with reference to any experience are relatively faint, we may infer that we are using the imagination, a faculty which *may* be exercising its power of independent reconstruction of ideas. But Hume will not allow even the first distinction mentioned in the preceding paragraph, the distinction of force and vivacity, to remain unqualified. An idea of the memory may lose its force and vivacity, and become an idea of the imagination. "We are frequently in doubt concerning the ideas of the memory, as they become very weak and feeble; and are at a loss to determine whether any image proceeds from the fancy or the memory, when it is not drawn in such lively colours as distinguish that latter faculty. I think, I remember such an event, says one; but am not sure. A long tract of time has almost worn it out of my memory, and leaves me uncertain whether or not it be the pure offspring of my fancy" (pp. 85, 86). "So, on the other hand, an idea of the imagination may acquire such force and vivacity, as to pass for an idea of the memory, and counterfeit its effects on the belief and judgment. This is noted in the case of liars; who by the frequent repetition of their lies, come at last to believe and remember them, as realities; custom and habit

having in this case, as in many others, the same influence on the mind as nature" (p. 86). But, we ask, if an idea may degenerate or develop in either direction, how is the distinction with reference to force and vivacity to be of any more service than the distinction with reference to correspondence and transformation? How are we to know whether a given idea is a fiction of the imagination or a faithful reproduction of past experience? If it has a force and liveliness, we must forsooth believe in it. But the idea itself may be either a faithful reproduction of past experience, or it may be a recombination and transformation of the imagination which has acquired such force and liveliness as to pass itself off for an idea of the memory. Hume would have us say, I presume, that *as a rule* belief, which is only another name for force and vivacity of perceptions and ideas, "attends the memory and the senses," and not the imagination; *as a rule*, remembering is believing —just as seeing is believing—and imagining may be more or less of illusion; but practically the distinction will not always hold true Sometimes we believe in the illusion, and disbelieve in the half-forgotten testimony of our senses. And Hume's psychology is so true to life that we can never tell whether we have a rule or an exception.

So much for the distinctions between imagination and memory, involving belief. Hume gives us no explanation of the origin of these distinctions, nor anything but hints as to the forces that sweep them away. Let us now see how it fares with

II. Imagination distinguished from reason.

"When I oppose imagination to the memory, I mean the faculty, by which we form our fainter ideas. When I oppose it to reason, I mean the same faculty, excluding only our demonstrative and probable reasonings" (p. 117, note.). The expression "the same faculty" is ambiguous in its reference; but subsequent statements make it clear that Hume identifies reason and imagination to some extent, *e. g.*, "to the understanding, that is, to the general and more established properties of the imagination" (p. 267). The distinction between imagination and reason grows sharper and deeper as the treatise proceeds—in this respect quite the contrary of the distinction between imagination and memory.

At first, imagination and reason appear to co-operate in one of the two worlds in which we live. These two worlds are (1) the world of memory and senses, with which, strictly speaking, in the nature of the terms as defined above, the imagination has nothing to do. This world is the system which we form of our impressions and ideas of

memory; "and every particular of that system joined to the present impressions we are pleased to call a reality. But the mind stops not here" (p. 108). And we have (2) the world of judgment, in which, as the following quotation will make evident, imagination and reason work together in harmony; it is that system of perceptions which is "connected by custom, or if you will, by the relation of cause and effect . . . . " (p. 108). And as the mind "feels that it is in a manner necessarily determined to view these particular ideas, and that the custom or relation, by which it is determined, admits not of the least change, it forms them into a new system, which it likewise dignifies with the title of *realities*. . . . . " (p. 108).

'Tis this latter principle which peoples the world, and brings us acquainted with such existence, as by their removal in time and place, lie beyond the reach of the senses and memory. By means of it I paint the universe in my *imagination*, and fix my attention on any part of it I please. I form an idea of Rome, which I neither see nor remember; but which is connected with such impressions as I remember to have received from the conversation and books of travelers and historians. This idea of Rome I place in a certain situation on the idea of an object, which I call the globe. I join to it the conception of a particular government, and religion, and manners. I look backward and consider its first foundation; its several revolutions, successes, and misfortunes. All this, and everything else, which I believe, are nothing but ideas; tho' by their force and settled order, arising from custom and the relation of cause and effect, they distinguish themselves from the other ideas, which are merely the offspring of the *imagination* (p. 108). [Italics mine.]

I have quoted the last paragraph in full, not only because it tells how harmoniously imagination and reason may work together, but also because it contains an example of the use of the word "imagination" in the third sense; that is, in a sense opposed or related neither to memory nor to reason. In other words, the paragraph contains two entirely different uses of the word. In the first instance the word is used in the sense of the handmaid of reason; its ideas have the "force and settled order arising from custom and the relation of cause and effect." In the second instance the word is used in the sense of mere fancy and caprice.

The occasional agreement and co-operation of the reason with the imagination is easier to note and record than the progress and outcome of the growing distinction and conflict between the two. I will not here attempt to trace all the turnings and windings of thought in and out and back and forth, in which reason is now "the discovery

of truth and falsehood" (p. 458), and now the probability of probabilities *ad infinitum*, "till at last there remains nothing of the original probability, however great we may suppose it to have been, and however small the diminution by every new uncertainty" (p. 182); and in which the imagination is now a mere fanciful transformation of ideas, and now the very foundation of the memory, the senses, and the understanding (p. 265), and the bearer of causation and the objective world; until at length we are pulled up short by the startling antithesis: "We have, therefore, no choice left but betwixt a false reason and none at all" (p. 265). For the main features of this shifting interplay and growing distinction and conflict will come to light, I hope, in the impending discussion of the active part or function that imagination plays in Hume's theory of knowledge.

III. Imagination distinguished from habit, association, and emotion.

There are other important distinctions and relations between imagination and other categories of the mind, involved in the treatise, which should be taken into account, although they seem not to have had nearly so much importance for Hume as the distinctions and relations discussed above, or else were taken for granted. They are (1) imagination and custom or habit; (2) imagination and the laws of association; and (3) imagination and the passions or emotions. As all but the last are involved in the discussion of causation and objectivity, brief statements will here suffice.

1. The relation between custom, or habit, and imagination is extremely intimate. Imagination is clay in the hands of the potter, custom. "Custom takes the start and gives a bias to the imagination" (p. 148).

A significant distinction between imagination and reason is made in connection with this point (pp. 147–9). Custom lies at the bottom of both imagination and reason, imagination being conceived as the mediator between custom and reason, in a way that recalls the schematism of Kant. "According to my system, all reasonings are nothing but the effects of custom; and custom has no influence, but by enlivening the imagination, and giving us a strong conception of any object" (p. 149). But imagination and reason are by no means identical or always in agreement. The imagination is, so to speak, the more plastic element, the more sensitive, fluent, impulsive element; whereas the reason is more staid and sober and responds only to general rules (Book I, Part III, sec. 15), to acknowledged and conserva-

tive principles. "The general rule is attributed to our judgment; as being more extensive and constant. The exception to the imagination; as being more capricious and uncertain" (p. 149).

2. The relation between the principles of association of ideas—resemblance, contiguity, and causation—is similar to the relation between the imagination and custom. Without these principles of association, chance alone, as Hume says, would join the ideas of the imagination. In the chapter treating of the "Connexion or Association of Ideas" (Book I, Part I, sec. 4) Hume does little more than mention that third principle of association, cause and effect, leaving a thorough examination of it to another occasion. Anticipating, however, our discussion of that examination, we may pause to note the circular reasoning involved in making the principle of cause and effect one of the guiding principles of the imagination, and then later in showing how the imagination is the only faculty that makes possible the idea of cause and effect. It would be anticipating too much to attempt to bring out at this point the full significance of this circle. It suggests the circular reasoning into which Spinoza fell in considering the relation between the imagination and things finite.

Another significant distinction between imagination and reason comes out in connection with this point. Reason is totally inadequate to afford any basis for the principles of association. Only the imagination can do this.

> Reason can never shew us the connection of one object with another, tho' aided by experience, and the observation of their constant conjunction in all past instances. When the mind, therefore, passes from the idea or impression of one object to the idea or belief of another, it is not determined by reason, but by certain principles, which associate together in the ideas of these objects, and unite them in the imagination. Had ideas no more union in the fancy than objects seem to have to the understanding, we could never draw any inference from causes to effects, nor repose belief in any matter of fact. The inference, therefore, depends solely on the union of ideas. (P. 92.)

3. A discussion of the relation between the imagination and the passions, or emotions, involving Hume's fundamental moral category—sympathy—would take us too far afield of the theory of knowledge. It would hardly be relevant to our purpose to examine how "'tis on the imagination that pity entirely depends" (p. 371), or how "'tis certain, that sympathy is not always to the present moment, but that we often feel by communication the pains and pleasures of others, which are not in being, and which we can only anticipate by the force

of the imagination" (p. 385). But, at the risk of apparent digression, I should like to call attention to a very fine piece of psychological analysis in Book I, which, in discovering the mutual reinforcement of the imagination and the emotions, anticipates the modern organic-circuit interpretation of the reflex-arc theory. I will quote the whole paragraph, italicizing the most significant passage:

. . . . custom takes the start, and gives a bias to the imagination.

To illustrate this by a familiar instance, let us consider the case of a man, who being hung out from a high tower in a cage of iron cannot forbear trembling, when he surveys the precipice below him, tho' he knows himself to be perfectly secure from falling, by his experience of the solidity of the iron, which supports him; and tho' the ideas of fall and descent, and harm and death, be derived solely from custom and experience. The same custom goes beyond the instances, from which it is derived, and to which it perfectly corresponds; and influences his ideas of such objects as are in some respect resembling, but fall not precisely under the same rule. *The circumstances of depth and descent strike so strongly upon him, that their influence cannot be destroyed by the contrary circumstances of support and solidity, which ought to give him a perfect security. His imagination runs away with its object, and excites a passion proportioned to it. That passion turns back upon the imagination and enlivens the idea; which lively idea has a new influence on the passion, and in its turn augments its force and violence; and both his fancy and affections, thus mutually supporting each other, cause the whole to have a very great influence upon him.* (P. 148.)

We certainly have before us a remarkable instance of how far Hume's native psychological sagacity could outrun the sensationalistic inheritance, which he elsewhere accepts uncritically. Had he only been able to take his man out of the iron cage which was hung out from the high tower, and set him down on firm ground, he might never have become the traditional means of awakening Kant from his dogmatic slumber.

