SOME IMPLICATIONS OF DEWEY'S THEORY OF KNOWLEDGE FOR THE STUDY
OF ECONOMICS

DISSertation

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Social scientists agree, by label at least, that the subject-matter of their study is "social" and their method "scientific," or, at least, that they attempt to make it so. Beyond this consensus, however, the divergence in views which reveal their fundamental concerns with the nature of society and of science are so seriously contrary as to make it appear that they write within different universes of discourse.

To one extreme, there is the conception of society as organic; that is, the social sphere is seen to be continuous with the physical realm in such a way that the same mechanical properties which characterize the latter also determine the nature of the social. Society is an entity, mechanistic in structure, with its own inherent causal forces which determine the pattern of social development. This theory of social structure received much wider currency when science was more under the influence of "Newtonian mechanics." The organic theory of society is mostly of historical interest, but remnants of it yet remain here and there in the literature of social study. The simple paradox of the human choice of purposeful inquiry within an inclusive deterministic context has yet to be reconciled by the "mechanists."

To the other extreme are those who see society to be a collection, a mere geographical contiguity of individuals, each of whom is a
separate and independent entity, willing freely his own eventualities. Social forms are contractual agreements voluntarily entered into by society's members. This notion of society is more often held by those who incline to idealistic schemes. It is perhaps the common-sense view in our own culture and reflects the eighteenth century philosophical conception of autonomous individuals. Why Frenchmen so predominantly prefer chopped goose liver to the ubiquitous egg foo yang of China and why Australian Hottentots are so much like Hottentots in general and so unlike suburban Americans is a little like a riddle for this social philosophy.

Conceptions of the nature of science as method are as mutually exclusive as social scientists' ideas on the make-up of society. There is, however, usually an appreciable correlation between theories of society and of knowledge. The organicists generally hold that knowledge is a process wherein the mind copies the ideas which reflect the essence of things. This makes for a kind of consistent determinism. Those who, in a sophisticated sense, conceive society to be a mere collection of personal entities, self-contained atoms, think knowledge to be an assimilation, through a kind of ethereal osmosis, of the essence of Being. The two hang together pretty well. The real problem of social science, however, arises from the fact that social scientists today rather widely view society to be what it must be--forms of associated activities, political, economic, etc., which express two mutually determining causes: one, the
freedom of will and purpose of reflecting individuals within; two, the context of activities which in turn condition the value-elements of those wills and the direction of their purposes.

In contrast to this commonly held notion of society, however, there are critical differences with respect to how the study of society should be directed. Some inquirers believe science is more significantly a corpus of universally valid principles and, for this reason, social study should give emphasis to the gaining of knowledge that holds good everywhere. Usually, however, those who stress science as being a body of laws universally applicable believe further that scientific method, to be fruitful, is necessarily inductive. The discovery of particulars with common properties affords the supporting evidence for a generalization. This idea of method has its roots in early British empiricism and its influence today is such as to persuade many social scientists that their study is less than scientific because the relativity of knowledge to culture does not give the universal knowledge which is truly scientific. The crucial question to be raised at this point is whether knowledge which solves a social problem, relative to a particular time and place, is not of far greater significance than the possibly impossible

For example, in criticism of the Keynesian economic analysis, it has been said: "It is, however, vital to renounce communion with any attempt to revive the Richardian practice of offering, in the garb of general scientific truth, advice which—whether good or bad—carries meaning only with reference to the practical exigencies of the unique historical situation of a given time and country." (From the Statistical Journal as quoted by Seymour E. Harris in The New Economics, p. 32.) Italics mine.
task of social study attempting to emulate the physical sciences in a total sense. It may be that the subject-matter of social inquiry is such that a knowledge of its nature can claim scientific validity if the purpose of inquiry is more defensibly conceived in light of a more valid metaphysics.

Along with the emphasis on the universality of scientific knowledge, the foregoing idea of science also excludes values from science, on the belief that science, to be science, must be value-free. This means that science should be an impartial noting of objective facts, subservient to nothing, only admitting identity with truth. The upshot of this is the insistence that science eschew ends; for ends, of course, denote values, and true science is amoral. This leaves science concerned exclusively with means. Science can inform us of the necessary disposition of means to a given end; but the choice of the end is a matter of value-judgment, moral preference. At this point science takes leave. This is the conception of science which has wide vogue today and thus conditions the direction of much social inquiry.

Quite contrary to the above views on science is the contention that science is inescapably value-conditioned, that knowledge will of necessity serve one end or another. From this view, it is argued that science is an instrument of human use and for this reason cannot help but favor the dominant social elements if social scientists default on their responsibility to subscribe to those social objectives which seem to serve better the cause of that which is just.
and fair.

There is partial truth in each of these views. Surely science, as objective fact, can be that only if it is "true to things as they are." In this sense, knowledge as social prefers no particular arrangements to others, and physical knowledge has universal reference. And science so conceived is wholly free of value. Equally true, however, is the relativity of social knowledge to cultures. This means that the subject-matter of social inquiry is value-data in a particular and necessary way. The objective conditions of social patterns reflect consciously preferred relationships. For this reason, social knowledge is always in immediate jeopardy of being invested with the sanctity of science on the sole basis of being "objective knowledge." History documents the equation of particular social conditions with the necessary nature of things. The two equations of science as objective fact and objective fact as natural order make mere description fully scientific. Thus the charge that social science has too often given tacit approval to the status quo has some basis in fact and becomes of real significance.

What we all like about physical science is that we get things done with it. We gain control of the physical and reconstruct it to our purposes. But hypothesis in physical science gains scientific validation only as the consequence of the operations it effects squares with the predicted results always implicit in theory. Both diagnosis and prognosis are necessary to physical science. For the
physical scientist it seems that prediction always requires a preference of data. The problem which confronts an inquirer requires of him a logical choice among the different available means to a solution. In this sense, no one ever rejects the solution to a problem because the "logical means" were "prejudged." If social study can never become scientific in this sense, then it seems that inquiry into the social must remain value-free in such a way as to confine it to the partial business of just describing.

Whatever we may not know, we do know that social inquiry has become increasingly more fruitful. Man has learned much about himself as a social being. There have been problems, inquiry, and solutions. Knowledge has accrued, some of wide application, some quite limited. This much we can agree on. Perhaps this datum of common agreement affords a departure for a consideration of the nature of social science which may give fruitful insights into the questions of whether social study is scientific and how, if at all, values figure in inquiry. Too often the arguments regarding proper method do not proceed from conclusions which rest on an examination of knowledge; rather, the controversy is carried along on the basis of assumptions which are without grounding in specific instances of verified inquiry. As it is, too much of discussion on methods is a circular affair of contrary assumptions being disputed without reference to an example of that, knowledge, which is being disputed. It would seem that inquiry into what may be generally accepted as a
case of effective inquiry holds out more promise of wider agreement on what constitutes proper inquiry than continued polemics on what it is assumed knowledge must be. In the belief that disputed knowledge of knowledge must continually refer to a case of knowledge for proof, this study will be an inquiry into specific inquiry to the end of finding significant evidence as to how and why inquiry, in one particular case, did not function effectively and, in another instance, how and why it did.

This writer will not, however, plunge right off by himself into a case of knowledge in an attempt to find verifiable knowledge of knowledge. John Dewey will help very much in this undertaking. Dewey, perhaps more than any other philosopher, has examined the nature of knowledge. His thought constitutes a systematic philosophy, though the critical underlying concern with science as method is even confirmed by his critics who refer to his thought as being only a theory of knowledge. It is doubtful whether any other thinker has explored as many aspects of inquiry. Moreover, the crucial conclusions on inquiry offered by Mr. Dewey have to do with the nature of social inquiry. The belief that social problems must be dealt with by methods less scientific than those of inquiry into the physical realm has been Dewey's bete noire. His most critical insights arise from his efforts to refute the contention that social concerns must settle for something less than a thorough-going science.
In his efforts to interpret rightly the necessary modes of science, he has probed deeply into the questions of just how social study becomes scientific and the nature of values and their functioning in inquiry.

Dewey's conception of scientific inquiry has a metaphysical underpinning. But the "metaphysics" of his philosophy is distinctive and has a unique relationship to this theory of knowledge. Whereas metaphysics has traditionally meant that branch of philosophy which deals with the trans-empirical realm, Dewey's metaphysics, if we may use this designation, is confined to an interpretation of experience. For he draws no distinction between experience and nature or any other reality. In his scheme, experience is inclusive, the only reality. Whatever may lie beyond present experience can be known only through experience. The reconstruction of present experience is the proper concern of mankind. An attempt to leap beyond experience is a contradiction in terms.

In a sense, Dewey builds his theory of inquiry on this theory of nature. Inquiry is autonomous; that is, fruitful inquiry is its own grounding—it needs no external metaphysical support. As Dewey says, "It (the autonomy of logic) precludes resting logic upon metaphysical and epistemological assumptions and presuppositions. The latter are to be determined, if at all, by means of what is disclosed as the outcome of inquiry; they are not to be shoved under
inquiry as its 'foundation.' Thus Dewey offers no a priori conceptions of nature. What he interprets the "generic traits of existence" to be are those characteristics of life which fruitful inquiry has revealed. Dewey has followed the lead of the ancient Greeks in this respect. Their science was in strict correspondence with their metaphysics. The Greek concept of knowledge was a logical corollary of their interpretation of nature. Knowledge had to be of the nature it was because reality was what it was. Knowledge is a trait of existence and as such has its function determined by the nature of the reality which underlies inquiry. This Dewey believes is the significant aspect of Greek thought which modern philosophy may well profit from.

Dewey is quite critical of the tendency of contemporary philosophy to arrive at a theory of knowledge first and then append a logically conceived theory of nature to the epistemology to support it. What is unique in Dewey's concern with knowledge and metaphysics is that he considers a theory of nature to be somewhat of an afterthought to a study of inquiry. Although Dewey has offered a definitive treatment of his metaphysics in Experience and Nature, the description of reality in that writing is secondary to his concerns with the nature of knowledge. In this sense, Dewey is quite logically consistent. For his whole philosophy seems to teach this lesson: man has been inquiring for a long time; the fruit of this inquiry

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has been to render rather obvious the traits of existence; the problem of man, then, is to get on with the business of further inquiry to the end of reconstructing experience, or reality, to his own chosen ends. Contemplation of reality may give aesthetic satisfaction, but only scientific inquiry can gain man a real security of values.

But for this study, the logical procedure is to consider first those traits of existence which determine the function of knowledge. This will be done in Chapter One and, as such, will constitute a rationale for the conceptions of inquiry and value to follow. This is necessary in order to refute those metaphysical assumptions that are implicit in the conceptions of science which will be critically treated in later discussion of economic doctrines. A treatment of Dewey's metaphysics, though, will involve some consideration of his theories of knowledge and value. His philosophy so hangs together that one aspect cannot be studied in isolation from the total scheme. For this reason, the metaphysics in Dewey's philosophy is not an unadulterated element and cannot be considered without some mention of inquiry and value. The first chapter on metaphysics will give some hint of what is to follow in discussions of knowledge and value.

Chapter Two of this study will be devoted to Dewey's theory of inquiry. In this treatment emphasis will be given to the naturalistic matrix of inquiry, the contrast between Dewey's idea and traditional theories regarding the functioning of conceptions and data in inquiry,
and knowledge of the outcome of scientific experiment. These are the critical aspects of Dewey's theory of knowledge which are so seriously opposed to those conventional notions of knowledge which will be, as they figure in economic science, critically treated in the concluding chapters of this study. It will be seen that the significant criteria of inquiry given in this discussion of Dewey's theory of knowledge figure decisively in the critique of economic analysis which concludes the study. As it is, though, the theory of inquiry outlined in Chapter Two is more nearly a criterion for scientific social inquiry to be developed in conjunction with the treatment of economic theories. The differences in subject-matter between physical and social inquiry require certain emphases to be given to the procedures of social experiment. The logical procedure is to develop these emphases as they become relevant to the aspects of economic inquiry to be discussed in Chapters Four and Five.

Dewey's theory of value follows logically from his theory of knowledge. They are two sides of a coin. This study will present the basic elements in Dewey's value theory. As such, this consideration of value in Dewey's philosophy will point to the critical functioning of value in inquiry. Perhaps no other concern of social methodology has brought forth so much argument as the "value issue." And perhaps no other aspect of social inquiry has been so seriously obfuscated. Much of the confusion regarding the role of values in inquiry comes about because methodologists fail to distinguish between
logical and moral values. Chapter Three serves as a background for the elaborated distinctions between logical and moral values—and their differing functions in inquiry—which will be discussed in relation to economic analysis.

Against Dewey's criteria for method and value, a case of "old" and "new" knowledge will be considered to determine to what extent this selected knowledge illustrates—and validates—Dewey's theories of knowledge and value and how the latter must figure in inquiry.

There are, of course, two implicit assumptions here. The reasons for the choice of Dewey's thought have been stated. The justification for the selected example of "old," or ineffective inquiry, and "new," or fruitful study, rests on no less defensible grounds. In the field of economics, there is general agreement today that classical economic doctrine has been brilliantly reconstituted by J. K. Keynes. It is now seen in retrospect that orthodox economic theory was never fully adequate for explaining the phenomena of free-market economies. The critical economic problem of continual unemployment under laissez-faire systems could be explained only as an aberration by classical analysis. Only a few die-hard economists will now deny that traditional theory was incapable of dealing effectively with the most fundamental problem of why free economic systems periodically slumped.

It seems that in no other field of social study has there been such a dramatic example of largely useless knowledge being supplanted, in one fell swoop, by an analysis which answered the crucial questions
that were more like mysteries to the older scheme. Thus to apply Dewey's criteria of science and value in inquiry to classical economic doctrine should offer some rich insights into what makes for proper inquiry. By the same token, a consideration of the economic theory of J. M. Keynes in light of the same criteria holds promise of giving what may be rather conclusive claims for valid method in social inquiry. If it is seen that classical doctrine seriously violated the criteria of science as laid down by Dewey, and if it is further seen that the effectiveness of the Keynesian analysis reflects the procedures of inquiry stipulated by Dewey, there is, it would seem, a real ground for a definition of right method in social study.
Philosophers incline to the notion that the philosophy of pragmatism is largely without a metaphysics.\(^1\) This view gains partial explanation from the fact that both Charles Peirce and William James were concerned with the philosophy as method. John Dewey, continuing the leads of Peirce and James, gave pragmatism a much fuller delineation, and his own writings, like theirs, emphasize conceptions of knowledge and methodology. Sidney Hook's *The Metaphysics of Pragmatism*, despite its title, treats the philosophy largely from the standpoint of epistemology and elaborates the view that pragmatism is essentially a theory of knowledge.\(^2\) Whether or not pragmatism has a metaphysics and how significantly the metaphysics

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\(^1\) For example, two books, *John Dewey: Philosopher of Science and Freedom*, edited by Sidney Hook and *The Philosophy of John Dewey*, edited by Paul Schillp, each of which purports to be a comprehensive treatment of Dewey's thought, have one chapter each devoted to the metaphysics of the philosophy. George Santayana's chapter in the Schillp volume offers the conclusion that Dewey's metaphysics is all "foreground." The implication here is that such a metaphysics can be only partial. Hofstadter, writing in the Hook volume, has his chapter titled "Concerning a Certain Deweyan Conception of Metaphysics." It is explicitly stated in this chapter that Dewey's metaphysics is of a limiting kind.

\(^2\) The contrast in content between Hook's "Metaphysics" and Dewey's *Experience and Nature* is appreciable, to say the least. There should be little doubt that Hook predominately treats the pragmatic theory of knowledge. In fact in only one chapter, the last, does Hook deal with subject-matter that is not largely relevant to the nature of knowledge. In Dewey's (E and N) he is basically concerned with conceptions of nature, experience, mind, language, and value. It is interesting to note, too, that Dewey, in his preface to Hook's "Metaphysics," does not expressly state that he accepts that writing as an account of the pragmatic metaphysics.
figures in the larger philosophy are questions whose answers may vary with the respondent's definition of "metaphysics."

In popular usage, the term usually denotes no more than "that which is abstract or abstruse." Philosophers generally define the term by indicating what they regard as the proper subject matter of metaphysics. Most philosophers would accept the assertion that a metaphysics purports to define "the nature of reality." But this assertion leaves ample room for disagreement regarding the proper scope of metaphysics, inasmuch as philosophers differ in their notions of what constitutes reality. And the difference is one of moral import. Naturalists believe that speculations regarding what may be beyond the natural realm are a default on the real problems which confront us all with the moral responsibility to give life here and now a more humane quality. Conversely, idealists regard naturalistic schemes as being spiritually meager and impoverished of true value. Mr. Dewey clearly condemns concerns with "higher realms":

The thinker who enjoys leisure and is removed from the immediate necessity of doing something about these predicaments (ignorance, injustice, privation) seeks certitude in a higher more metaphysical realm of Being.

Several dictionaries which this writer has checked make this distinction in definition. Bardwin's *Dictionary of Psychology and Philosophy* gives, in rather difficult terminology, an extended definition of "metaphysics." The conclusion here seems to be that the term denotes properly, in "technical philosophy," that which has to do with the nature of that which transcends the empirical.
and defines as mere "appearance" the region of actual and possible frustration.\footnote{Dewey, \textit{Experience and Nature}, p. 27, 1929 edition.}

With the implication that naturalism conceives only a partial reality and restricts imagination, Santayana says:

\begin{quote}
Naturalism will break down, however so soon as words, ideas, or spirits are taken to be substantial on their own account, and powers at work prior to the existence of their organs, or independent of them.\footnote{Paul Schillp, editor, \textit{The Philosophy of John Dewey}, p. 246.}
\end{quote}

A reference here to a particular treatment of the pragmatic metaphysics will do two things--first, it will further explain why some philosophers are dubious about pragmatism's having a metaphysics; and, second, it will lead directly into a treatment of the metaphysics of pragmatism. John Butler, with some hesitation, attempts to define the pragmatic metaphysics; and, although he rightly refers to John Dewey for confirmation of the fact of a pragmatic metaphysics, he surprisingly does not point out the one "metaphysical work" by Dewey and fails to realize the significance of the metaphysics for the philosophy.\footnote{It is surprising that Butler in his "Four Philosophies" should say, regarding his own treatment of the pragmatic metaphysics, "It is not without some precedent, therefore, that this synopsis of pragmatism includes this section on metaphysics." (p. 430) For in an earlier passage Butler refers to Nature and Experience, saying that ".... George Santayana regarded it (E and N) as a metaphysics...." One would suppose that Butler had read (E and N) but his references to Hook, Santayana, and Childs suggest that he did not. Childs' \textit{Education and the Philosophy of Experimentalism} gives only a superficial rendering of the philosophy's metaphysics. And Butler assumes that Dewey's and the \textit{Philosophy of Experimentalism} gives only a superficial rendering of the philosophy's metaphysics. And Butler assumes that Dewey's preface to Hook's book means that "Dewey.... appears there. A reading of (E and N) leaves no doubt of pragmatism's metaphysics and what it means in the total scheme of the philosophy.}
of pragmatism. For this reason, the study henceforth will deal with "Dewey's metaphysics."

Dewey, in his *Experience and Nature*, frequently refers to that writing as an attempt to spell out an empirical metaphysics. His writing alternates between criticism of other metaphysics and positive elaboration of his own. In this work, Dewey says that he considers a metaphysics to be a reading of the generic traits of existence. This phrasing is not limiting; but, in Dewey's interpretation, there is no existence beyond experience. On this assumption, this explicit definition is perhaps expected: "(A metaphysics is)... the more generalized statements about nature which he (a naturalist) finds to be justified." These "generalized statements about nature," as Dewey has phrased them, constitute the metaphysics of pragmatism elaborated in *Experience and Nature*.

To appreciate the significance of Dewey's "generalized statements" regarding the nature of reality, it is necessary to note his more serious criticisms of traditional philosophy. For it is in light of the "sins of philosophy" with respect to traditional conceptions of reality that Dewey's own metaphysics gains forceful distinction. That Dewey has constantly inveighed against conceptual schemes that would sunder nature and then render the physical sub-

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Schillp, op. cit., p. 597.
ordinate to a more real and enduring transcendental real is a commonplace among his readers. What seems not to be so generally recognized is that Dewey regards past philosophies constructively as well as critically. He honors all systems of thought in the sense that each, in its time, was a sincere effort to give meaning, purpose, and direction to man's living. Dewey, of course, honors the spirit which motivates man in his philosophizing, and, with us all, partakes of its intellectual fruits:

All the wit and subtlety of reflection and of dialectic find scope in the elaboration and conveying of directions that intelligently point out a course to be followed. Each system of philosophy presents the consequences of some such experiment. As experiments, each has contributed something of worth to our observations of events and qualities of experienced objects.  

Man dishonors the spirit of philosophy, however, when he dogmatizes thought. It is our opportunity and moral responsibility to reflect critically on our legacy of thought to the end of applying its intellectual and moral insights to the problems which confront us. Dewey's efforts to discharge this responsibility has lead him to reiterate a criticism of traditional philosophy on which turns the import of his metaphysics.

Dewey refers frequently in his writings to the "philosophical fallacy." This, to him, is the sin that largely vitiates much of

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Dewey, op. cit., p. 38.
the intellectual worth of past philosophies; for the effect has been to involve philosophy in pseudo-problems which have no bearing on the "real affairs" of man.\(^9\) The "fallacy" has come about in this way: There emerges in life, through experience, aspects of existence that are functional in character; but, because of man's anxiety for certainty security, these functions have been hypostatized into antecedent realities. The difficulty ensuing from this conversion is insuperable; for the problem then becomes one of trying to reconcile unlike entities. And the futile attempt to reconcile, through dialectical manipulation, the artificial essences which are the evil fruit of "vicious abstraction," as Dewey terms it, has borne the brunt of his constant strictures against historical doctrines. How conversion of eventual functions into \textit{a priori} entities has come about and the significance of this hypostatizing for certain problems will appear in detail in subsequent discussion of theories of mind, knowledge, logic, and value.

Dewey is quite explicit as to why the "philosophic fallacy" has too often been committed; for inescapably it is:

\begin{quote}
.... the intricate mixture of the stable and precarious, the fixed and the unpredictably novel, the assured and the uncertain, in existence which sets mankind upon that love
\end{quote}

\(^9\) In one sense, the "pseudo" and "technical" concerns of traditional thought, the "metaphysics" of past systems, have serious consequences: "The statement, sometimes made, that metaphysical sentences are "meaningless" usually fails to take account of the fact that culturally speaking they are very far from being devoid of meaning, in the sense of having significant cultural effects." See footnote to Dewey's \textit{Theory of Valuation}, p. 64.
of wisdom which forms philosophy. Yet too commonly, although in a great variety of technical modes, the result of the search is converted into a metaphysics which denies or conceals from acknowledgment the very characters of existence which give significance to its conclusions.10

And although "There are a multitude of recipes for obtaining a vicarious possession of the stable and good without getting involved in the labor and pain of intellectual effort attending regulation of the conditions upon which these fruits depend,"11 this does not absolve philosophers of the moral obligation when they "... have hit in reflection upon a thing that is stably good in quality and... worthy of persistent and continued choice... to give it some such stability in observed existence as it possesses in quality when thought of."12

The preceding is in contrast with the empirical approach to a metaphysics. For, first of all, the empirical method does not cover up the fact of choice. But non-empirical philosophies commit both an intellectual and moral fallacy because "For reflection the eventual is always better or worse than the given..."; and philosophers have historically converted "... the eventual into some kind of Being,

11 Ibid., p. 56.
12 Ibid., p. 53.
something which is, even if it does not exist."\textsuperscript{13} Then, the choice having been made, "Deception lies in the fact that its presence is concealed, disguised and denied."\textsuperscript{14} In contrast with this, "An empirical method finds and points to the operation of choice..."\textsuperscript{15} and is the only "... way to secure execution of candid intent..." because "... it places before others a map of the road that has been travelled; that they may accordingly, if they will, retravel the road to inspect the landscape for themselves."\textsuperscript{16}

If philosophy were to adopt the empirical method, Dewey believes, the futile controversy which now besets the discipline would be much abated. As it is, even though different philosophies have commonly identified reality with what is secure, regular and finished, "... the reports of the world which form our different philosophies are various to the point of stark contrariness."\textsuperscript{17} The method of experience, on the other hand, would "... procure for philosophy something of that co-operative tendency toward consensus which marks inquiry in the natural sciences."\textsuperscript{18} This is so because "... experience in unsophisticated form gives evidence of a different world and points

\textsuperscript{13} \textit{Ibid.}, p. 53.
\textsuperscript{14} \textit{Ibid.}, pp. 34-5.
\textsuperscript{15} \textit{Ibid.}, p. 35.
\textsuperscript{16} \textit{Ibid.}, p. 35.
\textsuperscript{17} \textit{Ibid.}, p. 46.
\textsuperscript{18} \textit{Ibid.}, p. 35.
to a different metaphysics." It is, then, to experience, with Dewey, that we turn to learn what are the generic traits of existence.

That we learn the characteristics of nature through experience does not mean that experience is outside of nature; for experience itself, an affair in nature, is nature's own way of disclosing itself to us. To say then that we know nature through experience is not to mean that experience is a kind of translucent screen through which we come to know an external reality. It is to say, rather, that man himself is an event in the ongoingness of nature. What sets man off from other events, what gives him distinction in nature are the properties of awareness and perception. The significance of the foregoing will be developed in the course of the chapter. As preparatory to a description of nature, the remarks serve to point out that reference to nature is not to something apart from our experiencing it: "The processes of living are enacted by the environment as truly as by the organism; for they are an integration." 20

Dewey concisely draws the distinguishing emphasis of his own point of departure for a "reading of the traits of existence" when he says:

19 Ibid., p. 47.

One might think that philosophers in their search for some datum that possesses properties that put it beyond doubt, might have directed their attention (to) ... commonplaces like human interest in the things of sport and celebration (which are) the most conspicuously obvious of all.21

Here Dewey is pointing to the consummatory phase of experience as being the ultimate datum for an empirical metaphysics. The fact that the immediacy of enjoyment and the having of things, which characterize the completing phase of an experience, reflect the precarious and contingent features of nature is the basic assumption from which Dewey develops his larger metaphysical scheme.

The completing phase of an experience is distinguished from its initiating and mediatory aspects in that the culmination of an experience is uniquely qualitative. This is to say that an event has reached a closure or arrest, and at this point things are enjoyed for themselves. Objects in their instrumental capacity have now become ends, to be had on their own account in that qualitative way which peculiarly defines experience as final. The foregoing, in its brevity, is the concise judgment from which the more pervasive and dramatic traits of existence are read by Dewey. In way of elaboration, it is initially asserted that:

Human experience in the large, in its coarse and conspicuous features, has for one of its most striking features preoccupation with direct enjoyment, feasting and festivities, ornamentation, dance, song, dramatic pantomime, telling yarns and enacting stories.22


22 Ibid., p. 78.
This trait of experience doubtless points to the hazardous and uncertain in life. Man prefers leisure to toil; for in leisure we have a sense of achievement that reflects a stably good object, while the necessity of labor reminds us that the good is ephemeral and often conditioned by chance. Obviously "A world that consisted entirely of stable objects directly presented and possessed... would lack power to satisfy and to inspire," while "Festal celebration and consummatory delights belong only in a world that knows risk and hardship."23

The interpretation of the culminating stage of experience as being a finality, an end, is crucial in Dewey's metaphysical scheme. For it means that nature in having qualities has ends. Any experience, which is an event, has its initiation in the termination of another event. This is to say that an experience begins with the closure of another; and, in the ceaseless interaction of things, relationships are such that there is no one beginning nor no one end. An experience arises out of conditions in which many things were linked up with each other. Such is the fluidity and dynamism of the interactive pattern of experience that any point in time and place reflects at one and the same time the culmination of a prior interaction of events and the initiation of eventualities yet to run their course. And an event is an experience in a distinctive sense.

Ibid., p. 90.
when the "flow of things" is given conscious intent, is directed
to one end rather than another. This distinguishes an "experience-
event" from mere events. What is significant in the process of an
"experience-event" is that its directing agent "owns it" when it,
the experience, has completed its history. An experience expresses
its qualitative uniqueness only when it has run its course and
actualized qualitative aspects potential in it from its inception.
The foregoing gives some idea of how Dewey equates a quality with
finality: "To the empirical thinker immediate enjoyment and suffering
are the conclusive evidence that nature has its finalities as well
as its relationships."^{24} This conception of qualities as ends under­
pins a view of nature that is significantly in contrast with tradi­
tional metaphysics. Previous reference has been made to the
dominance of notions of a completed, closed and final universe in
other philosophies; but experience should teach us that "There are
finalities in nature, but nature is not final."^{25}

The preceding discussion is suggestive of the larger "picture of
nature" which Dewey draws. To give further delineation to nature's
ordering, however, experience would show that nature is "... a
scene of incessant beginnings and endings...."^{26} Nature "... is a


history which is a succession of histories, and in which any event is at once both the beginning of one course and the close of another. But this is not meant to imply that there are not within nature invariant relations which give nature an aspect of mechanism. To the contrary, the existence of matter sees solid and substantial in comparison to the more transient and changing; and "... the universal and stable are important because they are the instrumentalities, the efficacious condition of the occurrence of the unique, unstable and passing."  

At this juncture it is necessary to point out that, if the treatment thus far of Dewey's metaphysics appears somewhat cryptic, this may be in part because his philosophy so "hangs together" that it is difficult to treat one phase of it in isolation from other aspects. His conceptions of nature, experience, knowledge, logic and value are so inextricably entwined that to study one phase is fruitful only to the extent that its necessary relationship to other phases is seen. Donal A. Piatt, writing on Dewey's logical theory in the "Schillp volume" says "... Dewey's philosophy is all of one piece, metaphysics, epistemology, logic differ not in their ultimate subject matter but in phases or perspectives of the same

27 Ibid., p. 100.

28 Ibid., p. 116.
subject matter."

Arthur E. Murphy, in the same volume, asserts that "... it is only in terms of it (Dewey's theory of knowledge) that the more puzzling features of his empirical metaphysics are to be understood." For this reason, the preliminary statements about nature can be more meaningfully elaborated if the discussion at this point turns to Dewey's conception of experience.

If experience is a trait of nature, is the only way we have of knowing what nature is like, then, in knowing experience, we know nature. In fine, to define experience is to explain nature. There is a difficulty however, which arises here. It comes about in this way. To say that nature—or reality—is only known to the extent of our experiences of it, invites a charge of solipsism. Without a significant qualification, the criticism would have force. But Dewey is not to be stumped by this dilemma; he makes a distinction between nature and environment which resolves the issue. This distinction is crucial in two ways: first, an "independent reality" is recognized; and, secondly, when reality does become known it is said to exist, to have existence, only within the scope of our experiencing or knowing it. As Dewey says, "There is, of course, a natural world that exists independently of the organism, but this world is environment only as it enters directly and indirectly into


30 Ibid., p. 197.
Thus is given a notion of reality which to some readers is compromised—that is, a Realist would wonder how Dewey can admit the existence of an "independent reality," yet qualify it as he does with the concept of environment and still insist that his philosophy is "realistic." The point is that what is by definition or necessity beyond experience can be only a matter of speculation; for whatever is permanently beyond our ken is immaterial to our control of it. To be sure, we know what we know through the imaginative speculation of thought; and, for this reason, reality has widened in scope and changed in nature. The crucial effect of this has been to give man progressively more control of nature. It follows, then, that what is important is to try to learn the nature of reality rather than to engage in futile argument as to whether a "reality" does in fact exist apart from the human organism.

To continue the examination of experience as conceived by Dewey, it is well to be reminded that "The key to the trends of nature is found in the adjectives that are commonly prefixed to experience. Experience is political, religious, esthetic, industrial, intellectual, mine, yours."32 To see, however, the "trends of nature" as revealed by different kinds of experience, it is necessary to come at the

32 Dewey, op. cit., p. 15.
problem in this way:

To see the organism in nature, the nervous system in the organism, the brain in the nervous system, the cortex in the brain is the answer to the problems which haunt philosophy. And when thus seen they will be seen in, not as marbles are in a box but as events are in history, in a moving, growing never finished process.33

To see the organism in nature, though, is to see inanimate nature prior to the sentient creature. But even the inanimate is not wholly inert, for "Even atoms and molecules show a selective bias in their indifferences, affinities and repulsions when exposed to other events."34 No dramatic significance is imputed to this quality of non-living things; it is merely meant to point to the fact that nature in her basic ordering is more characteristically dynamic rather than enduringly static. This observation orients us to a view of nature as eventful and not as a mechanism.