To conclude this portion of the subject. One thing is so evident, I believe, as not to need emphasis or further discussion — the fact that Hume wavers between a structural and a functional statement of the categories of the mind; between an attempt to set up distinctions and determine boundary lines, on the one hand, and a candid recognition of the active, living, functioning character of the elements singled out by and for critical analysis, on the other. On the side of description, of structural distinctions, are (1) sense-perception, (2) memory, (3) imagination, (4) reason, (5) habit, (6) principles

of association, (7) emotions. They can be made to hold still, as it were, long enough to have their pictures taken. But on the side of explanation, of functional interpretation, note the interplay, the protean shifting of character, the cinematographic display of activity. Sense-perceptions become either memory or imagination. Memory fades to imagination. Imagination wakes into memory — or more, imagination, after transforming and recombining the material given by sense-perceptions and memory, wakes into a new memory, or to an illusion that is taken for a memory. Reason and imagination are as one, like man and wife; and then they fall out, and quarrel with one another till they find out that another element, custom or habit, has made them what they are, and till they learn that one of them is simply *a deeper, more permanent crystallization of habit than the other*. But reason has lost its plasticity, its progressive quality; with the help of imagination it can give us the old world, the old Rome, but not the new; it is a hopeless Tory. Therefore it is denied all participation in the principles of association. Imagination, however, can give us a new world, growing out of the old; it is more like a Liberal Unionist. And finally we have the whole circuit of activity. Sense-perception reacts into conflicting habits; ideas of memory and of imagination are brought into play; these ideas exite the emotions; the emotions in turn reinforce the sense-perceptions and react upon the imagination and "enliven" the idea, thereby making it more believable; and so on, causing "the whole to have a very great influence" on the man.

We miss in Hume the brave show of logical consistency that we found in Spinoza. We miss the sense of completeness and finality that comes with a view of Spinoza's deductive hierarchy of systematic thought. Hume's analysis may, in contrast, appear to reduce the world of the spirit to chaos. But there is life here. There may be small hint of division of labor, but there is a forecast of organic activity. There is a basis for a fine skepticism of rigid class distinctions, and for a faith in onward movement.

SEC. III. THE FUNCTION OF THE IMAGINATION IN THE THEORY OF KNOWLEDGE.

The function of imagination in Hume's theory of knowledge can be stated in a few words. It is the faculty which makes it possible for us to have the conception of causation and the conception of objectivity. Hume's expression for objectivity is the continued and distinct, or independent, existence of objects.

Hume never doubts the reality of causation or of objectivity, as I understand him, but is concerned solely in accounting for the way in which we come to have believable ideas of such realities. "We may begin with observing that the difficulty in the present case is not concerning the matter of fact, or whether the mind forms such a conclusion concerning the continued existence of its perceptions, but only concerning the manner in which the conclusion is formed, and principles from which it is derived" (p. 206). The same would be true of causation. Hume becomes a skeptic with reference to all existing explanations of the way in which we come to form ideas of such realities, as I shall attempt to bring out in the course of this discussion, rather than a skeptic with reference to the existence of these realities themselves. In short, his interest seems to be psychological, rather than metaphysical or epistemological.

Causation involves three essential factors: contiguity, or relations in space; succession, or relations in time; and *necessary connection.* The first two are given in ordinary sense-perception. But whence is the idea of necessary connection derived? If we observe that objects of one sort follow immediately objects of another sort, and if we remember to have observed that this has been the case in all past instances in which these objects have been concerned, we say that they are *constantly conjoined,* and that in such a constant conjunction the antecedent is the cause of the consequent (Book I, Part III, sec. 6). Constant conjunction, at first sight, seems to be the same as necessary connection, just as a case of unvarying *post hoc* would to all practical intents and purposes be the same as a *propter hoc;* provided, Hume would have to add, that we could know beforehand in some miraculous way that this *was* a case of unvarying *post hoc.* And yet "this new-discovered relation of a constant conjunction seems to advance us but very little on our way" (p. 88). For constant conjunction is nothing but the multiplication of instances. If a single instance of conjunction between two objects can never give us the idea of necessary connection, how can we get such an idea from the mere repetition of this instance? "From the mere repetition of any past impression, even to infinity, there never will arise any new original idea, such as that of a necessary connexion; and the number of impressions has in this case no more effect than if we confined ourselves to one only" (p. 88).

The senses and the memory, then, can never give us the concept of causation. There remain two other possible sources, the reason and the imagination. Hume asks reason first.

"If reason determined us, it would proceed upon that principle, *that instances of which we have had no experience must resemble those of which we have had experience, and that the course of nature continues always the same*" (p. 89). Such a proposition must rest either upon demonstrative knowledge or upon probability. It cannot rest upon demonstrative knowledge, for we have no demonstrative arguments that transcend experience. Neither can it rest upon probability, for even probability has to have some objective data on which to work; it can have nothing whatever to say in regard to those "instances of which we have had no experience." "Probability, as it discovers not the relations of ideas, considered as such, but only those of objects, must in some respects be founded on the impressions of our memory and senses, and in some respects on our ideas" (p. 89). Then follows one of the most remarkable sentences in the whole treatise, significant not only in its bearing upon present discussion, but in its anticipation of the famous dictum of Kant that forms of thought without sense-perceptions are empty, and sense-perceptions without forms of thought are blind: "Were there no mixture of any impression in our probable reasonings, the conclusion would be entirely chimerical: And were there no mixture of ideas, the action of the mind, in observing the relation, would, properly speaking, be sensation, not reasoning" (p. 89).

The next step is the subtle distinction between presumption and probability. The idea of cause and effect is only a presumption. We *presume* the existence of an object similar to the usual attendant of another object. Now, the *probability* of cause and effect is unquestionably founded upon this presumption. But therefore it is impossible that this presumption can arise from probability. "The same principle cannot be both cause and effect of another; and this is, perhaps, the only proposition concerning that relation, which is either intuitively or demonstratively certain" (p. 90).

Reason, then, which can create no new idea, is unable, either through demonstrative or probable arguments, to derive for us the concept of causality. The idea of necessary connection has been reduced to the narrow limits of a bare presumption.

The imagination is the last resort. What is needed is some kind of psychological basis for the presumption which will transform it into an idea of necessary connection. In other words, what is needed is a faculty sufficiently plastic and coherent to carrry the mind beyond the present object or idea to an idea not present, but resembling the

usual attendant of the present object or idea. This is exactly what imagination seems to be capable of doing, for "the imagination when set into any train of thinking, is apt to continue, even when its object fails it, and like a galley put in motion by the oars, carries on its course without any new impulse" (p. 198). The imagination is all the more inclined to do this, if the contiguous and successive objects have been repeated. The more frequent the repetition of any given contiguous and successive objects has been, the more readily the imagination passes from the given present object to an idea resembling its absent attendant; that is, from the experienced to the not-experienced. In other words, constant conjunction, operating upon the imagination by means of the principles of the association of ideas, makes possible what neither sense nor reason could give, namely, ideas which are not given in and through the present experience, but which resemble the impressions usually had in conjunction with this object which is now the sole content of sense-experience. *When the mind in and through the carrying or propensive quality of the imagination passes from a present object to an absent attendant, it reasons from cause to effect, or from effect to cause.*

But how does the mind *know* that it reasons thus from cause to effect? How does it thereby get the *idea* of causation? "The repetition of perfectly similar instances can never *alone* give rise to an original idea" (p. 163). Imagination makes it possible for us to *do* the passing from cause to effect or from effect to cause, but does it make it possible for us to *know* that we are doing it?

Hume's thought takes a peculiar turn at this juncture, which plainly makes the idea of causation completely *a priori*, or what Locke would call an idea of reflection, an "impression of reflection," to use Hume's phrase.

> Tho' the several resembling instances, which give rise to the idea of power, *i. e.*, to the idea of causation, have no influence on each other, and can never produce any new quality *in the object*, which can be the model of that idea, yet the *observation* of this resemblance produces a new impression *in the mind*, which is its real model. . . . . Necessity, then, is the effect of this observation, and is nothing but an internal impression of the mind, or a determination to carry our thoughts from one object to another. . . . . The idea of necessity arises from some impression. There is no impression conveyed by our senses, which can give rise to that idea. It must, therefore, be derived from some internal impression, or impression of reflection. There is no internal impression which has any relation to the present business, but that propensity, which custom produces, to pass from the object to the

idea of its usual attendant. This therefore is the essence of necessity. Upon the whole, necessity is something that exists in the mind, not in objects; nor is it possible for us ever to form the most distant idea of it, considered as a quality in bodies. Either we have no idea of necessity, or necessity is nothing but that determination of the thought to pass from causes to effects and from effects to causes, according to their experienced union. . . . . The efficacy or energy of causes is neither placed in the causes themselves, nor in the deity, nor in the concurrence of these two principles; but belongs entirely to the soul, which considers the union of two or more objects in all past instances" (pp. 164–6).

I shall not attempt to do justice to Hume's account of the way in which we arrive at the ideas of continued and independent existence of objects. But the course of reasoning is much the same as that involved in showing how we arrive at the idea of causation. The imagination, in virtue of its propensive quality, already referred to so often, is able to bridge over the gaps between interrupted sense-perceptions, and produce the opinion of a continued existence of body. This opinion is "prior to that of its distinct existence, and produces that latter principle." For belief in the continuity and identity of that which to our sense-perceptions appears only as interrupted fragments, must give rise to the opinion or fiction of the imagination that this continuity and identity is an objective reality, or, rather, "that these interrupted perceptions are connected by a real existence of which we are insensible" (p. 199).

It is in the discussion of objectivity that reason and imagination come to blows again. And the idea of causation has a falling out with the idea of objectivity: (1) Reason tells us that "the doctrine of the independent existence of our sensible perceptions is contrary to the plainest experience. This leads us backward upon our footsteps to perceive our error in attributing a continued existence to our perceptions" (p. 210). The opinion of the identity of interrupted perceptions "can never arise from reason, but must arise from the imagination. The imagination is seduced into such an opinion only by means of the resemblance of certain perceptions, which we have the propension to suppose the same" (p. 209). "The imagination tells us that our resembling perceptions have a continued and uninterrupted existence, and are not annihilated by their absence. Reflection tells us that even our resembling perceptions are interrupted in their existence, and different from each other" (p. 215). Reason, paradoxically enough — reason, which is appealed to only with general rules and conservative principles — suddenly appears to object to imagination's

becoming a lawgiver, a legislator of universal principles. Reason, I should say, appears to feel that its vested rights in the actual data of experience are being threatened. (2) Again, "when we reason from cause and effect, we conclude that neither color, sound, taste, nor smell have a continued and independent existence. When we exclude these sensible qualities there remains nothing in the universe which has such an existence" (p. 231).