The fact that atoms do exhibit the dynamism of affinities and repulsions does not make legitimate the deduction that organic forms, in their need-fulfillment activities, express qualitatively the same constitutional structuring as "un-feeling particles of matter." Neither does the acceptance of this truistic trait of nature commit one to any particular philosophic doctrine. But there is a crucial point to be made. It is simply that Dewey's "vision of things" is

33 Ibid., p. 295.
34 Ibid., p. 208.
ultimately referable, in a very distinctive sense, to the pervasiveness of activity in life. F. S. Breed is on the point in saying that "For him (Dewey), activity is an ineffable ultimate assumed as the mysterious source from which all objects and ideas somehow blossom forth." Activity is ultimate but not assumed and ineffable. It is only a mystery when it is assumed to be substantive in make-up. For then the problem is to explain as an entity what can be understood as functional only. Activity becomes mysterious when inexplicable qualities, such as "soul," are imputed to it. "Soul" is a designation, not an explanation. Essences are ineffable, but functions are knowable because the consequences which issue from their operations are open to empirical observation and test.

The qualitative distinctions which Dewey draws among different natural forms give a view of nature that reflects a continuity of kind from matter to mind. There are no discrete kinds in his scheme, no substantive differences which reflect desperate entities. All things are tied together in an unbroken evolutionary continuum. What appears to be unlike in substance is merely different in function. There are, to be sure, significant qualitative differences between physical matter and organic forms; but the distinction shows up as a difference in behavior.

Dewey notes these significant distinctions in nature—the physical—chemical, and the psycho-chemical. Inanimate matter is

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characterized by physical-chemical properties. The differential
between physical-chemical and psycho-physical is sentiency. And
"psyche" or "sentiency" designates an empirically denotative,
functionally significant quality, not as "essence" or "cause," but
a difference that is definable only operationally. Lacking in
sentiency are inanimate matter and lower forms of organic life.
There are, however, similarities even between simple molecular
matter and plant life. Plant life is characterized by energy
disequilibrium which is reflected by "need and effort" activity on
the part of the plant. A shaded plant, for instance, will direct
its growth, even if crookedly, toward the sun, or in dry soil,
usually extend its roots. In its efforts to fulfill these needs,
the plant effects a new equilibration of energy, assuming a con­
summation of the growth process. This is commonplace, but it denotes
a patterned activity which Dewey believes empirically explains the
life-functions of all organic forms without having to postulate such
"causes" as "mind" or "will" to account for the distinctive behavior
of the human organism. 36 It is a patently observable fact that all

36 This bears crucially on Dewey's criticism against other
philosophies for "hypostatizing eventual functions into antecedent
essences." In his own cryptic phrasing, "Organization is an
empirical trait of some events, no matter how speculative and
dubious theories about it may be; especially no matter how false
are certain doctrines about it which have had great vogue, namely,
those doctrines which have construed it as evidence of a special
force or entity called life or soul. Organization is so characteristic
of the nature of some events in their sequential linkagethat no
theory about it can be as speculative or absurd as those which ignore
or deny its genuine existence." (Experience and Nature, p. 255.)
natural forms exhibit a tendency, the essence of organization, to effect a continuing equilibrium.

This characteristic of plants, however, is also a quality of "dead" matter; for "... (inanimate bodies) are subject to conditions of disturbed inner equilibrium, which lead to activity in relation to surrounding things, and which terminate often a cycle of changes."37 Though the drive to maintain equilibrium is the basic trait of all life forms, an important qualitative difference is noted between inanimate material and plants and lower organic forms. A stone presumably shows no preference for remaining a stone; but with plant life there is a temporally patterned activity which consummates itself in such a way that the dynamism of the pattern shows that "... interactions of the various constituent parts... take place in such a way as to tend to continue a characteristically organized activity... to utilize conserved consequences of past activities so as to adopt subsequent changes to the needs of the integral system to which they belong."38 The qualitative difference between animate and inanimate bodies is one of organization, which means that the difference "... lies in the way in which physico-chemical energies are interconnected and operate, whence different consequences of inanimate and animate activity respectively."39 The interaction of

38 Ibid., p. 254.
39 Ibid., p. 254.
physico-chemical energies, organization, is, then, the differential which explains the behavioral aspects of man usually designated "mind," "will," "spirit," etc.

As was said earlier, a "psychic" quality sets off living forms from "dead matter." This "quality of psyche," in its distinctions, accounts for the different behavioral aspects of plant, animal, and men. To repeat, the psyche is not some immaterial force superimposed upon matter; rather, it denotes "... ability to procure a peculiar kind of interactive support of needs from surrounding media." In plant structure, the consequence of a psychic property is a sensitivity caused by the interrelatedness of the constituent parts of the organism. In sessile organisms, each part is discriminating in its activity—that is, the constituent part, in its interaction with the whole to which it belongs fulfills its individual needs, as these are conditioned by the pattern of the whole to which the part belongs; and, in so doing, the separate part conduces to the temporally patterned activity of the whole. In this fact of organization, discrimination makes for sensitivity. In contrast with inanimate activity, animate activity is dependent upon surrounding conditions for its nurture in an interactive way which is quite qualitatively different.

The next consequential difference Dewey notes is between lower organic forms and those organic forms which have locomotion and

\[\text{Ibid.}, \ p. \ 255.\]
distance-receptors. Organisms having these physical characters are capable of feeling, which is qualitatively quite unlike sensitivity. The psyche has taken on a new quality; sensitivity becomes feeling in these more complex forms because "... susceptibility to the useful and harmful in surroundings become premonitory, an occasion of eventual consequences within life." Life, to maintain itself on this level, requires "premonition of what is to occur" and "cumulative embodiments of what has occurred." All of which, some would contend, is to say, in effect, that instinctual behavior is an obvious trait of animal life. But this is exactly what Dewey inveighs against; for to say "instinct" is to name and not explain.

The significance of behavioral differences is this:

In terms of conscious control of inclusive wholes, search for those links which occupy key positions and which effect critical connections in indispensable. But recovery of sanity depends upon seeing and using these specifiable things as links functionally significant in a process.42

Mindful of this admonishment, then, further observation of living kinds shows that the organization of psycho-physical energies in animals that can move, see, and hear is such as to give them configured feelings that reflect a temporal sequence. Distinctions of feeling on this complex psycho-physical level, however, are only

41 Ibid., p. 257.

42 Ibid., p. 295.
grossly delineated. They exist in inchoate form, say, anxiety
accompanied by a preparatory phase of activity or satiation following
the consummatory stage. In brief, to give obvious point to a
patent fact, the behavioral differential of "feeling forms" is
easily illustrated; a weed is indifferent to a gardener approaching
with a sickle, whereas a hungry tiger appears to move anxiously
toward one scent, while circumventing another, and, after a kill,
will remain lethargic in the presence of previous prey. The signifi-
cance of the "obvious" is lost, however, unless these emerging and
differentiating qualities are seen to be functionally distinguishing
traits of organic kinds having a common naturalistic locus.

In characteristic cryptic style, Dewey both pointedly summarizes
the consequential behavioral modes of higher non-human forms and
points to the distinguishing aspects of the human organism:

Complex and active animals have, therefore, feelings
which vary abundantly in quality, corresponding to dis-
tinctive directions and phases—initiating, mediating,
fulfilling or frustrating—of activities, bound up in
distinctive connections with environmental affairs. They
have them, but they do not know they have them. Activity
is psycho-physical, but not "mental," that is, not aware
of meanings. As life is a character of events in a
peculiar condition of organization, and "feeling" is a
quality of life-forms marked by complexly mobile and
discriminating responses, so "mind" is an added property
assumed by a feeling creature, when it reaches that organized
interaction with other living creatures which is language,
communication.43

43 Ibid., p. 258.
Furthermore, "With language (feelings) are discriminated and identified. They are then 'objectified'; they are immediate traits of things." How language accounts for the mental and intellectual properties of human behavior will be discussed in the next chapter in which Dewey's theory of inquiry will be tested.

Up to this point, this study of Dewey's metaphysics has been largely a consideration of experience as subject-matter. In noting the critical aspects of experience, the dominant traits of nature were revealed; for, in Dewey's metaphysical scheme, nature and experience, for all practical purposes, are one. To speculate as to what may be beyond experience is, to Dewey, useless conjecture. Experience is enough, for experience as subject-matter is as inclusive as human consciousness—extending from the throb of a toothache to "mystical states." It reaches back through the ages to primitive consciousness and covers all of present life. In short, the subject-matter of experience is everything. The method of experience, though, is distinctive in a critical sense. Each of us has the quality of "mindness." This varies in extent with the spread of our experiences. In some instances, it is limited, provincial; in others, it is more enriched, culturally inclusive. The extent of our experiencing is often beyond choice. But the "minding" of that experience is a thing of alternative modes. Experiences can be made to give up

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Ibid., p. 259.
their meaning. This is the function of "minding," of our use of consciousness. It distinguishes experience as subject-matter and as method. The distinction reveals the functional nature of "mind."

In Dewey's interpretation, mind is two-sided; it is, first of all, the accretion of meanings that are held culturally or individually. More importantly, though, mind is a function of experience in which the objects of experience undergo transformation.

Mind, in the human sense, is what is gained when language had developed. It is only "When communication occurs... (that) events turn into objects, things with a meaning. They may be referred to when they do not exist and thus be operative among things distant in time and space, through vicarious presence in a new medium." Mind denotes the whole system of meanings as they are embodied in the workings of organic life." Mind, in this sense, is distinguished by Dewey from consciousness. Mind as objectified meaning extends in a cross-sectional reference from the sharp focus of consciousness to the nebulous periphery of our funded meanings. Consciousness is implicit meaning become explicit. It is the acute awareness of things in our immediate and urgent involvement with them. Objects in their conspicuous and vivid presence are consciousness, while in their latency of meaning they designate mind.

46 Ibid., p. 303.
Consciousness is mind thinking and mind is meaning existing.

Dewey gives emphasis to another property of mind. This is to say that the "minding quality" possessed by the human organism is defined operationally in contrast with mind as meaning. The point to be made is that:

... unless "mind" was, in its existential occurrence, an organization of psychological or vital affairs and unless its functions developed out of the patterns of organic behavior it would have no pertinency to nature and nature would not be the appropriate scene of its inventions and plans, nor the subject-matter of knowledge. **7

There is no mystery about mind; it is observable in its function and understood in its necessity. For "if mind is a further process in life, a process of registration, conservation and use of what is conserved, then it must have the traits it does empirically have ..." **8

As previously noted, mind as objective is the cumulative meaning possessed by either a culture or an individual. And individual mind has a distinctive functional capacity. Experience is, first of all, social and objective. The individual assimilates cultural meanings primarily for his own biological maintenance; but, in appropriating social experience, the individual gains personality and selfhood. The latter are, again, "... eventual functions that emerge with **7

Ibid., p. 286.

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Ibid., pp. 281-2.
complexly organized interactions, organic and social. There is, then, no necessity for postulating essences to explain what is functional and behavioral in the emergence of life. The mind that appears in individuals is not, as such, individual mind. What is termed individual mind is the subjective aspect of experience. To say that individuals have minds, Dewey contends, is to imply that an individual mind is an entity, an independent essence which creates its own meanings. This gives warrant to the charge of solipsism and misconstrues the real function of mind as individual in experience. Selves emerge as functions in experience and "... life goes on among things of which the organism is but one..." Self, or individualized mind, though, has a critical role to play in experience. As an event, involved in the continuing interaction of things, individual thought and desire can reconstruct events to chosen ends. This is the function of experience as subjective. Experience, as subjective, "... denotes a distinctive and unique mode of existence, an object held in solution, undergoing transformation, to emerge finally as an established and public object." And "... this shows the genuinely intermediate position of subjective mind; it proves to be a mode of natural existence in which objects undergo directed reconstruction."  

49 Ibid., p. 282.  
50 Ibid., p. 282.  
51 Ibid., p. 220.  
52 Ibid., p. 220.
The foregoing has, in broad outline, defined the quality of "mind" as a generic trait of existence and explained experience in the sense of objectified meaning. In doing this, the subject-matter of experience has been initially distinguished from experience as method. To define Dewey's conception of experience as method will be the concluding phase of the chapter.

To give the comprehensive sense of the subject matter of experience, we use his own phrasing:

"Experience includes dreams, insanity, illness, death, war, confusion, ambiguity, lies and errors; it includes transcendental systems as well as empirical ones; magic and superstition as well as science. It includes that bent which keeps one from learning from experience as well as that skill which fastens upon its faint hint."

As experience is inclusive of all, it follows that experience "... recognizes in its primary integrity no division between act and material, subject and object, but contains them both in an unanalyzed totality."

Experience as method, however, is the most crucial trait of existence; for it is "that skill which fastens upon its faintest hint." As method, experience discloses her meanings and reveals nature to us. Moreover, to define the method of experience is to elaborate further the function of individualized mind in experience, because it is only in this way that experience becomes method. The

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53 Ibid., p. 10.
54 Ibid., p. 13.
method of experience distinguishes an experience from experiencing. An experience is experiencing in a reflective way. Even non-human kinds have experience, but not in a cognitive sense. An experience becomes meaningful when the organism "... suffers the consequences of its own behavior." Doing apart from undergoing has no "play back" to the experiencer to inform him of the consequences of his act. The random play of a child is quite active doing, but it has not the meaning of an experience wherein an object "hits back." An object acted on idly remains uncognized; but when it "bites back" there is a consequence which gives meaning to the object. The object then "means something" in terms of consequences—what it will do if one acts toward it in a certain way. Such doing and undergoing differentiates mere experiencing from "an experience." An experience, as thus distinguished, is more vital and significant than the many experiencings we ordinarily have which lack the focalized meaning of "an experience." In Dewey's phrasing:

But experience situations come about in two ways and are of two distinct types. Some take place with only a minimum of regulation, with little foresight, preparation and intent. Others occur because, in part, of the prior occurrence of intelligent action. Both kinds are had; they are undergone, enjoyed or suffered. The first are not known; they are not understood; they are dispensations of fortune or providence. The second have, as they are experienced, meanings that present the funded outcome of operations that substitute definite continuity for experienced discontinuity for the fragmentary quality due to isolation.  

55 Dewey, Reconstruction in Philosophy, p. 83.

The import of the foregoing paragraph is reflected in this conclusion: how we experience our experiencing determines the effectiveness of experience as method. Experience rightly interpreted teaches us that "We do not merely have to repeat the past, or wait for accidents to force change upon us. We use our past experience to construct new and better ones in the future. The very fact of experience thus includes the very process by which it directs itself in its own betterment." 57 This organizing factor within experience is intelligence. Intelligence within experience, which is experience aware of itself and directing itself by what is implied, affords us the only reliable knowledge we can gain and the only effective instrument for reconstructing life to the end of a better experiencing; for "... the knowing which occurs within nature involves possibility of direction of change. This ... gives intelligence a foothold and a function within nature...." 58

In its sequential phases, this conception of an "act of experience" or "act of knowledge" is in serious conflict with other notions of what constitutes experience, knowledge, intelligence and truth. This is seen in the qualifications which define reflective experience. Things are experienced first on the qualitative level of everyday experience; which is to say that in our ordinary experiencing things come to us with qualities of love, fear, hope, desire, etc. They are not experienced as cognitive objects. How we experience objects

57 Dewey, op. cit., p. 88.
58 Ibid., p. 213.
depends on the knowledge which we bring to bear on our experiencing. The more effective our knowledge, the deeper and more meaningful is the peculiar esthetic quality of experience in its primary stage. Why primary experience is esthetic, experience in its intermediary stage, peculiarly cognitive and instrumental, and the consummatory stage, again esthetic, is understood in a fuller exposition of how thought and emotion reciprocate their respective functions in an experience.

Experience in its immediacy is non-cognitive. The closure of an event gives the experiencing of it esthetic quality. Things are had qualitatively in the termination of a history and reflection is without a function for it had unneeded, having already served its purpose. It is when an element of doubt, tension or perplexity enters into the immediacy of experience that reflection occurs; for a disturbance in the ongoing evenness of things evokes inquiry. At this point we suspend our immersion in things, as it were, and enter into abstractive thought. The need for an instrument to effect an equilibrated situation demands an object of knowledge. In an effort to remove the doubt and difficulty which plagues an existential situation, experience is seeking cognition. But the search for knowledge is not for its own sake alone, but for the resolution of a problematic state of affairs. And thought, when successful, always returns to immediate experience; but the return is with a difference. The
gaining of reflective knowledge give us increased power to regulate better our relations with the objects of primary experience and invests its objects with added meaning and deepened significance. Such is the cycle which characterizes living. Here Dewey has followed the lead of William James who said life was a series of "perchings and flittings."