Imagination has made possible both the idea of causation and the idea of continued and independent existence — it is the only faculty that makes them possible — yet these two ideas are found to be incompatible. Is it possible that a deep-seated conflict lurks within the very imagination itself? (*Cf.* p. 266.)

SEC. IV. CRITICISM.

At about this point in the discussion, difficulties, contradictions, self-involved criticism, which have been surging below, begin to come to the surface and threaten to wreck all that has been accomplished.

I doubt whether there is in any literature a finer specimen of a confession of philosophic difficulties than the concluding chapter of Book I. In this chapter, and indeed throughout the *Treatise*, Hume makes it so evident what the contradictions are that we are in danger of missing their deeper significance.

The following are brief statements of some of the difficulties and contradictions involved in the *Treatise:*

1. The recurrent doubt as to whether such a faculty as the imagination can furnish the basis of a solid and rational system (*cf.* pp. 198, 217, 267).

2. The ultimate inexplicability of (*a*) the cause of impression — "It will always be impossible to decide with certainty whether they arise immediately from the object, or are derived from the author of our being" (p. 84) — and the ultimate inexplicability of (*b*) causal conjunction. "We cannot penetrate into the reason of the conjunction. We only observe the thing itself, and always find that from the constant conjunction the objects acquire an union in the imagination." (P. 93.)

3. Dilemma between illusion of the imagination and ineptitude of the reason — between false reason and none at all (pp. 267, 268).

4. "Direct and total opposition betwixt our reason and our senses," involving a contradiction within the imagination itself (p. 231). Imagination makes possible both the idea of causation and the idea of continued and independent existence. But when reason employs the former idea, it contradicts the latter. (3) and (4) taken

together have a three-cornered conflict, involving reason, sense, and imagination.

5. "In short, there are two principles which I cannot render consistent: nor is it in my power to renounce either of them, viz., *that all our distinct perceptions are distinct existences, and that the mind never perceives any real connection among distinct existences.* Did our perceptions either inhere in something simple and individual, or did the mind perceive some real connection among them, there would be no difficulty in the case" (p. 636).

6. A final resort to intuitionalism (pp. 164–6 and 629; especially p. 629, Appendix to Book I, Part III, sec. 6, which is too long to quote).

I have said that it was an easy matter to find these difficulties and contradictions, and many others, in Hume's *Treatise*, but it is no easy matter to appreciate their true significance. Perhaps one of their chief functions is to arouse the questioning attitude—*e. g.*, does not Hume end where Spinoza began, namely, with discrediting the imagination as a source of truth? Or, from another point of view, is there very much difference between Hume and Spinoza as to the practical outcome of their systems? What matters it, after all, whether at the start sensations and images be rejected as useless lumber or accepted as foundations, if the outcome and final resort is to be in each case an appeal to a mystic or intuitional sense of immediate contact with reality? What is the use of all this machinery of ideas, sensations, images, emotions, and memories, if it only drives one to a resort where it never has been needed, and never will be? Have the philosophers attempted to discover how this machinery came to be, and what it is really for? This last question seems to me to be aiming closer to the mark than any other. And the nature of a solution of these difficulties and contradictions will be found, I believe, through an inquiry into the origin and evolution of psychological machinery, and its function in experience.

SEC. V. SUMMARY COMPARISON OF SPINOZA AND HUME.

The answers which I find in Hume to the questions proposed at the end of the statement of Spinoza's theory of the imagination are as follows:

1. Manifold, fragmentary, finite particulars and the imagination cannot be identified. The imagination is a unifying activity. It possesses the power of rearranging, of recombining, the particulars of sense-experience which are given to it. The imagination is a plastic,

unifying, *propensive* element in whose flow particulars are held and carried along; transcending the present, it gives us the idea of cause and effect, and of the distinct and continued existence of the objective world. The imagination is not Spinoza's reason or understanding, which sees things *sub specie aeternitatis;* it gives us time, sequence of phenomena, progress.

2. Reason and the imagination are often opposed to one another, but they could not long exist apart. It is difficult, because of the inconsistencies in Hume, to put the point in a more specific form. Part of the time, at any rate, his statements would warrant the inference that reason divorced from the imagination would become absolutely rigid, inaccessible to the molding influence of custom; and that, on the other hand, imagination divorced from reason would become mere fancy. Curiously enough, it is reason with Hume that informs us that our perceptions are interrupted, in this respect corresponding exactly to the imagination with Spinoza; whereas it is the imagination with Hume that gives us the continuity of the objective world to which our interrupted perceptions refer, in this respect corresponding exactly to reason with Spinoza. Yet in another view of the two categories they correspond respectively each to each: with both Spinoza and Hume the imagination is a source of individual variation, whereas the reason can originate no new idea. Reason is a coming to consciousness of laws given either by custom (Hume) or by God (Spinoza). With Hume, however, there appears to be no error necessarily bound up in the spontaneous character of the imagination. To be sure, absolutely undirected by custom or reason, the imagination might become mere fiction. But as it is actually constituted, its spontaneity is rather a propensive quality, an amœboid movement, passing beyond this, that, and the other sense-perception, and leaving behind the formal fixity of reason.

If Hume had completely solved his own difficulties, he would at the same time have answered Spinoza so effectively that further discussion of the matter would be superfluous. The difficulties which he himself recognized are those which some follower of Spinoza, had he been shrewd enough, might have pointed out. Such a follower of Spinoza would probably have begun with that passage in his master's *Ethics* which demonstrates how general ideas arise confusedly in the imagination by means of the agglutination of overcrowded images (*cf.* p. 27); and he would probably have asked how Hume's idea of causation differed from a general idea so formed. He might have

pointed out, as Hume himself did, the contradictory character of the two concepts which the imagination offered to reason — the concept of causation, and the concept of continued and independent existence of objects. And he might have asked whence the validity of any deliverance of the imagination, seeing that it is constituted *ex hypothesi*, not by a universal act of thought, but by particular sense-perceptions, varying in quantity and in quality with every individual.

Still, in spite of the conflicts between these two treatments of the imagination, both agree in one fundamental point; both regard the imagination as conditioned from without, as concerned with particulars given to it ready-made. Only with this difference: Spinoza regards the imagination as that aspect of the mind which is passive with reference to the data imposed upon it from without; whereas Hume regards the imagination as actively recombining its data, as passing from one group to another, as anticipating data not yet actually given. I believe this fundamental assumption to have been the source, to a very large extent, of Spinoza's one-sided conception of the imagination, and of his negation of individuality; and also a source of the difficulties in which Hume found himself — difficulties which any answers to Spinoza's position, in case they flow from the same assumption, are liable to encounter.

From the standpoint of this whole discussion, the chief value of the theories discussed above lies in the problems they suggest to psychology. These problems may be summed up and stated once more as follows:

1. To what extent is the imagination to be held responsible for the detached, fragmentary particulars of experience? (Spinoza.)

2. How far can the imagination be dissociated from the understanding or reason? (Spinoza.)

3. To what extent is the imagination a unifying, anticipating activity? (Hume.)

4. To what extent is the imagination co-operative with reason? (Hume.)

5. Why does the imagination fail to give a firm foundation to a rational system of philosophy — and especially to the concepts of causation and substance, meaning by substance continued and independent existence? (Hume.)

6. Does the imagination simply receive or operate upon ready-made data, conveyed to it through the sense-organs? To what extent is it merely receptive? To what extent is it creative? (Spinoza and Hume.)

PART III.

PSYCHOLOGY OF THE IMAGINATION.

SEC. I. THE USE OF TERMS.

IN the interests of division of labor it may sometimes be an advantage to distinguish carefully between the *imagination* and *mental imagery*, according to whether the attention of the observer is directed to the functional or to the structural aspect of the matter. The term "image," moreover, seems to be the more specific and scientific term. Mr. Wilfred Lay, in his monograph on mental imagery, draws a distinction between the terms which is useful because it reflects the distinction commonly made and accepted:

> By imagination is here meant the "faculty" generally called, more specifically, creative imagination. It is that which makes great works of art, whether they be paintings, sculptures, poems, symphonies or cathedrals. The possession of the creative imagination implies that of mental imagery, but not *vice versa*. Imagination is something abstract and indescribable; imagery is concrete and is experienced by every one. Imagination is something that cannot be itself represented in mental imagery save by a feeling; mental images are, on the other hand, quite as real (not objective, however) as sensations themselves, and play quite as important a role in our lives. The association in our minds of the creative imagination with mental imagery is somewhat far-fetched from the real nature of things, and is the result of the similarity and like etymology of the English words which are used for these two aspects of mental life.[1]

If I fail to use this distinction it will be because it seems unreal and fallacious when carried over from ordinary discourse into psychological analysis. It is true that "imagination is something abstract and indescribable"—that is, apart from its embodiment in images or in outward physical forms. It is true that "the possession of the creative imagination implies that of mental imagery." But if we add "not *vice versa*," we are drawing an arbitrary line; we are viewing the matter from the outside, as we must do so often in practical emergencies when we say, for example, such and such people have no imagination, while certain others have. Psychologically speaking,

[1] LAY, "Mental Imagery" (supplement to *Psychological Review*, Vol. II, No. 3), p. 2.

every mental image is creative — creative in the same sense that imagination is creative. To what extent this or that image may modify overt conduct or the arrangement of objects in space and time is a question of becoming aware of a fact; it is not a question of becoming aware of a principle. In making this assertion I am anticipating, of course, a line of argument to be worked out later.

SEC. II. RECENT SPECIFIC CONTRIBUTIONS TO THE PSYCHOLOGY OF THE IMAGINATION.