Experience thus conceived puts the stress on intelligence as method. For whenever inquiry is effectively carried forward, intelligence has been gained. Now intelligence, as defined by Dewey, is not the same as knowledge. Intelligence is the effective application of knowledge to the needs of inquiry. And although knowledge also accrues from fruitful inquiry, its character in an experimental context is quite different from knowledge as it has been historically defined. The notion of knowledge too commonly held, according to Dewey, explains it as a "matching of the mind" with antecedent existences. From this perspective, knowledge was conceived to be "...a universal reign of law, based on properties immutably inhering in things of such a nature as to be capable of exact mathematical statement...." But insoluble problems attend this kind of epistemology. The source of its error is in metaphysical assumptions. More particular criticisms of "traditional epistemologies" will be offered in the succeeding chapter. Reference here to a historical

59 Ibid., p. 208.
conception of knowledge puts in quick relief Dewey's own notion of knowledge as a generic trait of existence.

The critical concern, then, insists Dewey, is to recognize knowledge when we have it. This we can easily do if we see knowledge for what it is. If intelligence, knowledge, mind, conceptualization, etc., which are functional aspects of the knowing process, are converted into entities, "epistemological" problems ensue—such as the relation of object to subject, mind to reality, perception to conception, or physical object to cognitive object. Such artificial concerns, Dewey observes, of necessity lead to futile dialectical manipulation of concepts. For Dewey, the simple fact is that "We know whenever we do know; that is, whenever our inquiry leads to conclusions which settle the problem out of which it grew. This truism is the end of the whole matter—upon the condition that we frame our theory of knowledge in accord with the pattern set by experimental methods." Knowledge, as it accrues, is as significant as the problems we deal with; for knowledge is eventually "... the fruits of the undertakings that transform a problematic situation into a resolved one." To continue the emphasis, "Anything that may be called knowledge, or a known object, marks a question answered, a difficulty disposed of... an inconsistency reduced to coherence, a perplexity mastered."
The analysis of an act of experience, with the function of knowledge in experience noted, seems to give in broad outline, the "wholeness" of Dewey's conception of experience and to point to the characters of existence which have important consequences for logic and value. Further amplification of what Dewey means by inquiry, knowledge, and truth will be the concern in succeeding discussions of theories of logic and value. Even though logic and value are interpreted by Dewey in such a way as to constitute, in themselves, significant traits of existence, no consideration will be given them here as their significance for inquiry requires extended treatment in separate chapters.

This presentation of the pragmatic metaphysics was continually carried against criticisms of other philosophies. This was felt to be necessary if the thought of Dewey was to be given a desired force of contrast. Moreover, criticism of traditional metaphysical doctrines will afford a point of reference for the critical study of historical conceptions of the nature of science and inquiry in later chapters that deal with economic theory. A more emphatically positive definition of the metaphysics of pragmatism would have failed to present the "points of contention" among differing metaphysical assumptions. As it is, later concerns with the assumptions underlying economic theories can be more easily related meaningfully to the relevant issues as presented in this chapter. A summary can positively catch up the more fundamental characters of nature in
their continuing relatedness—those traits of existence which have serious consequences for the function of logic and value in inquiry.

Nature, in its ultimate essence, is dynamic and ongoing; for "Every existence is an event." Continuity and interaction mark the character of events. Each event has its own unique history and is, in its termination, the fulfillment of an interactive pattern which had its source, its beginning, in the culmination of other events. The ending of one event merges into another; a beginning is always an end and an end a beginning. An individual life, a baseball game, an act of inquiry, a historical epoch is each an affair having an individual history; but each is integrally a part of the comprehensive interactive continuum that is nature. And in the flux of existence, separate affairs may merge and continue an inclusive history, eventually separate, and initiate divergent courses to different completions. Some histories are prolonged to the point of appearing constant; others are ephemeral, giving the effect of mere appearance. It is man, as an event himself in nature, involved in the ceaseless interaction of things, who alone has the power to turn the course of events to the ordering of his own eventualities. For man alone as an event in existence is conscious of his own eventfulness. Through experience as a natural affair in nature, nature reveals her traits because "the organism is a part of the natural world; its interactions with it are genuine additive

63 Dewey, Experience and Nature, p. 128.
Experience is the sum of the meanings we possess in virtue of our ability to abstract, to invest, through language, other events with the qualities of their being. Through communication objects are revealed in their meaning and give signs of their existence, the consequences to which they may lead when interacted with. Experience, moreover, informs us of its character; for it is not experience that we experience, but the things of nature. It is only when interacting with things in certain ways that we know our experiencing—that is, the crude, macroscopic subject matter of primary experience which is primitive and inchoate in its flow becomes an experience, a known, when the dumb immediacy of things is converted into objects of reflection. The differential is intelligence which is a natural, emerging function in the process of experiencing. Experience, as method, is the process of reflection. By reflecting on experience as method we refine our procedures of experiencing and enhance the significance of experience. Study of experience as method, as the way things come to be known, should teach us that thought is the instrument of inquiry which has as its end the securing of enjoyment of the present experience; for "The realm of immediate qualities contains everything of worth and significance."  

64 Dewey, The Quest for Certainty, p. 234.  
65 Ibid., p114.
Thought, then, as a trait of existence, has its locus in the matrix of nature. It emerges as a function of the organism in its proclivity to maintain itself amid the hazards and perils of change. To hypostatize the function thought into an entity is to separate nature in its unity and engender futile difficulties. The problem of knowledge is primarily the problem of an increasingly more effective inquiry. The stress is to be put on a refinement of the techniques of experimentation. If there is one obvious trait of experience it is the fact of intelligence as a function of man's effort to turn doubt into certainty and hazard into security. In our quest for certainty, our only recourse is to experimental knowing.
Dewey conceives the really significant problem of logic to be the gaining of knowledge of the nature of fruitful inquiry. Surely history yields some evidence bearing upon the comparative effectiveness of different modes of inquiry. If so, the problem of logic becomes one of determining the logical forms of fruitful inquiry and refining them to the end of increasing success in inquiry. When the problem is approached in this way, metaphysical concerns become irrelevant. But metaphysics, as basic assumptions, is a critical problem when those who subscribe to the method of science as the only means for gaining tested knowledge so variously define science as method that inquiry, or knowledge, has opposing functions and leads, of course, to divergent outcomes. There is the need, then, for social scientists, especially, to reconcile methodological differences by examining the premises on which their notions of inquiry rest. It is to inquiry that Dewey turns to find out what reliable knowledge is, on the assumption that it is only by examining effective knowledge in the context of its source and function that a valid theory of knowledge can be had.

In the development of his logical theory, Dewey makes this basic assumption:
The position taken implies the ultimacy of inquiry in determination of the formal conditions of inquiry. Logic as inquiry into inquiry is, if you please, a circular process; it does not depend upon anything extraneous to inquiry.\textsuperscript{1}

It is further asserted by Dewey that this conception of the criterion for the "formal conditions of inquiry" precludes the selection of any \textit{a priori} principles for logical norms or any metaphysical assumptions for a foundation for logic. Such a foundation is rather to be determined by what valid inquiry reveals. 

Obviously, this approach to logical theory renders metaphysical presuppositions idle. This does not, however, completely dispose of the problem. Dewey himself constantly asserts the logical necessity of recognizing certain traits of existence if a valid theory of knowledge is to be gained. His constant polemic is against \textit{a priori} conceptions of the nature of logic. Ungrounded assumptions with respect to the nature of knowledge have often led to inconsistency between metaphysical and logical theories. This being so, "It would seem to be more incumbent upon logicians than upon others to make their position in logic coherent with their beliefs about other matters."\textsuperscript{2} Dewey believes that the Greeks have a lesson to teach us regarding epistemological matters:

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\item \textit{Ibid.}, pp. 21-5.
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Everybody knows that the trend of modern philosophy has been to arrive at theories regarding the nature of the universe by means of theories regarding the nature of knowledge—a procedure which reverses the apparently more judicious method of the ancients in basing their conclusions about knowledge on the nature of the universe in which knowledge occurs.\(^3\)

To the present writer, the basing of a theory of knowledge on a theory of nature seems not only "more judicious" but quite inescapable. Much social inquiry as will be shown below in regard to economic analysis has been rendered useless by misconceptions of the nature of knowledge which have been derived by impeccable deduction from a priori metaphysical assumptions.

Brief reference was made in the preceding chapter to Dewey's conception of knowledge and how he derived it. It is now necessary to tie his metaphysics and logic together. As was suggested earlier, inquiry and knowledge are functions of a special mode of organic behavior. Biologically, the cause of inquiry is ultimately referable to the need which arises:

When the balance within a given activity is disturbed—when there is a proportionate excess or deficit in some factor—then there is exhibited need, search and fulfillment in the objective meaning of those terms.\(^4\)

And the explanation of the transition from the biological to the intellectual is suggested in the observation that "the structure and course of life-behavior has a definite pattern, spatial and temporal."

\(^3\) Dewey, *The Quest for Certainty*, p. 41.

\(^4\) Dewey, *op. cit.*, p. 27.
This pattern definitely foreshadows the general pattern of inquiry."

The writer proposes to precede the further delineation of this naturalistic theory of inquiry with a historical treatment of logical theory. Such a procedure is intended to cast in sharp contrast Dewey's distinctive naturalistic logical theory with particular aspects of traditional theory. Initial force is given to the contrast when it is asserted that "A naturalistic metaphysics is bound to consider reflection itself a natural even occurring within nature because of the traits of the latter." But historically, the vitiating fallacy of much of logical theory comes about because:

The conversion of the logic of reflection into an ontology of rational being is ... due to arbitrary conversion of an eventual natural function into a causal antecedent of reality.

How the "logic of reflection" may be converted into "an ontology of rational being" is seen in an examination of the science of the ancient Greeks. Greek science postulated a reality which was hierarchically ordered and eternally fixed. Forms of being included the Ideal, which was eternal, and the temporal, which was transient and deficient because changing. Change was recognized, but it was within the limits of pre-determined forms. Change was not a change of kind; it was merely potentiality becoming actuality. The actualization of an antecedent process was the realization of a pre-existing Ideal Form

5 Ibid., p. 34.
6 Dewey, Experience and Nature, p. 68.
7 Ibid., p. 68.
which afforded the culminating end toward which the "changing" was
directed. In short, what looked like an actual change from one
kind to another was merely a deficiency in the process of annihilating
itself, or an ideal in the process of becoming. The consequence of
this kind of ontology for knowing and knowledge quite logically
followed. To the Greeks, knowledge gained from experience was not
true knowledge; for things of sense were subject to change and
variation. Practical knowledge afforded some reliability in doing,
but it was merely probable whereas true knowing was an intuitive
grasp of the eternal kinds which constituted True Being.

Process, therefore, was subordinate to form because
form reflected the idealized kind while process was mere
change—forming, perhaps, but formless. In short, the
consequence was that 'from the side of knowledge and
logical forms, the changing is sensible, particular or
partial, while the measured whole, defined by limits,
is rational.'

The object of knowledge in the Greek epistemology was, then, a trans-
empirical form which the mind possessed when its idea conformed to
the intrinsic qualities inhering within the completeness of the
eternal kind. Dewey is of the opinion that the dominance of form
in Greek thought is to be explained by the influence of esthetics
in Greek life. The Greeks believed that in art the individual
object was merely a particularized instance of the form which endured.
It was an easy transition from this perception to an ontology of

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Ibid., p. 85.
Ideal Forms. Broadly speaking, it followed from this ontology that the artisan, who dealt with the particular and changing, gained a knowledge that was necessarily partial compared to that of the philosopher who knew the essence of the pure Ideal Form.

Conceptually, Greek science is intriguing; but, obviously, the criterion of knowledge, however esthetically delightful, is elusive of empirical grasp. If the criterion of knowledge is beyond experience, then it is to be had only in definition. And this is exactly how the Greeks had it. Given the ontology, there was no alternative. If it is assumed that knowing is an intuitive grasp of an essence, then proof becomes a matter of formal demonstration. For this purpose the syllogism was as appropriate to Greek science as the idea of idea as instrument is to inquiry conceived as a determinate transformation of existential materials. If the knowing of reality is a knowledge of kinds, then proof consists in establishing the implications of definition and classification; for "Definition is a grasp of the essence which makes things to be what they truly are. Classification concerns the ontological exclusions and inclusions of real natural kinds or species." 9

The foregoing is qualifiedly offered as an exposition of the Greek metaphysics. It is clearly not sufficient for other possible purposes; but it sets forth what is clearly sufficient for the purposes of this study. What is in Greek ontology and logic

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9 Ibid., p. 87.
particularly relevant to this phase of the study is, as Dewey points out, the appropriateness of the logic to Greek science. The logic had real validity in the context of the Greek culture. As Dewey notes, the logic of the syllogism was necessary to classic science. And by virtue of this necessity, the logical forms of the thinking process as then conceived conformed to the subject matter of inquiry. There was no disparity between the logic and methodology; the two were equated. The full force of this point will be developed later during the direct treatment of Dewey's conception of inquiry. The most crucial criticism leveled by Dewey against logicians who today separate logic from methodology is that they continue fruitlessly the refinement of logic whereas the urgent problem is to develop a more effective method of inquiry. In contrast, Greek logic was true to Greek science. And even thought techniques of inquiry were then primitive, the observations of Aristotle were a reflection of genius. His methodology, of necessity, was one of noting and describing; as a result, "the nature of things" had to be conceived as observable by such methods and, thus, by modern standards, static. But even today, most of us are naive realists to whom kinds and qualities, the substantial and evanescent, the ideal and partial appear as ontological differentia. Cognitively, we are prone to settle for classification, gross distinctions, and vague definitions. In light of the absence of refined techniques of experimentation, the conceptualization of Greek science is understandable.
The necessity of syllogistic reasoning in Greek science is easily demonstrated. On the assumptions that logical norms are derived from the forms of existence, and that existence reflects a gradation of kinds from the inclusive universal to the particular, correct reasoning becomes simply a matter of laying down a principle, the major premise, which states a universal, subsuming a particular which is a member of the universal kind, and then drawing the necessary conclusion. So illustrated, then, logic was science and science logic. From the critical side, however, Dewey observes that Greek logic is wholly inadequate to experimental science. It is a logic of demonstration; a logic that sets forth the results of thinking in formal relations. It is necessary that the conclusions of inquiry be formally demonstrated; but to make this the whole of logic is to leave us without a logic of invention. Thus, the syllogism, Dewey explains, was not a logic of experimentation. The conclusions of syllogistic reasoning, instead of resting on experimental verification, were, in a sense, merely assumed in the major premise. And, as universals could easily be conceived apart from experiment, knowledge accrued to the extent that inclusive kinds were postulated and particulars properly subsumed.

As the development of logical theory is noted generally, what happened after Aristotle has crucially determined the conception of logic which has separated logic from inquiry and which accounts for the retarded development of social inquiry. The continuing theme
in Dewey's *The Quest for Certainty* is fairly summarized here:

... (the Greeks) brought with them the idea of a higher realm of fixed reality of which alone true science is possible and of an inferior world of changing things with which experience and practical matters are concerned. They glorified the invariant at the expense of change, it being evident that all practical activity falls within the realm of change. It bequeathed the notion, which has ruled philosophy ever since the time of the Greeks, that the office of knowledge is to uncover the antecedently real, rather than, as is the case with our practical judgments, to gain the kind of understanding which is necessary to deal with problems as they arise.10

As Dewey interprets the significant developments in the history of conceptions of knowledge, the conception of a closed and determinate universe has dominated philosophical inquiry and even affected scientific experiment until recent times. Knowing was generally assumed to be a cognitive grasp of the essence of objects antecedently determined. A brief survey of the history of epistemology, as Dewey draws it, seems to give confirmation to his criticism of traditional logic.

The conception of knowledge inherited from classical science gained renewed emphasis with the Scholastics. Conceptualization and deduction were the continuing traits of inquiry. The point is, however, that to conceptualize meant the rational intuition of "first principles" from which appropriate particulars could be deduced. Scholastic thought, then, however brilliant in its conceptualizing, was, for practical purposes, merely hypothesis. It did not yield knowledge as present scientific method determines valid knowledge.

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Experience was deprecated as sensible, transient, and chaotic, affording a basis for mere opinion but never universal truth. Reason was construed to be independent because "pure reason" was the necessary faculty for apprehending the immutable object of knowledge which inhered transcendentally in the realm of True Reality. Such a faculty of independent reason was necessary if thought were to transcend the particular and contingent of experience and result in true knowledge. That the Christian tradition gave emphasis to the knowledge of the immutable moral law and did not equate rationality, as such, with ethical validity is not of concern here. The point is that knowledge and truth, for the Scholastics, did not differ in nature from that conceived by the Greeks.

There was, however, another aspect of Greek science which had a subsequent influence. Aristotle's realistic stress on observation was reflected in the empirical spirit which motivated early modern science. With the advent of exploration and experimentation, Rationalism came to be seriously questioned. The belief that true knowledge was arrived at by rationally conceiving absolute principles was unduly disparaging of sense knowledge. Intuited principles which reflected enduring truth and eternal moral precepts became suspect. Francis Bacon and later empiricists criticized the "absolute certainties" of Reason as being too often a rationalization of institutional power and class interest. And the claims of a knowledge independent of experience became increasingly susceptible to attack as empirical knowledge increased.
The brief allusion here to Dewey's critical analysis of historical doctrines of knowledge is offered merely as a broad reference for certain fundamental aspects of Dewey's own logical theory. Documentation of these broad assertions is not necessary for this study. The present treatment is no more than an attempt to summarize very generally the criticisms of past theories of knowledge which pervade Dewey's writings. We now turn to the logic of the early empiricists, especially Hume, to note the development of a significant differing idea of knowledge. To come quickly to the point, Hume and some of his contemporaries, in their logical philosophy, asserted the claims of experience for valid knowing—the kind of knowing we come by in our practical concerns. More particularly, Hume and other empiricists claimed that sense-data were the only valid criteria for knowledge. Knowledge, in the empirical scheme, was conceived to consist of "simple ideas" which reflected the objects of experience that come to us through the senses. This, of course, was diametrically opposed to Rationalism, for the need to transcend experience for true knowing was denied; knowledge began and ended in the "stuff of experience." The process of knowing, too, was differently construed by the empiricists. Mind, unlike the independent entities whose processes remain unexplainable in the Rationalistic conception of mind as substance, was held to be definable in its working. A simple idea—that of a chair, say—was passively received through the senses and eventually formed into
perceptions and conceptions. Through an inductive process, accumulation of particulars, a valid generalization could be arrived at. The emphasis was placed not upon deducing particulars from antecedently true principles, but upon empirical induction from particulars to a generalization.

The crucial difference, however, between Rationalism and Empiricism had to do with the nature of conceptions. Rationalists denied the power of discrete sensations to order themselves in such a way as to give the connection and regularity reflected in conceptualized knowledge. This criticism was directed at the most vulnerable point of empiricism. There was a note of credulity in the notion that the mere stringing of separate sensations on a "rope of mind" effected the synthesis of a concept. On the other hand, the claim that knowledge could be gained apart from sense-data was patently presumptuous.

This issue, Dewey observes, was critical in the history of logical theory. Kant proposed to resolve the differences. He, as some believe, gave proper perspective and role to both sense-data and conceptualization in the knowing process. If he did not quite manage this to everyone's satisfaction, Kant at least deflated the pretensions of absolute knowledge and showed the inadequacy of the sensationalism of empiricism. To imagine, argued Kant, that the disconnected, disordered, chaotic data of experience could effect its own conceptual synthesis was to ignore an essential element in
thought. Conversely, to suppose that a priori universals were valid knowledge was pretentious and vacuous. Rationalism, thought Kant, gave the necessary emphasis to the synthesizing faculty of mind. Categories of thought prior to experience were needed for conceptualization. These forms of mind-number, space, time, etc.—gave intellectual organization to the disparate, atomic sensations of experience. Without the synthesizing a priori categories of thought, a datum of experience necessarily remained isolated and useless. Empiricism, Kant further argued, correctly recognized sense-data as necessary for the validity of general principles. Apart from the concreteness of the "things of experience," thought was idle. In Kant's familiar phrasing, "conception without perception is empty; perception without conception is blind." Later developments in theories of knowledge are not of concern here. The foregoing sketch of the historical development of theories of knowledge provides, in the writer's judgment, a sufficient reference for the criticisms of Dewey against those aspects of contemporary logical theory which incorporate traditional notions into their scheme. The ground for burdening the text with such a summary is that the consequences of Dewey's theory of inquiry for experimental procedure can have full import only as the crucial separations of Dewey's theory from past doctrines are noted.

To return now to the biological matrix of inquiry where Dewey's logic was left, a reminder that inquiry is naturalistically conditioned
leads directly into a consideration of how organic behavior is transformed into intellectual behavior marked by logical properties. It is recalled that the most conspicuous trait of complex organisms is the cyclical nature of their need-fulfillment activities. In its sequential phases, the activity begins with a state of disequilibration which manifests need on the part of the organism; and the instrumental phase is the action evoked by the need which causes an interaction between organism and environment. The culmination of the sequence is the restored tensional balance. This "restored balance" is of fundamental significance in Dewey's scheme of inquiry. It has reference to both organism and environment in a critical sense:

What exists in normal behavior development is thus a circuit of which the earlier or "open" phase is the tension of various elements of organic energy, while the final or "closed" phase is the institution of integrated interaction of organism and environment. This integration is represented upon the organic side by equilibration of organic energies, and upon the environmental side by the existence of satisfying conditions. In the behavior of higher organisms, the close of the circuit is not identical with the state out of which disequilibration and tension emerged. A certain modification of environment has also accrued...

The last and underscored words in the quotation will receive extended consideration in a later phase of this study. They are noted now in anticipation of a crucial qualification in Dewey's theory of science. For the present, the phrase "integrated interaction of organism and environment" is of concern. This biological

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trait, according to Dewey, explains the integration of thought, the organization of experience, more truly than did Kant's categories:

In the first place, the interaction of organism and environment, resulting in some adaptation which secures utilization of the latter, is the primary fact, the basic category. Knowledge is relegated to a derived position, secondary in origin. Knowledge is not something separate and self-sufficing, but is involved in the process by which life is sustained and evolved. 12

Here, then, is a connecting principle which nature in its very ordering provides for the maintenance of behavior with intellectual qualities. Seen this way, the function of sensation and conceptualization in knowing is readily explained. The error regarding the function of sensation in the know process is to construe it as any kind of knowledge. The "simple ideas" of early empiricism are immediately apprehended; but as Dewey defines them they are not sense-data, or mere sensations. What we immediately know are objects of knowledge which have accrued from prior inquiry—the familiar meanings of ready perception. Prior to inquiry, sense-data are not knowledge, good or bad; "sensations... are emotional and practical rather than cognitive or intellectual." 13 They are, more particularly, "... provocations, incitements, challenges to an act of inquiry... stimuli to reflection and inference." 14

12 Dewey, Reconstruction in Philosophy, p. 83.
13 Ibid., p. 84.
14 Ibid., p. 85.
With further reference to the connecting principle of intellectual behavior, Dewey says:

The true "stuff" of experience is recognized to be adaptive courses of action, habits, active functions, connections of doing and undergoing; ... Experience carries principles of connection and organization within itself. These principles are none the worse because they are vital and practical rather than epistemological. 15

Although these biological traits are primary, the social has its effect, too, in ordering experience:

The conceptions that are socially current and important become the child's principles of interpretation long before he attains to personal and deliberate control of conduct. Things come to him clothed in language, not in physical nakedness... The beliefs coming to him as so many facts from his mind; they furnish the centers about which his own personal expeditions and perceptions are ordered. 16

Having seen that organic behavior, naturalistically conceived, has its own intrinsic trait of ordering itself to the end of continuity and organized adaptation to environment, the earlier question of just how organic life gains an intellectual and logical nature is now to be treated. The explanation is first seen in the fact that "Transformation from organic behavior to intellectual behavior, marked by logical properties, is a product of the fact that individuals live in a cultural environment." 17 And the critical differential

15 Ibid., p. 86.

16 Ibid., pp. 86-7.

17 Dewey, op. cit., p. 45.
in organic modes which explains the transformation is "... the development of language... out of prior biological activities."\(^{18}\) The larger concern of how language invests biological activities with intellectual qualities will be dealt with in terms of what language is, what happens to behavior, how it is modified, when language as communication is effected, and, language being an affair of words, how a distinct property, or function, or words gives rise to logic.

A naturalistic conception of the origin and status of language postulates words and their use as an emergent function of behavior. For "In the beginning there was the word" it substitutes, "In the beginning there is an active organism." Language marks no existential break between lower forms and the human organism, for it "... is a strictly biological mode of behavior emerging in natural continuity from earlier organic activity."\(^{19}\) For this reason, to be interpreted rightly, language, as a sound, a written mark, an object, is, first of all, a physical existence. And this is about all we can significantly say about it on that level. When, however, language as bearing meaning, as intellectual, is considered, its unique qualities are revealed. In the latter sense, that of language as communication, it is seen that "signaling acts evidently form the basic material of language";\(^{20}\) and "signaling acts" are words as

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\(^{18}\) Ibid., p. 44.

\(^{19}\) Ibid., p. 46.

\(^{20}\) Dewey, Experience and Nature, p. 177.
they function "... in virtue of their representative capacity or meaning."\(^{21}\) Of fundamental significance is the idea that "Primarily meaning is intent."\(^{22}\) For if a word is to convey meaning, its effect in usage must, when it is acted on, institute "... agreement in action; ... shared modes of responsive behavior and participation in their consequences."\(^{23}\)

The physical sound or written form of a particular word is a matter of convention, of arbitrary choice. But existential forms do not constitute a "word" because "... concord of consequences as the determinant of meaning of any sound used as a medium of communication shows that there is no such thing as a mere word."\(^{24}\) A word, as a meaning-symbol, is "... a part of language only in virtue of its operational force; that is, as it functions as a means of evoking different activities performed by different persons so as to produce consequences that are shared by all the participants in the conjoint undertaking."\(^{25}\)

The preceding quotation gives the flavor of Dewey's definition of language. There is more to be said, however, about the function of language in explaining the transition from organic behavior to intellectual activity. To explain the transition further, it is necessary, first, to note the distinction which Dewey draws between

\(^{21}\) Dewey, op. cit., p. 46.
\(^{23}\) Ibid., p. 216.
\(^{25}\) Ibid., p. 48.
"natural signs" and "artificial signs." To use Dewey's own illustration, smoke, as an existential thing, is a natural sign of fire. As an existence, "smoke" signifies fire because the two are evidentially connected—that is, through a mere experiencing of fire, apart from abstraction, anyone would "know" that one "meant" the other. There is nothing difficult in this; even animals presumably act on such "inferences." But in this case it should be noted that "the representative capacity in question is attributed to things in their connection with one another, not to words whose meaning depends upon agreement in social use."26 In contrast to existences as natural signs, symbols have a distinctive intellectual property. Symbols, in Dewey's terminology, are the "artificial signs," the words of a language. To draw the meaning simply, the word, "smoke," as a symbol-meaning, signifies fire in the absence of the existential stuff. The intellectual property of "smoke" as an artificial sign is seen in its independence, which means that:

Not only can the sound be produced practically at will, so that we do not have to wait for the occurrence of the object; but, what is more important, the meaning when embodied in an indifferent or neutral existence is liberated with respect to its representative function. It is no longer tied down. It can be related to other meanings in the language system.27

With language, then, man gains intellectual behavior because "Ideas as ideas, hypotheses as hypotheses, would not exist were it

26 Ibid., p. 45.
27 Ibid., p. 52.
not for symbols and meanings as distinct from signs and significances ...."26 For "Apart from the existence of symbol-meanings the results of prior experience are retained only through organic modification."29 Not only do symbols liberate meanings from their existential particularity; but, most important, man gains freedom of action. He can imaginatively rehearse the consequences of a proposed act without incurring the irretrievable effects of a fait accompli. This, simply, is the distinguishing characteristic of "mental" or "intellectual" behavior.

Dewey explains the origin of such behavior in this way:

Conditions of the environment become more ambivalent; it is more uncertain what sort of action they call for in the interests of living. Behavior is thus compelled to become more hesitant and wary, more expectant and preparatory. In the degree that responses take place to the doubtful as the doubtful, they acquire mental quality. If they are such as to have a directed tendency to change the precarious and problematic into the secure and resolved, they are intellectual as well as mental.30

Logic, as inquiry into inquiry, in its genetic development must obviously be explained within Dewey's system as an emergent function of behavior. Dewey sees the development in this way:

It is, so to speak, an incidental and external fact, logically speaking, that certain things are given representative function by social agreement. The fact becomes

28 Ibid., p. 53.
29 Ibid., p. 57.
logically relevant only because of the possibility of free and independent development of meanings in discourse which arises when once symbols are instituted.\textsuperscript{31}

And logical theory comes about thus: "The ordered development of meanings in their relations to one another may become an engrossing interest. When this happens, implicit logical conditions are made explicit and then logical theory of some sort is born."\textsuperscript{32}

So much for Dewey's account of the emergence of language from organic activities, what language functionally is, how it confers mental and intellectual properties on behavior, and how language as symbol-meanings gives rise to logical theory. Further study of "meanings in their ordered relations to one another" would relate to what Dewey terms the "proximate subject matter" of logic, about which there is today little dispute, and which is not, in any case, the concern of this study. Henceforth, the chapter will treat what Dewey distinguishes as the "ultimate subject matter of logic." The issue as to ultimate subject matter raises such questions as:

Do they (relations of propositions) stand for pure forms, forms that have independent subsistence, or are the forms in question forms of subject matter? If the latter, what is that of which they are forms, and what happens when subject matter takes on logical form? How and why?\textsuperscript{33}

\textsuperscript{31} Dewey, \textit{op. cit.}, pp. 51-2.

\textsuperscript{32} \textit{Ibid.}, p. 57.

\textsuperscript{33} \textit{Ibid.}, p. 1.
To answer these questions is to offer a theory of inquiry, as distinct from a conception of logic which deals only with its proximate subject matter. From Dewey's point of view, such a theory is equivalent to a description of the process of thinking as this is reflected in successful inquiry. To present such a theory is to demonstrate the function of logic in inquiry. The ultimate concerns of logical study are necessarily answered in the process. The point of reference for Dewey's examination of inquiry is the reconstruction of experience. This, for Dewey, is the function of inquiry, and for this reason logic is a practical concern: "... all logical... forms arise within the operation of inquiry and are concerned with control of inquiry so that it may yield warranted assertions." Logic thus conceived bears critically on the issue between Dewey's notion of inquiry and traditional methodological conceptions. The issue is simply this: is there, in Dewey's words, a fixed difference between logic and the methodology of scientific and practical inquiry?" His answer, of course, is negative: "(inquiry) ... develops in its ongoing course the logical standards and forms to which further inquiry shall submit." To imagine that logical forms are given antecedently, that somehow they reflect the rational structure of the universe to which thought must conform is to perpetuate the Greek logical scheme which is as appropriate to

34 Ibid., pp. 3-4.
35 Ibid., p. 5.
present-day inquiry as alchemy is to modern metallurgy. The lack of appreciation for the function of logic in inquiry—any kind of inquiry, so long as it solves the problem at hand—is due largely to the separation made between common sense and science.

Dewey gives heavy emphasis to the contrast between the procedures of common-sense inquiry and those of scientific thought in order to differentiate legitimately between the two modes of thought without artificially separating them. He formulates his ideas of common sense and science in conjunction with a critical analysis of the "epistemological problems" as these have been historically conditioned and made intellectually stultifying. The fundamental points of his own conceptions turn on conceptions of the "physical object" and the "scientific object," and "knowledge of the antecedently real" and "knowledge for practical use." These are critical concepts in a definition of inquiry, and Dewey turns to history to explain the causes of the ambiguities in methodological concerns.

The question of the nature of knowledge, how it functions in inquiry, created no epistemological problems for the Greeks. This was so because in the Greek logical scheme the physical object was not separated from the object of knowledge as this later developed in logical theory. To the Greeks things were known qualitatively; for it was qualitative distinctions which separated kinds and gave the hierarchically ordered nature of Greek ontology. Thus, it was
only on the basis of graded qualities that knowledge could be complete on the one hand, reflecting Pure Being, and, on the other, partial, reflecting the experiential and transient. But as known, completely or incompletely, knowledge of objects was a cognitive grasp of their essential qualities.