The great mass of material which has been put at the service of the psychology of the imagination since the investigations of Fechner and Galton were begun has been chiefly of a descriptive character. Images have been contrasted to and compared with sense-perceptions. The imagination has been analyzed into various types — visual, auditory, etc. — each corresponding to a sense-organ. One of the most striking facts that this analysis has brought to light is the wide variance between individuals with reference to the prevailing type of their imagery. As Professor James says: "There are imaginations, not 'the Imagination,' and they must be studied in detail" (*Princ. of Psy.*, Vol. II, p. 50). Abundant and telling evidence of this fact has recently been furnished by the discussions and controversies regarding various types of word-imagery, which have been carried on by Stricker, Egger, Ballet, Baldwin, Dodge, and others. The testimony of Stricker, for example, appears to be flatly contradictory to that of Egger. Stricker describes his internal speech as being purely an affair of articulatory-motor images, as being inseparably bound up with sensations of innervation of his lip and tongue and throat muscles. Egger, on the other hand, describes his internal speech as being purely in terms of auditory images. All this serves to corroborate and give new emphasis to Spinoza's view that the imagination characterizes the individual in his differences from all other individuals.

Attempts have been made, especially by French psychologists, to clothe this bare fact of individual variation with social meaning. Arréat, in his work entitled *Mémoire et imagination: peintres, musiciens, poètes et orateurs* (Paris, 1895), first analyzes memory into motor, visual, auditory, emotional, and intellectual types; then finds a type of imagination corresponding to each, and attempts to show how this varies in nature and development with the aptitude and vocation of the individual. Painters, for example (*cf.* Chap. II) have more definite and detailed visual images, and musicians more systematic

and accurate tone-images, than ordinary men. The intellectual type is feeble in artists, for example, who are by nature receptive and emotional. Still more explicit in the interpretation of individual differences is Queyrat in his work entitled *L'imagination et ses variétés chez l'enfant: étude de psychologie expérimentale appliquée à l'éducation intellectuelle* (Paris, 1895). Queyrat analyzes the imagination into three types — visual, auditory, and motor. His thesis is that predominance of a certain type determines aptitude for science, art, or professional life, as the case may be. Hence it becomes the duty of the educator to discover the predominant type in the child, and thus to direct him intelligently in his choice of a vocation, at the same time developing other types harmoniously. ("La prédominance dans un esprit d'un ordre d'images lui assure des aptitudes prononcées pour une science, un art, une profession. Le rôle de l'éducateur est donc de s'appliquer à la reconnaître, afin, s'il y trouve réal avantage, de possesser l'enfant dans la voie que lui trace la nature" (p. 156).

Further developments in this direction — that is, in the direction of giving an immediate and specific social significance to individual variations of mental imagery — would be in the nature of detailed application. And a thorough test of the hypothesis would involve experiments on children and adults extending over a considerable period of time. I have not been able to learn of any such experiments. Hence the hypothesis can be criticised here only as to its logical merits. The attractiveness of the hypothesis lies in its possibility of affording a positive interpretation of individual variation, by connecting the variation with division of labor in society. The special type of imagery which an individual possesses, especially if he possesses it to an unusual degree, makes him all the more fit, the hypothesis could readily be stretched to say, to discharge some particular function in the social organism. But the hypothesis is broad at the expense of depth. It is as superficial as it is attractive. It is premature. On the face of it, there is no more reason for associating a predominant type of mental imagery with a call to a particular vocation — say the visual type with the vocation of the artist — than there is in associating red hair with a fiery temper. It is true that there may be some deeplying relation between the two; but it is equally true that, until this relation has been made out, the comparison is merely one of superficial and inconstant resemblance — I say inconstant, because inquiries have revealed many exceptions to the supposed rule.[1]

[1] *Cf.* GALTON, *Inquiries into Human Faculty*, pp. 88 and 94. *Cf.* LAY, *Mental Imagery*, pp. 16–24.

Ribot, in his recent and suggestive work on imagination (*Essai sur l'imagination créatrice*, Paris, 1900), criticises the analysis of the imagination into the various types as illusory and futile. Such an analysis, he says, does no more than point out the materials with which the imagination works. It has no more meaning than a classification of architectural structures on the basis of the materials employed; say, a classification of monuments into those made of stone, brick, iron, wood, etc., without reference to differences in style (p. 150). Ribot then proposes the following classification of the principal types of imagination:

1. Plastic.
2. Diffluent.
3. Mystic.
4. Scientific.
5. Practical and mechanical.
6. Commercial.
7. Utopian.

It is not necessary to reproduce his definitions of these types; the essentially social and objective reference of the criterion of the classification is evident. Its value and its limitations fall together. Its value, to say nothing of the richness of detail with which Ribot has illuminated his pages, lies in the truth that the imagination does finally express itself in an objective world of fact. Ribot sums up this truth in the closing sentence of the book: "L'imagination constructive pénètre la vie tout entière, individuelle et collective, spéculation et pratique, sous toutes ses formes: elle est partout." Its limitations lie in the disregard of psychological processes, sensorial or otherwise, that lead up to the objective, overt results; its limitations lie also in the assumption that the sense elements involved in the imagination are so much "material," on and with which the creative powers work. Ribot is also to be classed with Spinoza and Hume, in so far as he regards sense elements merely as the given, the raw stuff, the data of experience.

A conception which, logically speaking, enables Ribot to analyze and classify the various types of imagery on an objective basis, and at the same time to regard the reproduced sense elements as so much "material," is the conception of the motor aspect of imagery. "La nature motrice de l'imagination constructive" is the title of the introductory chapter, and is a theme that reappears again and again throughout the entire work. "Essayons de suivre pas à pas la transition qui conduit de la reproduction pure et simple à la création, en

montrant la persistance et la prépondérance de l'élément moteur à mesure qu'on s'élève de la répétition à l'invention" (p. 1). Even in a purely reproductory image a motor element is present, Ribot would say, for such an image is a residue of an anterior perception; and perception always involves movements. In virtue of this motor element the image always tends to find outward expression. " . . . . l'élément moteur de l'image tend à lui faire perdre son caractère purement intérieur, à l'objectiver, à l'extériorer, à la projecter hors de nous" (p. 2). But Ribot fails to see anything creative in this tendency of the image to pass into an act. He distinguishes sharply between reprodutive and creative imagination. The criterion is the objective one. The reproductive imagination is that which gives rise only to the repetition of some act or object. To be creative, the imagination must result in something new.

Ribot's work is a contribution to sociology rather than to psychology. Or it might be described as embodying a type of social psychology in which "l'élément moteur" forms a sort of bridge between two sets of phenomena—one psychical or subjective, the other social or objective. Such a conceptiion as this marks an advance over the conception previously referred to—the conception that there is an immediate, qualitative correspondence between certain types of mental imagery and certain activities or vocations. It gives us a glimpse of a mechanism between image and result, idea and fact. I am not attempting to express an appreciation of Ribot's work as a whole, with its clear, though not always convincing, analyses, and its suggestive comparisons. I merely wish to use certain points emphasized in the work; namely, the fact that an image, whether visual, auditory, or tactual, is always motor; and the fact that by virtue of this motor phase an image always tends to objectify itself in the world of fact. And yet there is nothing novel, or strikingly "creative," in these points. They are simply expressions or applications of the current doctrine of sensori-motor and ideo-motor reactions.

What might be called the official work on the psychology of the imagination has not, it seems to me, brought to light results that have a very direct bearing upon the problems raised in our discussion of the imagination as treated by Spinoza and Hume. This cannot be urged as a criticism against the careful descriptive work that has been done, nor against the brilliant interpretations of recent French writers. But a solution will have to be sought in and through other phases of psychology.

SEC. III. A PSYCHOLOGICAL ANALYSIS OF IMAGE-DEVELOPMENT.

In this part of the discussion I am especially indebted to Professor Dewey's reinterpretation of the doctrine of sensori-motor reaction, as found notably in his article on the "Reflex-Arc Concept in Psychology" (*Psychological Review*, Vol. III, p. 357).

The fundamental assumption with Spinoza and Hume — and with Ribot as well — the assumption that the sense element in experience is externally imposed, is a datum; an "impression," to use Hume's word; "material," to use Ribot's — suggests the point at which analysis may be most effectively directed. If the assumption be granted, then we have either of two alternatives presented, according as we regard the recipient "faculty" of the mind as passive respecting its data, or as active. With Spinoza we may regard it as passive, and the problems already indicated (p. 48) will arise, the most pressing of which is perhaps the problem of individuality. What can be done for a self that is half bond and half free — half imagination and half reason? Is it a self at all? It takes a thoroughgoing empiricist, or associationist, like Herbert Spencer, for example, to push this conception past Spinoza and on to its logical ultimatum, completely generalizing the method of forming the individual out of a continual raining in of sense-impressions — but at the expense of a complete dissipation of individuality. Spinoza was a semi-Spencerian. Or with Hume we may regard the imagination as actively recombining and projecting its sense data; and another set of difficulties will arise, chief among which is the wholly irresponsible character of the imagination thus conceived apart from its material. In short, the assumption, in whichever way it is taken, creates more difficulties than it solves.

A counter-assumption which I wish to test on this group of problems is the assumption that a sensation is not a given element, a datum, but appears as the *locus* of a problem. It marks or locates the point in the organic activity of an individual where the strain is greatest, where demand for readjustment is most acute. A sensation is the way in which strain *seems* to the individual — in that sense it is seeming rather than being. It is the appeal which the demand for readjustment makes to the individual — in that sense it is particular rather than universal. It does not presuppose organic activity as a *basis*. It is organic activity come to consciousness in the process of becoming more organic. The so-called reflex arc is not sensori-motor or ideo-motor, in the sense that it is made up of two joints or segments, one of which is sensory up to a certain point, and the other motor. The

"reflex arc," or, as it has been more aptly termed, the "organic circuit" of stimulus and response, is either all sensory or all motor, depending upon whether it is a matter of immediate experience, or a matter of mediate or inferred experience; depending upon whether it is my experience from my point of view, in which case it is sensory; or my experience from your point of view, in which case it is motor. A kinæsthetic sensation is as much a sensation as a visual or auditory sensation. And, conversely, a visual sensation involves motor adjustments as much as a kinæsthetic sensation.