With the advent of Newtonian science, however, a separation was made between objects in their qualitative esses and in their cognitive essence. The explanation of this development is easy:

Very early in its history, modern science asserted that the teleology was a futile and mischievous encumbrance, wholly mistaken in its idea of the goal and method of scientific inquiry, and putting mind on the wrong track. It repudiated the doctrine of ideal forms, rejecting them as "occult."

But whereas "... Greek thought never made a sharp separation between the rational and perfect realm and the natural world. ... (It) accepted the senses, the body and nature with natural piety..."; and, for this reason, "... the conclusions of Greek science were much closer to the objects of everyday experience than are the objects of present scientific thought." This is because "According to Newtonian science, it (reality or the object of knowledge) consists of fixed relations, temporal and spatial, designated by exact enumeration of changes between fixed and ultimate substances, the masses of atoms." The result of this idea of science was the

37 Ibid., p. 51.
38 Ibid., p. 89.
39 Ibid., p. 206.
"... doctrine which makes perceived and 'conceived,' or scientific, objects rival claimants for the position of being the 'realities' knowledge is about."\(^{40}\)

The effect of this conception of science was to continue the Greek dualism between knowledge and action. Knowledge, though shorn of qualities, continued to be an affair of grasping pre-existing reality. Its office was to transcribe the rational and mechanical structure of the universe into mathematical formulae. And this was not favorable to physical objects, the things of ordinary enjoyment and use. For practical concerns were relegated to a secondary role just as they were in the Greek scheme. There was a difference between the physical object and the scientific object. The scientific object was an object in its essence, which meant that:

All that counted for science became mechanical
All that counted for science became mechanical properties formulated in mathematical terms...\(^{41}\)

It followed from this conception that the object of cognition was the truly real object. What happened, then, to things in their physical, existential state, our involvement with which is the source of our enjoyments and uses of things? These, of necessity, became psychological, subjective; for doubt and joy were merely personal and had nothing to do with cognition. The psychological factors arising from our interactions with objects could easily impede our

\(^{40}\) Schillp, The Philosophy of John Dewey, p. 536.

\(^{41}\) Dewey, op. cit., p. 97.
cognitive grasp of the real scientific object. In this sense, they were of concern, but this exhausted their significance. The sole alternative, then, was to locate values in inaccessible "private feelings" or posit a Kantian "moral will" to account for their source and sanction. This philosophical development will have significant bearing on the discussion of value in the following chapter. The immediate concern is to treat further the consequences of a doctrine of knowledge which claims reality for the scientific object.

Under Newtonian science, knowledge really did not have much of a function. The mind was conceived to be passive in its copying of the determinate order of nature. Thought could not be creative, for Reality was closed and complete, and what was given to knowledge was pre-existent to the cognizing of it. Knowledge made no difference to things—the completed order of the universe was indifferent to man's strivings and hopes.

This idea of knowledge and reality has practical consequences. In the discussion of Hume's empiricism, as that theory of knowledge figured in the question of the function of perception and conception, the point was made that empiricism somewhat redeemed experience from its subordinate role in Greek and medieval philosophy. But the redemption was only temporary "... the Newtonian philosophy allowed itself to become entangled in the Greek metaphysics according to which the immutable is the truly real and our thought is adequate in
the degree in which it approximates a grasp of what is antecedently fixed in existence." The effect was to set up a dualism between common sense and science. Common sense might enable one to manipulate physical objects to practical ends, but the true object was the scientific one. Empirical objects, being objects of sense perception, were self-warranting, and gave the sensible grounds for the inference of the ultimate atomic structure of the physical objects; but true knowledge had to do with the invariant relations exhibited by substances in their interactions. This leads Dewey to observe that "knowledge which is merely a re-duplication in ideas of what exists already in the world may afford us the satisfaction of a photograph, but that is all." The crucial need here, then, is to account for knowledge in its reconstructive function. To do this requires a theory of inquiry which will show the relationship of science to common sense, which will distinguish the physical and scientific object without irremediably separating the two.

If the knowing process is placed within experience and is seen to function in its reconstructive capacity, then the dualisms plaguing epistemology are seen to be artificial. Object and subject, the physical and scientific, common sense and science are abstractions and the cause of many difficulties. Because of dualistic

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43 Ibid., p. 137.
abstractions, qualities expelled from scientific objects "became mental and psychical in nature, and the problem arose how mind composed of such elements, having nothing in common with objects of science... could possibly reach out and know their opposites."

Such artificial problems are avoided if abstraction is seen to have for its purpose a functional differentiation which enables us to interpret better the interactive continuum of experience. It is necessary to appreciate that:

Physical inquiry has been taken as typical of the nature of knowing. The selection is justified because the operations of physical knowledge are so perfected and its scheme of symbols so well devised. But it would be misinterpreted if it were taken to mean that science is the only valid kind of knowledge; it is just an intensified form of knowing in which written large the essential characters of any knowing.

Knowledge accrues to common sense inquiries as well as to laboratory experiments. It is true that common sense is concerned with things in terms of use and enjoyment, and, in this sense, is properly distinguished from scientific inquiry:

The attainment of knowledge of some things is necessarily involved in common sense inquiries, but it occurs for the sake of settlement of some issue of use and enjoyment, and not, as in scientific inquiry, for its own sake. In the latter there is no direct involvement of human beings in the immediate environment—a fact which carries with it the ground of distinguishing the theoretical from the practical.

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44 Ibid., p. 121.
It is a common sense observation, Dewey implies, to note the characteristics of common inquiry. In our common, day-to-day doings, we come at things, order our lives largely in terms of the body of culturally conditioned meanings which constitute common knowledge. This points to the distinction between common sense as knowledge and as method. As those beliefs (meanings) which are rather universally held within a culture define its common knowledge, method as common sense becomes:

Sagacity is power to discriminate the factors which are relevant and important in significance in given situations; it is power of discernment...ability to tell a hawk from a handsaw, chalk from cheese, and to bring the discriminations made to bear upon what is done and what is to be abstained from, in the ordinary affairs of life.\(^{17}\)

Common inquiry, in contrast with the precise, mathematical language of science, is characterized by looseness and change of meanings. Obviously, "Common sense in respect to both its content of ideas and beliefs, and its method of procedure is anything but a constant";\(^{46}\) but more significant is the cause of this part, which for Dewey is that:

The effect of the embodiment of science in the common sense world and the activities that deal with it in the domain of human relationships is as great as that which has taken place in relation to physical nature.\(^{49}\)

The explanation of this effect is seen in the necessary relationship between common sense and science:

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\(^{17}\) Ibid., p. 61.

\(^{46}\) Ibid., p. 64.

\(^{49}\) Ibid., p. 75.
Scientific subject-matter and procedures grow out of the direct problems and methods of common sense... and react into the latter in a way that enormously refines and expands and liberates the contents and the agencies at the disposal of common sense.50

The foregoing quotation is, for Dewey a full description of the function of science in experience; for "scientific subject-matter is intermediate, not final and complete in itself."51 He argues that "... all reflective knowledge as such is instrumental. The beginning and the end are things of gross everyday experience."52

The conclusions arising from Dewey's account of the connection of science and common inquiry will be considered later. In summary, then, what follows is a rough outline of Dewey's description of the pattern of inquiry.

Inquiry begins with questioning—the two words are synonymous in the initial phase of a problem. There would not be questioning were there no doubt or perplexity characterizing any situations that men confronted. The doubt evokes inquiry. Without the conflict that attends a problematic situation, in short, there would be no occasion for thought. Dewey will allow a slight qualification here, but not enough to violate the necessity of a felt need to evoke inquiry. He contends that "There is no such thing as disinterested intellectual


concern with either physical or social matters. For, until the rise of science, there were no problems of common sense that called for such inquiry.\textsuperscript{53} Dewey would not disparage the "disinterested inquiry" of a mathematician who was solely concerned with the relations of symbols to one another, and not interested in their direct existential application. Such is the way of scientific thought. This minor apparent qualification is mentioned only to give point to the subsequent assertion that inquiry is not complete if it does not effect a transformation of an indeterminate, existential situation.

Reflective thought attends a troubled situation. Something has to be done before activity can proceed evenly in the ongoingness of things. No matter whether the problem is such as to be dealt with on common sense grounds or such as to be solved only with the use of the most refined concepts of science, there is no difference in logical procedure. The logical norms for the experiment of a housewife with salad oils for a particularly desired tartness and the experiments of Edison at Menlo Park are in this respect the same. The difference is in refinement of technique. Each is confronted by a common condition: both come to their respective problems in possession of knowledge previously gained. Knowledge in this sense means both perceptual and conceptual material. The perceptual

\footnote{Dewey, op. cit., p. 115.}
material is constituted of the observed facts. Facts constitute data and, in so doing, enable the inquirer to define the problem. This is the first essential act in the pattern of inquiry. Problems are not given; they are selected from a troublesome situation. The definition of a problem is required before hypothesis as solution. Unless a situation has some determinateness about it, one could but wallow helplessly in a morass of confusion. Some of the constituents in a situation must hang together if we are to have an anchorage for thought. We must have data sufficient to define a problem before we can attack a situation at all.

As inquiry proceeds, observation discloses "the facts of the case." Observed facts are the terms of the problem. A fact is not a fact without prior conception and perception. Said another way, the meanings we bring to a situation with us are both perceptual and conceptual—that is, only through perceptualizing and conceptualizing in antecedent inquiries do we gain meanings to transfer to later situations. To see the operation of thought in this way is to resolve the difficulty of perception versus conception. The difference between the two is a matter of abstraction. Specifically, in inquiry we denote observations as perceptions, functionally different from conceptualizations as hypotheses. Neither is prior to the other in the temporal spread of inquiry, and neither is to be given precedence over the other; for the two function in strict correspondence with each other and are mutually dependent in successful inquiry. The facts in their initial but partially determinate
ordering suggest a way of acting on them which promises a solution to the difficulty. The suggestion is then defined as idea or hypothesis or conceptualization, all meaning the same thing: a proposed solution to the difficulty.

The meanings we have in inquiry are, of course, in symbolic form. Without such artificial signs, facts in and of themselves could not suggest the consequences of their use as we imaginatively play with different arrangements of them. This gives particular meaning to conceptualization. In the sequential ordering of inquiry, an idea arises when the data of the problem are held up, so to speak, above their existential involvement, and shuffled, to the end of getting the right spread. When this is done, inquiry is in that intermediate stage between the existential locus and the determinate existence to which effective inquiry leads. And it is precisely here that the scientific object comes into play. For at this point, hypothesizing, meaning of objects, are being taken up in a non-existential way. Qualities of objects have been left in their existential source. Though it is the use and enjoyment of objects, our having of them, which evokes inquiry, objects in suspension in this intermediate phase of thought have been stripped of their qualities. They are now scientific objects, which means that the relation which they sustain to each other is the object of inquiry now:
It is unnecessary that knowledge should be concerned with existence as it is directly experienced in its concrete qualities. Direct experiencing itself takes care of that matter. What science is concerned with is the happenings of these experienced things. For its purpose, therefore, they are happenings, events. Its aim is to discover the conditions and consequences of their happening. And this discovery can take place only by modifying the given qualities in such ways that relations become manifest. ... these relations constitute the proper objects of science as such. ... when it (discovery of relations) is accomplished the scientific object becomes the means of control of occurrence of experienced things having a richer and more secure equipment of values and qualities.\(^5^4\)

Much stress is put by Dewey on the fact of the temporal spread of inquiry. Inquiry originates in existence and serially spreads in time to the eventual closing which is the "cleared up situation." In the process, to repeat, hypotheses, ideas, direct our operations of observation of facts as these, in relationship to hypotheses, become the data sought as being evidential of the "shape of things" which will spell out the problem and "solve" it. Facts and ideas reciprocate their functions in the temporal sequence of an alternation of observing and hypothesizing which mark inquiry. Facts modify conceptions and conceptions give facts meaning. All this requires time and physical ordering. When inquiry has eventuated to a successful issue, knowledge has accrued. Knowledge, however, as the outcome of competent inquiry, is quite unlike the kinds of knowledge which have been the subject of criticism in this study.

\(^5^4\) Dewey, The Quest for Certainty, p. 104.
It simply means that completed inquiry adds new meanings to our knowing and we can warrantedly assert that provisionally they constitute tested knowledge. Knowledge always has further work to do, and another job of inquiry may turn up facts which require a revision of prior knowledge. Such is the pattern of inquiry in the experiential continuum of life. In Dewey's words:

Inquiry is the controlled or directed transformation of an indeterminate situation into one that is so determinate in its constituent distinctions and relations as to convert the elements of the original situation into a unified whole. 55

Chapter 3

VALUES AND VALUATION

Dewey's theory of value is one with his theory of knowledge.\(^1\) Knowledge and value both have a naturalistic matrix, and intelligence and valuing function alike in the reconstruction of experience. Given Dewey's definition of value and his distinctive use of the word "valuation," intelligent behavior then becomes the obverse side of effective valuing. That the emergence of both knowledge and value is conditioned by an indeterminate situation is asserted:

Until there is actual or threatened shock and disturbance of a situation, there is a green light to go ahead in immediate act—overt action. There is no need, no desire, and no valuation, just as where there is no doubt, there is no cause of inquiry. Just as the problem which evokes inquiry is related to an empirical situation in which the problem presents itself, so desire and the projection of ends and consequences to be reached are relative to a concrete situation and to its need for transformation.\(^2\)

As was mentioned earlier, the philosophic notion which deprived objects of their qualities was left with no alternative except to

\(^1\) It is, of course, the purpose of the entire chapter to develop this introductory and covering point. It is interesting, however, to note that Dewey himself at least intends a correspondence between his theories of knowledge and value: "For denial (of the dualism of the subject and object in an existential situation) is the basic feature of my general theory of knowledge... my theory of value judgments being but a special case of this general theory." (Problems of Men, p. 258).

\(^2\) Dewey, Theory of Valuation, pp. 54-5.
explain desires or values as being mere "psychological states."
This pretty much left values without objective reality; they were
construed as surds, inaccessible to rational interpretation and
external actualization. This philosophical doctrine, Dewey
believes, accounts in large part for subjectivist psychologies which
have confused the problem of values. The confusion in this instance
results from equating values with feelings. The idea of "subjective
feelings" as the sole data for value propositions is simply not
intelligible to Dewey; "For, even if there be such states, they are
by description wholly private and accessible only to private
inspection."^ Feelings become data for value propositions when
they issue in overt activity with observable consequences. How
critically this matter figures in Dewey's value theory will be shown
later.

For empirical philosophies to deny intellectualized experience
as the source and sanction of values was to give force of argument to
idealistic schemes which postulated an extra-experiential realm for
values. Dewey points to the philosophy of Immanuel Kant as the
dramatic instance of what inevitably happens when objects of knowl-
edge and value are construed to reside in separate realms. Kant had

^ The upshot of this notion is that those who hold it claim
"... that genuine propositions... about values are impossible,
because the latter have properties that render them wholly recalcitrant
to cognitive treatment. (For) ... the verbal expressions about values
are of the nature of exclamations, expressing only the dominant
emotional state of the one from whom the ejaculation issues. ... the
only question of a cognitive or intellectual nature that can be
raised is whether the verbal expression in question... actually
expresses the emotional state of the speaker..." (Problems of Men,
p. 279.)
to posit a "moral realm" to redeem values after he had, in his epistemology, described nature as being an object of cognition. This creates a dualism whereby "Science is limited to phenomena in space and time in order that the world of higher and noumenal realities may be appropriated by ideals and spiritual values. Each has complete jurisdiction and undisputed sovereignty in its own realm."⁵ Dewey insists that this dualism is to be attributed to the fact that:

... any doctrine that identifies the mere fact of being liked with the value of the object liked so fails to give direction to conduct when direction is needed that it automatically calls forth the assertion that there are values eternally in Being that are the standards of all judgments and the obligatory ends of all action. Without the introduction of operational thinking, we oscillate between a theory that, in order to save the objectivity of judgments of values, isolates them from experience and nature, and a theory that, in order to save their concrete and human significance, reduces them to mere statements about our own feelings.⁶

To point again to the close connection between theories of knowledge and of value, Dewey sees the explanation of the idealistic and subjectivistic views of value in an epistemological premise which is common to both theories. As it is:

The reason for isolating doubt, striving, purpose, the variegated colored play of goods and bads, rejections and acceptances, is that they do not belong in the block universe which forms the object of generalized knowledge, whether the block be conceived as mechanical or as rational in structure.⁷

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⁶ Ibid., p. 263. (italics mine)
It is then to experience and operational thinking that we turn to learn how Dewey resolves the foregoing dilemma with his conceptions of value and valuation.

A valid theory of value must first recognize that experience is both the source of knowledge and the locus of values. Those notions that either locate values in a transcendental realm or define them as being mere feelings without objective reference are continually subjected to Dewey's penetrating criticism. Infatuation with abstraction and its conversion into the supreme substance of existence accounts, Dewey believes, for much of the artificial concerns of philosophy regarding value theory. Recourse to experience teaches this lesson:

Common-sense has an expugnable conviction that there are immediate goods of enjoyment and conduct, and that there are principles by which they may be appraised and rectified. It is guiltless of the division between objective reality and subjective events. It takes striving, purposing, inquiring, wanting, the life of practice, to be as much facts of nature as are the themes of scientific discourse.... Hence it has no difficulty with the idea of rational or objective criticism and rectification of immediate goods.

And it is a "common-sense" theory of value which Dewey sets forth. A study of Dewey's conception of value gives the impression that valuing is pretty much an affair of practical intelligence. His notion of what constitutes a value and what is of ultimate concern regarding values is intriguingly simple. Having a value is easy enough: the mere fact of being human means to hold values. The real problem is

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Ibid., p. 426.
that of securing that which is valuable and knowing why it is valuable.

In developing his value theory, Dewey first points to the obvious fact of impulse in human behavior. Impulse, as a datum of value, is simply the expenditure of physical-chemical energies in the organism's effort to maintain a tensional balance of energy in its interaction with the environment. This is the ultimate trait of biological activity and no mystery attends its occurrence. Impulse, then, from this biological reference, is, when it issues in overt activity, an experientially observable fact. The function of impulse in value is that "vital impulses are doubtless conditions sine qua non for the existence of desires and interest."9 But "... enjoyments, objects of desires as they arise, are not values, but are the problematic material for construction—for creation if you will—of values."10 For:

Of immediate values as such, values which occur and which are possessed and enjoyed, there is no theory at all; they just occur, are enjoyed, possessed; and that is all. The moment we begin to discourse about those values, to define and generalize, to make distinctions in kinds, we are passing beyond value-objects themselves; we are entering even if only blindly, upon an inquiry into causal antecedents and causal consequents, with a view to appraising the "real," that is the eventual goodness of the theory in question.11

It is not unfair to say that the foregoing critical assertions constitute, in capsule form, the basic elements in Dewey's theory of

value. Further elaboration of these assertions will turn largely on
the function of intelligence in the construction of values.

As stated in the opening paragraph, Dewey does not separate
values and knowledge. To the contrary, in the experiential
continuum there is a reciprocity of function between values and
knowledge. The reciprocal relationship is necessary in that "The
termination of inquiry... is a resolved situation whose primary
status and value is cognitional. But the terminal material is also a
directly had situation, and hence is capable of treatment on its own
account as an enriched experience."¹² This view is in direct
opposition to those philosophical doctrines which assume the
universality of knowledge. Dewey has convincingly shown the effect
of the assumption of "universal knowledge" on the realm of values.¹³
In simple statement, if the office of knowledge, of science, is to
reveal objects in their cognitive essence, there is, of necessity
a separation between the scientific object and the physical object.
The scientific object becomes the "real" object because it is
universal in reference; and the physical object is only "apparent"
because of its existential particularity and investment with


¹³ For a more extensive discussion of this point, see Dewey's
The Quest for Certainty, pp. 291-5. For the delights of dramatic
phrasing and the force of moral and logical import, however, the
following should not be missed: "In striving with the inclemencies
of nature, suffering its buffetings, wresting sustenance from its
resources, the (values) were parts of Nature. But in knowledge,
true knowledge, which is rational, occupied with objects that are
universal and immutable, they escaped from the world of visitude and
uncertainty. They were elevated above the realm in which needs are
felt and laborious effort imperative." (p. 292.)
affective qualitatives which are non-cognitive. Thus there arises a deadly separation between values and knowledge, between science and morals. As previously mentioned, the alternatives are either an equation of feelings and desires with subjective, a rational impulse or a super-sensible realm for the source and regulation of values. If values and science are rightly interpreted, claims Dewey, these gratuitious difficulties are removed. To interpret the creation and securing of values rightly and to offer a correlative theory of value is, in effect, to describe the intelligent and effective reconstruction of experience.

Values are conditioned by desires and interests as these inevitably come about in the matrix of experience. Desire is the condition of value but not in itself a value. As impulse is prior to desire, so desire precedes value. Impulse is the ultimate causal factor in all organic activity. It does not, however, become desire until differentiating biological modes and conditioning cultural forms have given it a patterned activity. As Dewey says, "That desires as they first present themselves are the product of a mechanism consisting of native organic tendencies and acquired habits is an undeniable fact." To say that one has "desires," as mere enjoyment of things, is another way of saying that some

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Dewey, Theory of Valuation, p. 29.
objects are liked, give pleasure; but the satisfaction called enjoyment is, in that sense, a kind of visceral reaction, aesthetic, mute, and non-cognitive. Knowledge has no concern here, for by definition this kind of "feeling" is inaccessible to intellectual analysis. The point is, however, that desires and likings, as "products of a mechanism," an activity which is an interaction of person and external conditions, have observable consequences. That is, they bring about consequences when acted upon; and once consequences ensue, the materials for a scientific appraisal of value are available. Prior to the consequences of action, though, "Values are values, things having certain intrinsic qualities. ... All that can be said of them concerns their generative conditions and the consequences to which they give rise."^{15} But what can be said of their generative conditions and consequences is all that is of significance; for "The fact that something is desired only raises the question of its desirability; it does not settle it."^{16} And to know whether a "value" is "valuable," worthy of perpetuation, the first logical condition is to know what causes a value to arise; for "If we know the conditions under which the act of liking, of desire and of enjoyment, takes place, we are in a position to know what are the consequences of that act."^{17}

17 Ibid., p. 266.
To consider consequences of an act is the essential condition of the crucial factor of intelligence in the process of valuing. If a desire is to become desirable, attention is necessary both to its causal factors—this knowledge, of course, being necessary to its perpetuation—and the results attending the having and acting on a desire, which are the ultimate determinants of whether a desire is worth the having of it. The imaginative projection of the consequences of acting on a desire is the condition then of desire and thought in reciprocity. Routinized habit and blind impulse, of course, preclude the function of intelligence in behavior. But whenever the consequences of an act are critically anticipated, an end-in-view figures in desiring. And "... whenever there is an end-in-view of any sort whatever, there is affective-ideational motor activity..."18

At this juncture there will be an effort to give concurrent illustrative force to the further development of Dewey's conception of valuation as being empirically verifiable. Apart from academic requirements, the present writer has an intellectual interest, an enjoyment, in the study of the problem under discussion. As far as the generative conditions of this interest are concerned, I could,

18 Dewey, Theory of Valuation, p. 31. Though the emergence of the intellectual element in experience has been given previous point (Cf., pp. 52-56), its significance for valuation is probably greater than the particular emphasis of this development would suggest. In his Essays in Experimental Logic, Dewey, quite to the point says: "Choice, preference, is originally only a bias in a given direction .... But let continuance in a certain line of action become questionable, let, that is to say, it be regarded as a means to a future consequence, which consequence has alternatives, then choice gets a logical or intellectual sense; a mental status...." (p. 365.)
of course, point to the particularities of the interest—teachers, courses, issues, etc. Persistent questioning on the causal factors of this interest, however, would ultimately elicit the response, "I like it because I like." This is the retrospective dead-end of the conditions of a desire. In a forward reference, thought, what is critical in an appreciation of Dewey's value theory is to see how the conditioning factors and anticipated consequences of an acted-on-desire is the functioning of the means-ends relationship in valuation. It does not seem difficult to show that the functioning of the means-ends relationship in valuation. It does not seem difficult to show that the functioning of means and ends in this writing provide the materials for a scientific analysis.

Dewey draws a crucial distinction between two kinds of valuation propositions. The first kind to be distinguished has already been pointed to—the fact of an academic interest. Of the nature and significance of this logically initial proposition, Dewey says:

Propositions about valuations have, indeed, been shown to be possible. But they are valuation-propositions only in the sense in which propositions about potatoes are potatoe-propositions. They are propositions about matters-of-fact. The fact that these occurrences happen to be valuations does not make the propositions valuation-propositions in any distinctive sense.19

19 Ibid., p. 19. Elsewhere Dewey points out that much confusion results from the notion that value and fact are different things. To this he says "(if the discussion) were the relation of value-facts to other facts, there would not be the assumption of uniqueness... ... I can think of nothing more likely to be clarifying in the present confused state of the subject (values) than an explicit statement of the grounds upon which it is assumed that propositions about values are not propositions about space-time facts, together with explicit discussion of the consequences of that position." (Problems of Men, p. 279).
To formulate a true valuation-proposition, however, it would have to be that:

In case the final outcome is to show that some kinds of acts of prizing are better than others, valuation-acts are themselves evaluated, and the evaluation may modify further direct acts of prizing. If this condition is satisfied, then propositions about valuations that actually take place become the subject matter of valuations in a distinctive sense, that is, a sense that marks them off both from propositions about physics and from propositions about what human beings have in fact done. 20

To continue the illustration, with emphasis on the latter quotation, the end-in-view of the initial interest was a completed dissertation and an understanding of certain relationships between conceptions of science and economic analysis. The latter, more particularly, was a proposed treatment of the conceptions of science in the philosophies of Dewey, Karl Marx and Karl Mannheim and their implications for economic analysis. The means for this kind of study—library and teacher resources, effort and time required, my own capacity—were evaluated and seemed to justify preliminary study. A logical condition to be noted here is that "... (ends-in-view) are of the nature of hypotheses and...hypotheses have to be formed and tested in strict correlativity with existential conditions as means..." 21

20 Ibid., p. 20.

21 Dewey, Logic, The Theory of Inquiry, p. 497. This is somewhat prospective in reference; but it also has special reference to prior points, especially pp. 1, 5.
In brief, then, as the study progressed, the treatment of all three authors, in view of my own ability, the time factor, and academic requirements, was re-evaluated as ends-in-view, and also as procedural means for the intended outcome. It was seen that the study as initially proposed was too much of a challenge to my own ability and the thought of Marx and Mannheim were really extraneous to the study. Whereas, initially, my inquiry into existing conditions, the matrix of the interest, was inadequate, further questioning better met the "... adequacy of the inquiry into the likelihood that the particular end-in-view which is set up will, if acted upon, actually fill the existing need, satisfy the requirements constituted by what is needed..."22 And this phase of the act of valuation:

... proves that there is present an intellectual factor--a factor of inquiry--whenever there is valuation, for the end-in-view is formed and projected as that which, if acted upon, will supply the existing need or lack and resolve the existing conflict.23

However general the description of this act of valuation, the logical condition of a "valuation-proposition in a distinctive sense" seems to have been fulfilled. The first valuation proposition was a matter-of-fact one--an academic requirement and a correlative interest. This, as an end-in-view, conditioned the appropriateness

22 Dewey, op. cit., p. 35.
23 Ibid., p. 34.
of means to their execution. Foreseeing better the consequences of the original end-in-view, I could then re-evaluate them as means. The more extended study was seen not to be a good means. The better appreciation of the really available means had the effect of modifying the previous ends, the result being a valuation of a valuation.

To complete this development of Dewey's value theory, it is necessary to discuss two further critical concerns—one, how habits are ultimately the determinant of both the kinds of values we hold and whether we do in fact hold them securely with critical awareness and, two, how the effective functioning of means and ends in valuing reflects intelligent habits. In Dewey's conceptual scheme, it is necessary, if the critical elements in scientific valuing are to be appreciated, to see first the nature of the individual, the value-agent. Dewey uses the word habit "... to express that kind of human activity which is influenced by prior activity and in that sense acquired; which contains within itself a certain ordering... of minor elements of action; which is projective, dynamic in quality...." Of significance here is that habit is both the ordering and propulsive factors in human activity. With the emphasis on the ordering or patterning of behavior, Dewey says "All habits are

demands for certain kinds of activity; and they constitute the self...
They form our effective desires and they furnish us with our working capacities."  With respect to the effectiveness of habits in valuing, however, it is familiar enough that "First and immature experience is content simply to enjoy..." The patterning of unreflective enjoyments constitutes habit in its derogatory sense. Of these kinds of habits, it can be said that they merely afford the means to their own perpetuation in the absence of conflict. The critical element in habit, however, is that although "Habit is an ability, an act, formed through past experience... whether an ability is limited to repetition of past acts adapted to past conditions or is available for new emergencies depends wholly upon what kind of habit exists."  The effectiveness of habits for "new emergencies" is gained when "... there takes place a change from original, comparatively unreflective, and hard-and-fast habits to desires and interest that incorporate the results of critical inquiry."  Habit, as Dewey conceives it to be the function of the having and securing of values, is the crux of the issue between his own

25 Ibid., p. 25.
27 Dewey, op. cit., p. 25.
28 Ibid., p. 52.
and contrary theories. The issue, as will be shown, turns on this assertion by Dewey, "... habits incorporate an environment within themselves. They are adjustments of the environment, not merely to it." This quotation is a logically necessary conclusion from Dewey's notion of selfhood and mind as emerging functions of experience. Habits, being the pattern of activities of individual biological forms, can, from this frame of reference, be construed as the agency, mind as individual, through which experience gets itself transformed. A moot point, it is to be remembered, is that experience is inclusive of nature, "nature" and "human being" being abstractions, not differing entities. This being so, habit, then, as intelligence in practice, has critical metaphysical connotations in that "The intelligent activity of man is not something brought to bear upon nature from without; it is nature realizing its own potentialities in behalf of a fuller and richer issue of events." The fuller significance, then, of the critical function of habits in valuing can be appreciated only in light of Dewey's metaphysics.

A most significant metaphysical aspect of habit is pointed to by Dewey in saying that "The generic propositions or universals of science can take effect, in a word, only through the medium of the habits and impulsive tendencies of the one who judges. They have no

29 Ibid., p. 52.

modus operandi of their own." This statement is ultimately critical in Dewey's attempt to formulate a theory which will redeem conceptions of value from the polarized extremes of supernaturalism and subjectivism. Each view errs from the side of metaphysics in that its theories of knowledge and value are appended to a priori metaphysical assumptions. The only valid metaphysics is constituted of those generic traits of existence revealed by experience through critical awareness of itself. Again, as in the case of knowledge, the only recourse to a knowledge of the nature of value is experience. And the function of habit in valuing is likewise to be understood only in the matrix of experience.

The continuum of experience is characterized by initiations and endings—the latter being characterized by qualities, esthetic elements which are consummatory and not instrumental. Man, as the directing agent of conscious experience, discriminates qualitatively among different kinds of experiences. And this discrimination is the function of habits because habits, first of all, constitute selfhood which, metaphysically, is the conscious reflection of a pattern of values. Of logical and metaphysical significance here is the fact that a

31 Dewey, Problems of Men, p. 228.

32 That the qualitative values of experienced objects is the condition of an ending is cryptically asserted: "Interactions of things with the organism eventuate in objects perceived to be colored and sonorous. They also result in qualities that make the object hateful or delightful. All these qualities, taken as directly perceived or enjoyed, are terminal effects of natural interactions." (Quest for Certainty, p. 239, italics mine).
quality of experience, or a conscious pattern of values, a self, is a totality—an incorporation of an individual biological form and its nurturing milieu, or nature. A division of self and environment is a function of abstraction—the purpose of abstractive thought being to differentiate the functions of conscious organism and inert matter. Abstraction is the necessary condition for determining the respective functions of the differentiated aspects of the indivisible unity of experience.

Experience as method, experience aware of itself, comes to this awareness when it is conscious of itself as a directing agent of an experience. Whatever qualities characterize an event depend for their existence on the consciousness of a self. This is the condition of their presence; they belong to the whole situation and are not confined to the subjective recesses of the experiencing agent. To say that qualities permeate the whole situation, inclusive of the

33 The following not only offers corroborating elaboration of the whole statement but also tends to summarize the thought of the whole paragraph: "Every event that takes place has a certain extensive durational and spatial spread, as long and as wide as all the interacting conditions involved. Environmental conditions are surely as much a part of the occurrence of a toothache as are organic conditions; to know the event as the toothache it actually is dependent on knowledge of the former. The sole difference that exists between environmental conditions and organic conditions is that the former occupy a relatively initial place and the latter a relatively terminal position in the series of occurrences forming a single total event." (Problems of Men, p. 264).