To say that a sensation appears as the *locus* of a problem does not mean that every sensation is to be so regarded. A sensation may be simply the point of least resistance in some habitual attitude or response which is anything but problematic. The barking of a distant dog breaks in upon my stream of consciousness as I write these lines. Since I have no jurisdiction whatever over that dog, the barking is barely perceived; in other words, only the most habitual and elementary forms of auditory perception and interpretation are brought into play. The case might be very different, however, if I knew that I could exercise some sort of control over the dog. In that event I might allow myself to be irritated by the barking. The more I felt that it was in my power to do something to check the disturbance, the more the sensation in question would appear to be the *locus* of a problem. The rattling of a window, the flapping of a curtain, the squeaking of a sign-board, are often almost entirely ignored, until it occurs to one that something can be done to stop the noise; then, unless the suggestion is followed up without delay, the noise is liable to become a source of irritation, a *locus* of a problem. I doubt whether Carlyle had been so much disturbed as he was by the cackling of his neighbors' fowls, if there had not been some suggestion, however remote, of the possibility of Mrs. Carlyle's purchasing the offenders, as she finally did, and silencing them forever. Instead of its being true that a sensation is a datum given from without, it is more true to the facts of experience to say that when a sensation is so regarded it is liable to be annihilated. Wholly from without? Well, then it does not concern me; I can't help it. It is only when I feel myself to be in some way responsible for a sensation; it is only when it arises within my range of activities, my habits of control, that it persists and grows more intense.

The greatest difficulty that stands in the way of this assumption or hypothesis as to the nature of sensation would seem to be the objection that it is absolutely idealistic — if sensation is not given from without,

then it must be given or produced from within — purely idealistic, subject to call, so to speak, and therefore not in any degree problematic. This difficulty or objection is really nothing but the same old assumption over again, though in an apparently new form. It arises because of the old tendency to deal with sensation as if it were a datum, if not given from without, then, forsooth, given from within. If the externally given sensation is to be regarded as materialistic, and the internally given sensation as idealistic, then from the standpoint of the present hypothesis it is a matter of complete indifference whether a materialistic or idealistic turn be given to the machinery. The present hypothesis simply takes sensation where it finds it, and attempts to give it a functional interpretation. One of the commonplaces of psychology is that sensation cannot be defined save in terms of itself. Carry this commonplace farther and the definition may be reached that sensation is, functionally, simply experience defining itself to itself.

It may relieve the last statement of some of its metaphysical abstractness to consider the classification of sensations employed by several modern psychologists, notably by Külpe. By him sensations are classified into those peripherally excited and into those centrally excited, or into sensations as such, and images or ideas. This distinction between peripherally and centrally excited sensations seems to be made on a purely structural or even anatomical basis. Sensations peripherally excited are psychical phenomena which necessarily involve the stimulation of a sense-organ. Those centrally excited are psychical phenomena which necessarily involve the activity of some portion of the central nervous system, but not necessarily the stimulation of a corresponding sense-organ — the phenomenon may be experienced even though the sense-organ is no longer in existence. The distinction does not deny the primary unity of the two sides, nor their subsequent interdependence, but it does assert that they may become anatomically distinct from one another. Yet, being a structural or anatomical distinction, it may furnish the *loci* for a functional restatement. It suggests a division of labor, as well as a difference of position. Even in its present form it is a criticism upon the traditional view, held by Hobbes and his successors, that a mental image is a less vivid or decayed sense-impression. "The correctness of the assumption that images are merely weaker sense-perceptions has never been demonstrated," says Külpe, "and the constant assumption has done as much as anything else to render the department barren and schematic" (*Outlines of Psy.*, p. 169). But *any* structural statement lays itself open

to just such a criticism as this. It has to be supplemented, and possibly corrected, by a functional or physiological statement. How did the two *loci* or *foci* of sensation arise? What is their function in maintaining the life-process? Under what conditions does an "organic circuit" become an organic ellipse?

The problem can be most readily approached, I believe, from the genetic and physiological side.

It is a law of growth, on the physiological side, that habits previously worked out independently of one another shall be combined, co-ordinated, to form a higher, more organic unity, which in its turn may become a habit, subject to combination with other habits; and so on indefinitely, or until growth ceases. This form of combination is not a mechanical putting together; it is organic, since each member of the co-ordination, each previously independent habit, undergoes reconstruction and also gains in efficiency through its interaction with the other members of the co-ordination. To illustrate, take the case of learning to swim. There are habits of pushing objects aside with the hands and arms, habits of kicking, habits of balancing the body, etc., which have been worked out independently of one another, at least so far as the act of swimming is concerned. They are the necessary constituents of the act or habit of swimming that is to be; but simply making them work together is not sufficient; they must be co-ordinated. Each habit has to be made over somewhat, reconstructed, through its interaction with the other habits involved. Each gains a new efficiency, in proportion as the act of swimming is mastered — as the co-ordination is realized. And this co-ordination, when realized, tends to become a habit, capable in turn of playing a part in some larger co-ordination yet to be.

Two distinct factors of this law of growth are habits and co-ordination; and bound up with these is consciousness. Between habits, the achievements of the past, and co-ordination, the possibility of the future, stands the "specious present" of consciousness. Out of this "specious present" of consciousness with reference to habits on the one side, and to co-ordination on the other, arise the two *foci* of sensation, the peripherally and the centrally excited sensations — sensations as such and images or ideas. Sensations as such answer to habits, which are not quite what they were, because they are conflicting or inadequately functioning under the stress of unwonted conditions. The image answers to the co-ordination that is to be, provided it is possible to anticipate the co-ordination.

As to the possibility, on the physiological side, of anticipating a co-ordination. The sensory areas or centers of an infant are unco-ordinated. According to Flechsig, the mechanism for their co-ordination is lacking until the medullary sheaths of the connecting fibers or association centers ripen. "Noch einen Monat nach der Geburt sind die geistigen Centren unreif, gänzlich bar des Nervenmarkes, während die Sinnescentren schon vorher — ein jedes für sich, völlig unabhängig von den andern — herangereift sind" (*Gehirn und Seele*, p. 23). Until the connecting fibers ripen there is no reason to suppose that the eye activity, say, influences in any organic way the hand or ear activity, unless it be through some subtle modification of that dark continent of inner environment, the blood supply. Naturally only random movements and instinctive acts are possible. The fingers close in response to a stimulus of the palm. In the same way, probably, the muscles of the eye respond to a stimulus of the retina. But neither hand nor eye movement can affect each other organically, until the nerve-fibers connecting the eye and hand tracts become functionally mature and active. It seems probable that each type of movement develops as far as its isolation will permit; but it is difficult to conceive how anything corresponding to a mental image could arise during this period. With the ripening of the connecting fibers, however, comes the possibility of the image. The eye-hand activity which now arises is a more complex activity, and one capable of a higher degree of organization, than either the eye or the hand activity by itself. At first each activity is an accidental stimulus to the other; it shoots into the other, so to speak, at random. Only through such chance associations, followed by repeated trials and interaction, does the higher organization of the eye-hand activity come into existence and establish itself. In the case of the painter, to take an extreme example, this process of perfecting the organization of the eye-hand activity may be the work of a lifetime.

The *Anlage* of the image thus approached from the genetic and physiological side is capable of being generalized and of having its mechanism stated in the following terms: At first, as I have already pointed out, the activity takes place in a wholly unanticipated, accidental way. There comes a time, however, with reference to a given stimulus, when a tension is bound to arise between the eye and the hand activity as independent reactions and the eye-hand activity as a co-ordinated reaction. It is not that the original eye activity is opposed to the original hand activity as such. But it is a conflict between the old way of doing things, represented by the instinctive

reaction of the eye activity as independent and the instinctive reaction of the hand activity as independent, and the new way of doing things, represented by the eye-hand co-ordination. In describing this tension we are at the same time describing consciousness, and also, what is more to our purpose, the origin and function of the image in its relation to sensation. (I am using the terms "image" and "sensation" as equivalent respectively to centrally and peripherally excited sensations.) The image is the incipient eye-hand co-ordination in its tension with the incipient eye and hand reactions. The image stands for the persistence of previously haphazard co-ordinations; the sensations stand for immediate eye and hand reaction. The image is the incipient eye-hand co-ordination in its tension with the incipient eye and hand reactions. The sensations are the incipient eye and hand reaction in tension with the incipient eye-hand co-ordination. (I am not using the terms "co-ordination" and "reaction" to mark a radical distinction. Co-ordination is simply a more complex, more mediated reaction. Reaction denotes the more direct and immediate response.) The greater the tension, the more comprehensive the image, and the more definite the sensation.

Professor James, in his chapter on "Will," has shown how all voluntary action is a function of the image or sensation attended to, though it seems necessary to him to postulate in addition a *fiat*, a sort of "le roi le veut." Our hypothesis can accept and utilize *in toto* Professor James's analysis of the mechanism of volition without at the same time being obliged to use the remnant of monarchy which is bound up in the doctrine of the *fiat*. Activity is a fundamental characteristic of the self. The problem is how this activity shall be organized and expended. The image is the element of control as against sensation or tendencies to immediate response. It represents a more adequate mode of freeing activity as against merely impulsive or instinctive action. Yet both image and sensation appear as the problematic points in the situation. The co-ordination can be expressed only through the reconstruction of relatively partial reactions. On the other hand, in asserting themselves as sensations these reactions at the same time define the condition which the more highly organized activity must meet and utilize. The process of consciously reconstructing previous types of reaction, and the tension between co-ordination and reaction which appears as a conflict between two sets of sensations — centrally and peripherally excited — are equivalent expressions. The activity which reconstructs, or which defines itself to itself in sensations, or which finds expression in overt movements, is one.

I have implied that the image is the persistence of previously haphazard co-ordination. This would seem to mean that the image is simply a revival. Taken in itself, this would be true, but the image is not to be taken in itself; it has to be taken in its relations, in its tension, to previously isolated reactions. With reference to them it is not a revival; they are rather the revivals. It is an anticipation of a fuller and freer activity into which these previously isolated activities may pass, and find organic membership.

It will be seen at once how close this is to the view which Hume took of the imagination. The value of Hume's analysis with reference to this point has not been recognized, and can hardly be overestimated. The "propensive," projective, anticipatory character of the image — that is precisely its function, as Hume clearly saw. It is interesting to recall, in passing, Spinoza's identification of the imagination with the gift of prophecy. True, Spinoza placed the emphasis on the receptive, sense-content aspect of the imagination, rather than on its forward, anticipatory movement. And yet, if prophecy deserves the name, it is a *fore*telling.

We cannot rest the case, however, on this somewhat speculative attempt to approach the problem from the genetic and physiological side. It was simply an attempt to get the benefit of a view of the matter from without before looking at it from within; before looking at it as it appears in the individual's stream of consciousness; that is, before approaching the problem from the psychological side. Doubtless it would be either gratuitous or else "metaphysical" to develop the point which underlies this discussion, namely, that these two sides, the physiological and the psychological, have little or no significance apart from one another, and that both are abstractions arising in one activity, in one life-experience. The point more relevant to this discussion is concerned with how the relations between sensations and image are experienced; and finally, what is the consciously experienced relation between what we call the imagination and reason. This is not to be concerned with how sensations are received from things, nor how "brain paths" are wrought — these are questions rather of psychophysics or of metaphysics — but the problem is to take sensations and images as we find them and to seek what is their function in experience. This is in harmony, I believe, with the attitude taken by Locke when he said, at the beginning of his *Introduction:*

> I shall not at present meddle with the physical consideration of the mind; or trouble myself to examine, wherein its essence consists, or by what motions

of our spirits, or alterations of our bodies, we come to have any sensations by our organs, or any ideas in our understandings; and whether those ideas do in their formation, any, or all of them, depend on matter or no: These are speculations, which, however curious and entertaining, I shall decline, as lying out of my way in the design I am now upon. It shall suffice to my present purpose, to consider the discerning faculties of a man, as they are employed about the objects, which they have to do with.

"To consider the discerning faculties of a man," and to consider them with reference to the carrying on of the business of life, whatever that may chance to be, or "as they are employed about the objects with which they have to do," is to be concerned with a psychological problem close to the one we now have in hand.

I shall try to be brief, for the points I wish to bring to attention are too obvious to need extended treatment; they are all on the descriptive rather than on the explanatory level.

1. The experience of a sensation of some kind is essential to the carrying on of any habitual activity, and *a fortiori* of any unaccustomed activity. By habitual activity I mean an acquired or learned activity, one that has passed through the readaptive process of consciousness, such as walking, writing, etc.; and I would exclude, of course, all purely reflex, automatic, and instinctive acts. The latter are rather the raw materials, if they are not the finished products, out of which habits are constructed.[1] The need of sensations in the forming of a new habit is too patent to require more than a mere mention. But the need of sensations in carrying on some well-established habit is sometimes in danger of being overlooked, because the sense factor may be so "remote," to use Professor James's word, so reduced in character, as to lose itself in the "fringe" of consciousness. Take, for example, the habit of writing, the habit of forming verbal symbols in script. It is only necessary to close the eyes while using the pen to note how dependent the habit is upon the visual sensations of the materials and movements involved. Professor Baldwin's analysis of handwriting, in *Mental Development, Methods and Processes*, is especially instructive as to the details of this illustration.

2. Granted that a sensation of some kind, no matter how remote and reduced—it may even be of the kind that is "centrally excited"—

[1] It is not intended to discriminate rigorously between automatic reflexes and habits; nor, on the other hand, is it deemed essential to the argument to reckon with the possibility of habits shading into reflexes. It is not a question of terms or of nomenclature. A habit may continue to be called a habit, if anyone likes, even after it becomes completely automatic, or operated by stimuli that do not rise above the threshold of consciousness. The aim of this part of the discussion is simply to indicate a functional relation between sensations and habits, or acquired co-ordinations — some habits, if not all.

is essential to the carrying on of a given habit, it is to be expected that in a specific case the absence of the appropriate sensation or sensations will render impossible the functioning of the habit. The reaction, if it takes place at all, will fail of the sureness and smoothness of the habitual reaction; it will tend to become wavering, spasmodic, too intense or too feeble, as the case may be. Either a new habit has to be worked out with reference to the sensations or stimuli actually present, or else the appropriate stimuli have to be discovered. *An important function of the image is to direct the search for the appropriate stimuli.* It is quite possible, I repeat, that when the appropriate stimuli are absent, a new habit may be formed with reference to the stimuli actually present; but this is liable to involve a long and conscious interruption of some process more or less essential to the life of the organism. If, when the interruption is first felt, an image comes to consciousness which reveals the appropriate stimuli in their association with the present situation, a search may be undertaken for the stimuli and the habit administered with due economy. The so-called laws of the association of ideas — contiguity, similarity, contrast, cause and effect, and the rest — are the mechanism of which the image is the definition, the specific instance, in directing the search for the stimuli appropriate to the functioning of a given habit. In the presence, then, of the interruption of some habit through the absence of appropriate sensations or stimuli, the image comes in as a more adequate representation of the situation than the immediate sense-perceptions can afford, as a filling out of the incomplete, the imperfect, and as a means of selecting or passing to the appropriate stimuli. It is possible, also, for the image to reveal the impossibility of selecting appropriate stimuli, and hence the necessity of reconstructing the habit or of working out a new one.

Suppose, for example, that, as I am writing these words, the supply of ink in the fountain pen suddenly gives out. The writing habit suffers interruption, not only because the movements of the pen will no longer leave a record that will be apparent to some possible reader, but because the writing movements themselves are dependent in a measure upon the visual sensations of the ink tracings that follow the pen. Even if I were to slip a sheet of carbon paper under the paper on which I am writing, so that a record could be obtained which should be visible to a possible reader, though not visible to me at the time of writing, I could not proceed as before. The look of the letters and the words as I write not only facilitates their comparatively regular

and legible formation, but also assists in the arrangement of the larger units of the sentence. Doubtless the habit of writing in my usual hand with a dry pen over carbon paper could be acquired without much expenditure of time or energy, but we will suppose in this case that it is neither necessary nor desirable. We will suppose also, for the sake of the illustration, that the ink bottle is not immediately at hand, and that the filling of the fountain pen has not become a purely habitual part of the writing act. The point is that the search for the ink bottle is directed by an image, if it be in any sense a conscious search. The image may be simply a vague feeling of tendency in a certain direction where the ink bottle is likely to be found, or, especially in the presence of unsuccessful efforts to find it, the entire contents of a shelf, or of a room, say, may be vividly imaged in the attempt to locate the missing article.

3. The sensations that have to do with the carrying on of habits are for the most part those lying in the "fringe" of consciousness. We have now to speak of sensations that lie in the focus of consciousness, and of the relation of the imagination to them. The function of sensations of this order has been implied under 1 and 2. The interruption of a habit through absence of appropriate stimuli brings at the same time certain stimuli to consciousness which may have lain far below the threshold of consciousness. But the more palpable cases are those that arise in the interruption of a habit through conflicting habits, or through unusual and inappropriate stimuli. In such cases it is not so much a question of discovering the missing stimuli so that the old habit may go on, as it is of reconstructing the habit to meet the new demands of the situation. In all cases of interrupted habitual activities the sense factor locates the interruption, the strain, with reference to which a new adjustment has to be made. Take the case, for example, of a man who is about to make a speech before a large audience, and who is wholly unaccustomed to such an ordeal. Few under such circumstances would be fortunate enough to escape the distracting sensations that swarm to the surface of the stream of consciousness, coming from the lower regions of throat, lungs, heart, and diaphragm, and all indicating the interruption, the breaking up, of the speech habits and others, under the stress of unwonted and inappropriate stimuli.

4. It is possible that new adjustments may be worked out solely in the medium of peripheral sensations, without involving an image. But unless backed up by well-defined instincts, such a method of

acquiring new adjustments is laborious and expensive, judged by the usual standards. Each new movement in the process has to be made haphazard, without anticipation of probable consequences; and the successful adjustment, when finally reached, is likely to represent the survival of a few fit and elect responses, over and above the many unfit and condemned. It is a case of the adage: "Experience is a hard school, but fools will learn at no other." True, no new habit or adjustment can be learned save through random and haphazard responses. But the fact should not be overlooked that, in the case of children, the environment, or stimuli, is controlled by their elders, so as to limit the range and direct the play of these random and haphazard responses, the result being that the child learns through the experience of the race as well as through his own experience; and that, in the case of the more mature, models of various kinds, to say nothing of the imagination, play their part in economizing effort. New habits and adjustments may be acquired, to repeat, solely through the medium of the sensations, but in the interests of greater efficiency and economy the imagination enters as a factor.

What is commonly termed learning through imitation lies between learning through merely immediate sense-perceptions and learning through the imagination, and may properly be considered by way of an intermediate step in the discussion. The model imitated, particularly if it be not a finished thing, but a process of making or doing something, performs the function of selecting stimuli for response on the part of the learner. It tends to limit the range and direct the play of his random and haphazard impulses. The model imitated does not have to be, of course, an immediately present external thing or process. It may be a memory image of the thing or process. Most of the plays of early childhood afford illustrations of how new habits are acquired through imitating a model held in the form of a memory image. (I am using the expression "memory image" in the sense in which Hume uses the expression "idea of memory," meaning a pretty literal reproduction of the sense "impression," rather than in the sense of an image consciously referred to the past.) The memory image functioning in this way is psychologically creative, in that it is instrumental in the forming of new habits and adjustments.

But there arises a demand for greater efficiency and economy than that realizable through imitating either an external model or a memory image. Every break or interruption of the course of a habit is a unique event. The crisis will be met most economically if the

resources of the past experience of the individual, not of anyone else to the exclusion of his own, be brought to bear. No memory image will meet the situation most effectively, because the situation is new; it is a break in the habitual. It must be an idea of the imagination, to use Hume's expression — an image which reconstructs and projects the old to meet the new.

Modern drama and fiction are rich in illustrations of this point. The plot conflict frequently centers about the success or failure of some dominant idea of the imagination, as conceived by some individual, to meet the situation. We are not interested, as a rule, in how successfully one character may imitate another, except in burlesque; but we are interested in how a character faces a difficulty, a break in the course of his career, a problem; and we follow eagerly his attempt to bring his own resources to bear, whether he be a Prospero, winning almost perfect triumph through the range and power of his ideas, or a Caliban, almost entirely at the mercy of his own impulses and external circumstances.

To sum up the points made on the physiological and on the psychological sides:

1. The *Anlage* of the image, the physiological condition, comprises the association fibers connecting the various lines of sensori-motor activity. To say that the association fibers connect various brain-centers might be misleading, unless it be understood that in connecting centers they are also connecting peripheries. It is the whole sensori-motor activity, including sense-organ, nerve-fiber, muscle, or gland, that is connected with other sensori-motor activities by means of the association fibers. Even this is possibly misleading, as implying that the association fibers are somehow external or adventitious to the sensori-motor activities. The co-ordination of various sensori-motor activities, of which the association fibers are the physiological mechanism and the image the conscious representation, is, so to speak, a "union loop," constituted by the various sensori-motor lines.

The image arises in the tension between the new co-ordination and the older, more immediate, sensori-motor reactions.

2. On the psychological side the image comes to consciousness as the means for directing a search for stimuli or sensations appropriate either to the carrying on or to the reconstruction of a habit which has been interrupted, either through lack of appropriate stimuli or through the presence of inappropriate stimuli and conflicting habits or impulses. The image may be either a memory image — in other words, a reproductive or imitative image — or it may be a reconstructive image,

an image of the imagination—to put it tautologically. But in either case it is a creative image, in that it modifies the response—continues the functioning of a habit or directs its reconstruction.

Putting the physiological and the psychological sides together, we note that the image is not simply a faded copy of sense-impression, and that the imagination is not simply either the passive recipient or the arbitrary manipulator of so much sense-material given from without; but that the image is a conscious anticipation and selection of the conditions that will free impulses and organize them into useful habits, representing as it does a co-ordination of sensori-motor reactions; and that the co-ordination of sensori-motor reactions becomes effective as a co-ordination, because it does anticipate and select stimuli that are essential to its realization, and is not dependent solely on the reactions and stimuli immediately present.

It is evident, I presume, that an assumption which underlies this discussion is concerned with the nature of habit. I do not propose to argue the assumption here, but merely to mention it. No attempt is made to go back of habit into original instincts and impulses, because it seems probable that in the process of transforming instincts and impulses into habits the image plays little or no part; the transformation is assumed to take place through the medium of sensations, the instincts standing for ready-made, inherited co-ordinations—unconscious images, to put it paradoxically. In this discussion the existence of habits is taken for granted, and we are concerned with habits which do not function wholly below the level of consciousness, but which require some conscious element, sensation, or image, no matter how remote or reduced. The function of the image is to economize the process of transforming one habit or set of habits into another. A habit is an adjustment to a relatively fixed environment, or set of stimuli. But the environment moves on; new conditions arise; new demands have to be met. The habit is interrupted. The various sensori-motor reactions involved in a habit are shaken loose, so to speak, like strands of a broken cable. The points of interruption, of strain, are located by sensations. The reconstruction of the habit to meet the new conditions may be made through the medium of peripheral sense-experience exclusively, but only at a wasteful cost of time and energy. The function of the image is to diminish this cost of time and energy through anticipating and selecting stimuli appropriate to the reconstruction of the habit. This habit has not functioned hitherto as a separate thing. It is part of a co-ordination, part of what

is sometimes called a "bundle of habits." The image is this fact come to consciousness. The image anticipates only as it retrospects. It is *pro-pensive*, to use Hume's word, only under the momentum of past experience.

There remains to consider the relations of the imagination to reason, a problem set both by Spinoza and by Hume. With both, the imagination and reason are, finally, incompatible categories. True, as I have already pointed out (pp. 47 ff.), Spinoza and Hume do not agree as to the function and value of these categories. It is reason, according to Hume, that informs us that our perceptions are interrupted (in this respect reason corresponding exactly to Spinoza's definition of the imagination); whereas it is the imagination, according to Hume, that makes possible an idea of the continuity of the objective world, to which our interrupted perceptions refer (in this respect corresponding exactly to Spinoza's definition of reason). This very transposition of terms only brings out more clearly how both were at this point grappling with the same problem — the old problem of the one and the many. It is a case where transposition of terms does not alter the balance of the equation which states the problem. Rather is it where they most nearly agree in the use of terms that they differ most widely in meaning and in form of solution. Both agree that the imagination is the essence of individual variation. But with Spinoza this locates the source of error and confusion; whereas with Hume this locates the last resort, if not for truth, at least for the possibility of truth. Both agree that reason can originate no new idea. But with Spinoza reason is a way of becoming conscious of laws given by God; whereas with Hume it is a way of becoming conscious of laws given by custom. Both agree that the materials of the imagination are sense data given from without. But with Spinoza the imagination is conceived as passively receptive; whereas with Hume it is conceived as actively manipulating and recombining its data. Even in their apparently final and complete agreement that the imagination and reason are incompatible, Spinoza proposes the absolute exclusion of one category, the imagination, from the realm of philosophy; whereas Hume continues to keep house with both on his hands.

I think we are prepared to recognize that from a psychological point of view the imagination is not always compatible with reason. The imagination has the defects of its qualities. Its characteristic function of transcending the immediately present, in order to direct

the search for stimuli appropriate to the continuance or reconstruction of essential habits, demands a certain range for free play which may, particularly in the event of failure to discover the appropriate stimuli, be converted into license. The so-called laws of association — contiguity, similarity, and the rest — which are the mechanism by which the resources of past experience are brought to bear on a particular situation, may, especially in the case of failure, continue to run on their own momentum, one idea calling up another, in a sort of endless chain of mind-wandering. The energy which should have been directed toward meeting the concrete situation and in forming practical habits of conduct becomes diverted into mere play of mind, into mere day-dreaming. Action, instead of being controlled through ideas, is postponed for the sake of the satisfaction that attends the flow of centrally aroused sensations. When the actual conditions of action are lost sight of—which is only another way of saying that the peripherally excited sensations are ignored — the play of imagery runs away with itself; it becomes capricious, untrustworthy, and misleading. To use a mathematical comparison again, the imagination which first emerges as one of the foci of an organic ellipse may become parabolic, and even hyperbolic.

And yet it does not cease to be a function of the cone of experience. It is precisely at this point in the analysis that the adequate idea, or reason, is seen to have its place. The adequate idea, or reason, is the deeper principle of habit or control which lies back of the play of imagery. It is the idea which is adequate, equal to, a match for, the demands of the actual situation. In a sense, it is older and more fundamental than the imagination, for it is the side of response which is present in the first instinctive reaction. But at the same time it is one with the imagination, being the imagination as controlling most effectively the given situation through the free play of its own resources. Reason is the imagination in focus, both in the physical and in the mathematical sense of the word.

It is significant to note that comparatively little imagery is associated with reason. A concept or an idea, or a purely intellectual process, is described as a pale, washed out, abstract thing, in contrast with the rich, sensuous content of the imagination. It is usually taken for granted that the imagination is somehow closer to sense-perceptions, more of the earth, earthy; whereas concepts, ideas, reason, are more remote, transcendent, spiritual. It is quite possible that the negative virtues thrive with most safety to their possessors in the soil

of reason ; for a negative virtue planted in the soil of the imagination is liable to become a luxuriant vice. From a psychological point of view, however, there is no distinction of value between reason and the imagination. The distinction between the two is one of sensuous content, as has just been indicated, and this is to be interpreted as one of function. A concept, like a habit, is carried on, is consciously controlled, by means of a sense factor, which is usually exceedingly remote and reduced. In the case of a concept the sense factor is centrally excited ; in other words, an image. In the case of a habit the sense factor is more frequently peripherally excited ; in other words, a sensation. But even this distinction between concept and habit is rather arbitrary. By either is meant a consciously acquired process which is carried on with the minimum of conscious attention. Reason, as Hume pointed out, is not engaged in originating new ideas. Neither is habit. Their business is to continue the functioning of those already originated and worked out. It is true also, as Spinoza pointed out, that reason is adequate. It is the adjustment so completely worked out, so equal to, so adequate to the situation, that it is functionally one with it. Within the province in which it works reason's control, the control of the adequate idea, is supreme. What wonder that a philosopher should wish to make that province the universe, or the universe that province!

An idea of the imagination, however, represents control as ideal, not as fact. It represents a possible process of reconstructing adjustments and habits ; it is not an actual adjustment. Its sensuous content is richer and more varied than that of reason, for only in this way can it anticipate conditions and bring about responses in the process of learning the new adjustment. It arises normally in a stress, in the presence of fresh demands, and new problems. It looks forward in every possible direction, because it is important and difficult to foresee consequences. But suppose the new adjustment to be made with reasonable success — reasonable, note. Suppose the ideal to be realized. With practice the adjustment becomes less problematic, more under control — that is, it comes to require less conscious attention to bring it about. The image loses some of its sensuous content. It becomes worn away, more remote, until at last it becomes respectably vague and abstract enough to be classed as a concept. The imagination, then, is the essential reconstructive process between habit and habit ; between concept and concept ; between reason and reason.

If control be anything else but self-control, then reason and the

imagination are incompatible. Reason becomes the outer, external law, fate, custom, or substance, to which the individual must conform or perish; and the imagination becomes the unseen caprice, the idle, self-deceptive dreaming, of the unregenerate individual. But if control be won through conscious effort and maintained through conscious experience, then the imagination and reason are simply stages in one process.

APPLICATIONS AND CONCLUSION.

It is apparent, no doubt, that the psychological analysis of the imagination which has been undertaken above is closer to Hume than to Spinoza. How is it to avoid the difficulties that confronted Hume's analysis of the same faculty? Or, if we may cast the burden of the proof upon Hume, why the difficulties that arose in his attempt to make the imagination the carrier of the ideas of causation and of substance? We cannot lay the blame of all of them to his doctrine of sense-impressions, and images derived after the manner of Hobbes from sense-impressions. Such a doctrine might even dissociate mental imagery from the body of sense-impressions so far as to make one the mere ghost of the other; and yet, if the imagination does work in an orderly and progressive manner, it might still be described as the carrier of the ideas of causation and of substance; just as ghosts might be conceived of as rational beings dwelling in a real world like the gods of old, and influencing the course of events in harmony with the decrees of fate. Not metaphysical difficulties so much as actual psychological difficulties stared Hume in the face and were frankly acknowledged. The imagination is not always orderly and progressive. It is often capricious and ambiguous. Hume saw that the imagination is the distinctively subjective element; a potency, not a resultant; anticipating, prophetic — to recall Spinoza — not predetermining. And yet it was at the same time the only element left to Hume which could carry anything. It was the only element possessing the quality of continuity and capable of transcending the present moment. Hence it was loaded down with those great objective categories of causation and substance; and, mere ghost that it was, it broke down under the strain.

The image comes to consciousness in the conflict between tendencies to action. The presence of the image marks the stage as incomplete, as an experience in the process of being transformed, reconstructed. Taken in itself, the stage is but a cross-section of a given situation; not the complete experience that is to be. To regard such a stage as complete in itself is to mistake a part for a whole, a function for a structure. It is true that this stage is no mere abstraction from the sense-elements of experience, as many of the older

psychologists would have us believe; even in its earliest and crudest form it is a kind of rehearsal of the performance that is to come later. As a rehearsal it has to be as absorbing as the performance itself; and, though on a reduced scale, it may give as full a sense of power and of satisfaction. But apart from the performance it is meaningless. It is incomplete in itself. *The real test of a rehearsal is always the performance.* And, furthermore, the character of the performance will determine the *foci* of attention in a subsequent rehearsal.

The weakness in Hume's theory of the imagination lay in its failure to locate the test of truth in action itself. The imagination is but the half-way house on the road to this destination, and is not the permanent abiding-place of the objective categories of causation and substance. It can be held responsible only in and through the action that emerges as the expression of its anticipatory function. It is true that the imagination involves in its activity the use of the categories of causation and substance, just as a rehearsal of a drama involves the stage itself; we can go farther and say that in the activity of the imagination, or in the tension that this activity represents, these categories come to consciousness as the conditions of action and take on new meaning; just as in the rehearsal of a drama the stage, its machinery and accessories, receive a larger share of attention, it may be, than in the actual performance. But the imagination cannot on this account be conceived as the sole carrier of these categories. In the imagination these categories *represent* the conditions of action. In the forthcoming experience, in the performance itself, they *are* the conditions of action.

By way of final application of the points brought to attention in the psychological analysis undertaken above, let us return to the summary of problems on p. 48.

1. To what extent is the imagination to be held responsible for the detached, fragmentary particulars of experience? (Spinoza.)

Compared with reason, as has already been pointed out pp. 68–69, the imagination is much the richer in sensuous content, because it represents the conscious attempt to control the making of a new adjustment or habit, whereas reason stands for the acquired adjustment. In this sense the imagination is responsible for the particulars of experience, that is, it brings them to consciousness in the process of directing a reconstruction of experience. Nevertheless, in this conscious attempt to control economically the making of a new adjustment or habit, the imagination can at best only approximate the selection

of the appropriate stimuli. It must of necessity include as well stimuli that are not appropriate. Its forecast is more or less problematic. There is truth, therefore, in holding the imagination responsible, as Spinoza does, for the detached and fragmentary particulars of experience. It is only when the imagination is viewed as a faculty which passively receives impressions from without, that this characteristic becomes a consuming fault. Once let the imagination be viewed, not as passively receptive, but as a recombining, anticipatory, "propensive" faculty, and this characteristic is seen to be responsible rather to the novelty of the situation which the imagination is attempting to meet, than to any inherent flaw in the faculty itself.

2. How far can the imagination be dissociated from the understanding or reason? (Spinoza.)

From a psychological point of view, that is, from the point of view of the analysis of experience as maintained by the individual, the two cannot be dissociated. They are different stages in one rhythmic process. They are as essential to one another as any two things that are polar. Reason is the side of acquired, organized control; it is the *ratio*, the well-devised and tested plan. In a universe that manifested no change or progress, that might be all there was to it. But reason is continually being outgrown by life. The procession moves on. Demands arise that old adjustments, reason, cannot meet. An unknown quantity, an x, develops in the equation between the adequate idea and the nature of things. No manipulation of previous equations, or of cut-and-dried formulas, will alone suffice. The situation is unique. The value of x is new. That sense of the particularity of the situaiton—the "thisness" of the logicians—is the sensation or "impression." The appreciation of the sensation in the light of previous adjustments and habits, the interpretation of the break in this particular habit or set of habits, the conscious anticipation of stimuli appropriate to the reorganization of adjustments in order that the difficulty may be surmounted, are suggestions of what is the function of the imagination. The success of the function of the imagination in a particular case is the command for its own decline. The successful adjustment becomes through practice more and more a possession of reason. Control comes to be exercised with the minimum of conscious stimulus. Yet this adjustment, too, may later be brought into difficulties, though not exactly as before. So organically are reason and the imagination related in progressive experience that it would be truer to say that reason is the imagination generalized, and the imagi-

nation is reason particularized — which means that the analysis is not to be pushed to the extreme limit, lest the reality which it dissects come to life and escape the bounds of word-distinctions.

3. To what extent is the imagination a unifying, anticipating activity? (Hume.)

4. To what extent is the imagination co-operative with reason? (Hume.)

5. Why does the imagination fail to give a firm foundation to a rational system of philosophy — especially to the concepts of causation and substance, meaning by substance continued and independent existence? (Hume.)

These points are so closely related that they may be briefly discussed as one.

I have dwelt upon the value of Hume's theory of the imagination as a recombining, unifying, anticipatory activity, a theory which is both a criticism of Spinoza's theory of the imagination and a distinct contribution to modern psychology. I have attempted to point out, on the other hand, the hostility between the imagination and reason, which grows more open and acute with the development of the *Treatise*, and we have seen that Hume came to doubt the value of the imagination as a foundation of a rational system of philosophy. Both Spinoza and Hume doubted the compatibility of reason and the imagination. Their doubts can be shown to flow, I believe, from two psychological assumptions held in common: (1) the assumption that an analysis of the conditions of experience could be stated ultimately in terms of knowledge, instead of in terms of action; and (2) the assumption that the data of the imagination and of the perceptive faculties were so much material given from without.

Spinoza's ideal was, as we have already seen (p. 11), a character consisting of a knowledge of the unity existing between the mind and the whole of nature. If such a character or such a knowledge could be obtained, it would undoubtedly be reason, the unity, as controlled or habitual. The existence of the imagination, from this point of view, is plainly an evidence of failure to attain this character consisting of knowledge. If philosophy, as Spinoza seems to imply, be that perfect character consisting of a knowledge of the unity existing between the mind and the whole of nature, it can have no room finally for the category of the imagination.

Hume's ideal seems to have been the stating of the world in terms of the *ideas* of individual experience — again a knowledge ideal — and,

as we have seen, he found himself caught in a dualism between reason and the imagination. He discovered that reason tells us "that all our distinct perceptions are distinct existences, and that the mind never perceives any real connection among distinct existences" (p. 46, *supra*). Reason cuts the very substance of the world out from under the feet of individual experience. "Did our perceptions either inhere in something simple and individual, or did the mind perceive some real connection among them, there would be no difficulty in the case" (p. 46, *supra*). Hume also discovered that the imagination makes possible the ideas of causation and of substance, which reason denies. But he left the imagination where he discovered it, hanging in mid-air, like his man in the iron cage.

The point made in criticism of the assumption that an analysis of the conditions of experience can be stated ultimately in terms of knowledge, is that psychologically reason and the imagination represent mutually essential degrees of conscious control over action. Reason is the more effective, more complete, and therefore less conscious instrument of control. Imagination is the directing of a process of readjustment, and therefore is a more conscious instrument of control.

The second assumption (the numbering of the assumptions is, of course, a matter of no moment), namely, that the data of the imagination and of the perceptive faculties are so much material given from without, is involved in our last problem :

6. Does the imagination simply receive or operate upon ready-made data, conveyed to it through the sense-organs? To what extent is it merely receptive? To what extent is it creative? (Spinoza and Hume.)

To assume that sense data are literally data, or given from without, ready-made, is open to objection, if for no other reason, on the ground of the difficulties and contradictions which it involves. If sense data are distinct existences, as their plurality would imply, then we have on our hands Hume's problem of trying vainly to relate them. Imagination may succeed in tying them together, but reason says: "No, they come as many from without; and the without from which they come I know only as I know them — and I know nothing simple and individual in which they inhere." The psychological view that sensations, whatever else they are, and wherever else they may come from, are to be taken as we find them, and dealt with according to their function in locating critical points in experience, avoids a metaphysical problem which deserves dissolution rather than solution.

As to the latter part of the problem. Psychologically, every image, and, for that matter, every sensation, is creative. It is creative in that it is a stimulus; it modifies action or habits in some way. Every image recreates in some way the physical and psychical disposition of the individual organism that experiences it. As Professor James says in his chapter on "The Stream of Thought," *there "is no proof that the same bodily sensation is ever got by us twice. . . . .* Every sensation corresponds to some cerebral action. For an identical sensation to recur it would have to occur the second time *in an unmodified brain.* But as this, strictly speaking, is a physiological impossibility, so is an unmodified feeling an impossibility; for to every brain modification, however small, must correspond a change of equal amount in the feeling which the brain subserves." (*Principles of Psychology*, Vol. I, pp. 231–3.) There are, of course, degrees in the modification undergone — degrees so wide apart as to amount practically to differences of kind — but it does not follow that the criterion of the creative character of an image is, as I understand Ribot to maintain (p. 53, *supra*), the novelty of the thing created. A thing which is to all outward appearances perfectly commonplace may be the result of a tremendous reconstruction of individual habits; and a thing which to outward appearance is strikingly novel may be the result of comparatively little readjustment of individual habits.

Throughout this entire discussion there has been a constant endeavor, perhaps not always apparent, to search for and to appreciate, however inadequately, the positive value and significance to psychology of these theories regarding the imagination.

The strength of Spinoza's theory of the imagination lies in its rejection of the fallacious scholastic doctrine which explains the formation of abstract ideas or concepts as a process of agglutinating images. It is certainly true that ideas so formed would lack universality as much as the sense-materials out of which they were made. There could be no agreement between any two individuals as to the respective contents of their minds. But in rejecting such a doctrine Spinoza also rejected individuality as such, in favor of that spiritual automaton which is the knowledge of its union with the whole of nature. The only doctrine regarding sensation and imagination that he could command was one that compelled him to reject both categories from philosophy, and retain but the bare forms of thought, which reduce to identity.

The strength of Hume's theory, on the other hand, lies in its

recognition of the imagination, not as mere revival, but as the individual's carrying forward, projecting, of the data of his experience. With Hume, however, as well as with Spinoza, the individual was an abstraction. Spinoza left him the passive prey to outward circumstances; and pointed out that his salvation lay in becoming the zero of one member of a mathematical equation, the other member being *Deus sive Natura*. Hume equipped him for progressive action, provided him with certain important instruments with which to control a world of objects; and then failed to find him a field of action, a world in which to live.

By a curious paradox, he who set out with intellectual unity — the unity of science — as his ideal, became the greatest separatist in the history of philosophy — his dualism cutting far deeper than Descartes's and into the very heart of character, of individuality. Whereas he who has been commonly regarded as the arch-skeptic undertook to found his most important philosophic categories on the forward movement of the imagination, which faculty is the basis, I think we may say, of the spirit of all prophecy.