34 But more than mere consciousness determines the presence of qualities in an event; the emphasis is really to be put on reflection, for "We have to learn to see, hear, and to feel when "feeling" is taken to mean an identification and demarcation of an event as having the kind of qualities that define it as a kind of event...." (Problems of Men, p. 266).
self, may seem to be in contradiction with previous assertions regarding the immediacy and privacy of situations. There is no contradiction, however, if a significant distinction is kept in mind. As Dewey says, "... while the temporally and spatially terminal conditions of an observation are centered in a particular organism, they are not located under the skin of the organism. For events outside the skin as well as under it are directly involved in the production (of a quality)." Moreover, "... only when conditions arise that cause doubt to arise as to their value (not their occurrence) are they judged."

In summary of the metaphysical concerns under discussion, then, the critical factors are that the felt-qualities of an event are a reflection of the "minding" habits of the individual who is implicated in the situation. And reflection becomes necessary when the value-qualities of an experience are unsettled or in doubt. The function of reflection is an existential operation which will resolve the indeterminate situation. Subjective certainty is not adequate; for:

If we define "mental" through exclusion of overt acts that terminate in a changed environment, nothing merely mental can actually resolve doubt or clarify confusion. At most it can produce only a feeling of certainty-something best obtained by withdrawing from the real world and cultivating fantasies.

36 Ibid., p. 269.
Moreover:

Problematic situations when they are resolved then gain the meaning of all the relations which the operations of thought have defined. Things that were casually effective in producing experienced results became means to consequences; these consequences incorporate in themselves all the meanings found in the causes which intentionally produce them. 38

This centers attention on the significance of the means-ends relationship for intelligent activity—or in another word, that kind of effective habit which is the ultimate source of values and their security.

It is characteristic of Dewey to develop his thought from the perspective of a critique of traditional doctrine. For his reason, it seems there is inevitably to be found in his writings a critical quotation which joins the issue of the question under discussion.

In this present concern, the following sets the problem:

... arbitrary selection of some one part of the attained consequences as the end and hence as the warrant of means used ... is the fruit of holding that it, the end, is an end-in-itself, and hence possessed of "value" irrespective of all of its existential relations. And this notion is inherent in the view that assumes that "ends" can be valued apart from the appraisal of things used as means in attaining them. 39

Intelligent valuing will not commit "... the fallacy involved in the position that ends have value independent of appraisal of means involved and independent of their own further causal efficacy," 40

38 Ibid., p. 236.
40 Ibid., pp. 42-3.
because it is mindful of the fact that "Propositions in which things
(acts and materials) are appraised as means enter necessarily into
desires and interests that determine end-values." The necessity
of the foregoing as logical procedure is because:

Means-consequences constitute a single undivided
situation. Consequently when thought and discussion enter,
when theorizing sets in, when there is anything beyond bare
immediate enjoyment and suffering, it is the means-con-
sequence relationship that is considered. Thought goes
beyond immediate existence to its relationships, the
conditions which mediate it and the things to which it is
in turn mediatory.

It follows, then, that "The value of an enjoyment, of an object as
an attained end is a value of something which in being an end...
stands in relation to the means of which it is the consequence.
Hence if the object in question is prized as an end or 'final'
value, it is valued in this relation or mediated."

In contrast with the foregoing, the notion of fixed ends, both
for nature and man, has determined the nature and direction of science
and morals from the time of the Greeks to the advent of early modern
science. Although fixed natural ends have been rejected by modern
science, the "... doctrine of fixed ends-in-themselves at which
human acts are—or should be—directed and by which they are regulated

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Ibid., p. 35.


Dewey, op. cit., p. 41.
if they are regulated at all persisted in morals...." The effect of this, Dewey believes, is to divorce the consequences of action from the end-in-view and to vitiate present action because "When ends are regarded as literally ends to action rather than as directive stimuli to present choice they are frozen and isolated." Or else the effect is wishful thinking, since "... the contents of dreams and air castles are not ends-in-view, and what makes them fantasies is precisely the fact that they are not formed in terms of actual conditions serving as means to their actualization." An end that is so distant and remote in time as to have no existential relation to present action is not an end in an intelligible and practical sense. An end-in-view, on the other hand, is a projected consequence which is foreseeable in time and space—thus the emphasis on "view." And it is projected as an end to deliberation, not as an end to action. For the latter usually means a division of reality. By this is meant the idea of something hanging above experience, upon the reaching of which action ceases. Ends, properly speaking, are rather ends of deliberation;

45 Ibid., p. 227
46 Dewey, Theory of Valuation, p. 35.
47 But the "reaching" from this historical perspective is more nearly like death when this elaborated significance is noted: "Ideals" are thought to be remote and inaccessible of attainment; they are too high and fine to be sullied by realization. They serve vaguely to arouse "aspiration," but they do not evoke and direct strivings for embodiment in actual existence. ... they are expiring ghosts of a once significant kingdom of divine reality...." (The Quest for Certainty, p. 279.)
"... they are redirecting pivots in action." And deliberation is "... a dramatic rehearsal (in imagination) of various competing possible lines of action." 18

From the foregoing the distinction between means and ends is shown to be strictly functional; and, moreover, a reciprocity of function is pointed to. If an end is a "redirecting pivot" in action, it necessarily functions as a means to present action. Present action, in short, gets its meaning and direction from the consequences (pivots) to which it leads. The view that the difference between means and ends is merely how means function in temporal sequence is elaborated by Dewey in the following:

Means are means; they are intermediate middle terms. ... The "end" is merely a series of acts viewed at a remote stage; and a means is merely the series viewed at an earlier one. ... The "end" is the last act thought of; the means are the acts to be performed prior to it in time. To reach an end we must take our mind off it and attend to the act which is next to be performed. 19

This summary account of Dewey's conceptions of value and valuation has, at least, pointed the significance of the more critical aspects of the theory. Of interest is the fact that Dewey's value theory, in broad outline, can be logically inferred from his conceptions of experience and knowledge. It seems that each—experience,__________________

19 Ibid., p. 190.
50 Ibid., p. 31.
knowledge, and value-is one side of a triangle which reflects the pattern of transactions between organism and environment. In this sense, each side of the figure is merely a different perspective from which to differentiate functionally the critical elements in the ongoingness of life. Moreover, no matter what the distinction, the concern is the same: reconstruction of experience to the end of a better quality of human experiencing. That Dewey's theory of value has important implications for social inquiry will be shown in the following chapters.
Chapter 4

SCIENCE, VALUE, AND ECONOMIC ANALYSIS

The significance of the foregoing chapters relates to the important logical elements in Dewey's theory of inquiry. These are (1) the existential matrix of inquiry, how culture necessarily provides the ideational context for inquiry and thus determines the nature and direction of thought, (2) the function of abstractions and hypotheses in inquiry, and (3) the role of values in scientific thought. In this chapter we will apply these criteria to the general body of economic analysis.

Emphasis has been previously given to the nature of thought as it arises in an existential matrix. The implications of cultural influences for logical procedures in scientific inquiry will be developed in this chapter in relation to economic analysis. It has been shown that traditional theories of science, although they reflected culturally determined ideational schemes, defined science as if time and place were of no significance in determining the kinds of problems dealt with and the procedures of inquiry used. Subsequent discussion will point up the logical necessities of inquiry which cultural conditions impose. The effect of cultural forms on science, such as conceptual frameworks and value schemes, figure critically in social inquiry, especially economic analysis. The
Keynesian analysis is dramatic documentation of this aspect of logical procedure in social inquiry.

That the use of abstractions is basic to inquiry is obvious enough. Abstraction is the mechanism with which the complexity of subject-matter is simplified and given operational meaning. Dewey lays heavy stress on the use of abstraction in formulating hypotheses. The obvious necessity of abstraction in science is given, however, a distinctive emphasis by Dewey. It is one thing to abstract the qualities and elements of subject-matter—this is the only means to hypothesizing, which is an imaginative projection of the predicted consequences of a proposed interaction with the stuff being dealt with. It is quite another, however, when abstractions are converted into universal truths. Grave difficulties are then created. History has shown that particular problems are swallowed up in the maw of dialectics when abstractions are treated as timeless in function. Dewey has been relentlessly critical of this "logical sin of vicious abstraction," the futile effort to gain universal knowledge of social subject-matter, something which of necessity is always relative to circumstance and time. An examination, in this chapter, of some significant abstractions in economic analysis will reveal their initial necessity and eventual logical perversion. Classical economic doctrine will be discussed in the light of Dewey's criteria of the function of abstraction and hypothesis in inquiry.
The important implications of Dewey's theory of value for economic conceptions of value will be drawn. As a point of interest, it will be seen that the abstraction of economic value is the most logically defensible aspect of classical economic analysis. The final phase of the chapter is a discussion of the role of logical and ethical values in science. The implications of the necessary distinction between logical and ethical values for social inquiry are strikingly illustrated in the Keynesian economic analysis. (Treated in Chapter 5).

Economics is, of course, a discipline which ramifies widely, cutting across into other disciplines sometimes to an extent which makes it indistinguishable from the field "encroached" upon. An obvious example of this is welfare economics; which, to the economic "purists," is a conglomerate of psychology, sociology, political science, etc. This is not to imply that economics should be sharply demarcated from other disciplines. The particular point to be made is that since all of what passes for economics cannot

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In the history of economic doctrine in our own culture, it is legitimate to draw a distinction between, on the one hand, the so-called purists and, on the other, institutionalists, welfare economists, etc. The former believe price phenomena should be the exclusive concern of economic analysis, or, in other words, supply and demand relationships under equilibrium, which, more aptly defined and elaborated means: "Equilibrium theory is a theory of exchange relationships under given conditions; and abstracts from all personal relationships and social status. Its only institutional assumptions are those which are strictly necessary to facilitate exchange." (E. Ronald Walker, From Economic Theory to Policy, p. 87). From the other extreme, institutionalism, there are no subject matter limitations.
here be treated, the aspects chosen for illustration must be logically justified. In the field of economics, however, the justification for selected aspects for the purposes of this study add up more nearly to logical necessity. This will be shown when certain logical requirements of social inquiry are considered in light of particular cultural influences. But apart from the latter, there is something to be said for both economic phenomena and economic doctrine as being amenable to scientific treatment.

Economics peculiarly invites what is professed to be scientific analyses. This is to be explained in terms of the nature of the phenomena dealt with. The pervasiveness of exchange of goods measurable in physical magnitudes offers for study data that are easily objectified. Money-price affords a quantitative measurement of economic transactions and gives quantitative data which are highly amenable to objective treatment. And this is in advantageous contrast with the qualitative aspects of the subject matter of other social studies, i.e., psychology and sociology. It is not an exaggeration to say that for these simple reasons not only is economics, from this restricted perspective, peculiarly amenable to scientific analysis; but, more significantly, many economists, the price theorists especially, believe these conditions suffice for a complete science. As a result of these assumptions,

Even though nominal prices fluctuate widely, it is possible to correct for real prices.
though, the conceptual scheme of classical economic thought is much more logically complete than so much of other social doctrine which often is an amalgamation of description, history, commentary, hypothesis, extrapolation, etc. In contrast, the analytical structure of classical economic theory is quite logically refined, and, given its assumptions, offers an invincible internal logical consistency. Now the fruitfulness of this for this study is that a rich store of "economic science" has been established which serves, in fact, as an example of what science from the most crucial aspects is not. Further, as the assumptions of the classical doctrine permeate our culture, the implications of orthodox analysis for social inquiry are of real social concern.

If economic study is to be effective, there are primary logical conditions to be fulfilled which have their origins in cultural conditions. The moral precepts implicit in the assumptions of classical doctrine literally course through our institutional tissue. They have given design to our cultural fabric and direction to our customs. In a word, the philosophy of individualism, as it is inferred in the case of economics from the concept of autonomous "economic men," has been the controlling value in our culture.

3 As an interesting aside, were just three assumptions granted, the monistic psychology of the pain-pleasure calculus, the free mobility of factors, and government policy that would maintain conditions of pure competition, classical economic analysis would then be as scientifically valid as modern physics.

4 Though the following was written by an English author, it applies even more so to our culture: "No other form of political philosophy has ever had one-thousandth part of the influence on us; its teachings have settled down into the common-sense of the nation ...." (Walter Bagehot, Economic Studies, edited by R. H. Hutton, p. 3.)
In light of this, a logical necessity of social inquiry, as conceived by Dewey, becomes primary in significance:

... in physical inquiry the conditioning social factors are relatively indirect while in solution of social problems they are directly involved. Any hypothesis as to a social end must include as part of itself the idea of organized association among those who are to execute the operations it formulates and directs.5

In fact, any social doctrine, if it is to be scientific, must be realistic in a very distinct way. The crucial import of this "logical realism" is explained in this way:

Social inquiry, in order to satisfy the conditions of scientific method, must judge certain objective consequences to be the end which is worth attaining under given conditions. ... this statement does not mean...that ends and values can be assumed outside of scientific inquiry so that the latter is then confined to determination of the means best calculated to arrive at the realization of such values. On the contrary, it means that ends in their capacity of values can be validly determined only on the basis of the tensions, obstructions and positive potentialities that are found, by controlled observation, to exist in the actual situation.6

That any postulated social end can be practically determined only"on the basis of the tensions, obstructions and positive potentialities that are found to exist in the actual situation" means, obviously, that economic inquiry, if it is to be effective, must be value-oriented around classical economic doctrine. Economic


6 Ibid., p. 503.
study, then, to be scientific and socially effective, must proceed within the conceptual and value contexts of the orthodox doctrine. This necessity alone dims the promise of effective inquiry from the perspectives of contrary economic views. A consideration of some crucial elements of one ideologically opposing economic doctrine, the Marxian Theory, brings into sharp focus the unscientific aspects of that analysis and, in so doing, points to the critical logical necessities of scientific social inquiry. This examination of the logical import of the Marxian conceptual scheme will point first to the metaphysics underlying that doctrine.

The significance of the theory of marginal productivity for this study lies in its conceptual scheme. Conceptualization was dominant in this system of economic analysis. Certain basic conceptions--value, utility, demand, supply, cost, etc.--were necessary to rationalize economic material and to control the selection, arrangement, and interpretation of facts. The conceptual subject-matter of classical economics, however, did not function as operational means—that is, it did not lend itself to the formulation of ideas as hypotheses for the solution of particular problems. To the contrary, with the stress on dialectical relation of concepts and refinement of deductions, the effect of classical analysis was to retard effective inquiry.
The critical conceptions of the classical doctrine were assumptions regarding human nature. The basic premises regarding human behavior were conceived to be "natural laws," universal in scope. The psychological characteristics of man were (1) hedonism, seeking pleasure and avoiding pain, and (2) rationality. From these assumptions, it follows logically that men will behave rationally to maximize satisfactions by engaging in exchange of goods to gain utility at the least cost. These conceptions "... were not regarded as hypotheses to be employed in observation and ordering of phenomena, and hence to be tested by the consequences produced by acting on them."\(^6\) Rather, they were axioms—the "laws" of natural phenomena and, as such, the controlling norms, both logical and moral, of economic activity. Any failure of actual economic phenomena to correspond with deductions from the first principles of the doctrine was regarded as "unnatural."

If man was a self-inclosed atom, acting rationally to produce and exchange for maximum gain, it followed that the norm of practical activity was a condition of freedom for individual economic pursuits. Indeed, the premises clearly implied that free individuals would act with enlightened determination to find the most profitable employment for themselves and their capital. The cumulative effect

of intelligent self-interest would be the nearest approach to social harmony. This meant that the function of government was to maintain rules of procedure which would allow individuals complete latitude in their ownership and use of economic goods. Under such laissez-faire arrangements, the whole calculative process of producing and consuming described above would naturally follow.

The above reference to the role of government and the function of interest rates and wages in assuring full-employment equilibrium is intended to point to the "logical means" to economic efficiency implied in the classical analysis. This means-ends relationship is perhaps the most crucial aspect of social inquiry. A basic concern of this chapter is to show how classical analysis erred in this respect and how Keynes' inquiry brilliantly fulfilled the logical condition of means and ends being in "strict conjugate relation to each other."

That Marx inverted the Hegelian dialectic is familiar enough. The concern here is to point briefly to the concept of causation which posits the determinant of social development to be an alternating play of thesis and contradiction with an eventual ideal realm reflecting the culminating synthesis. There are un-scientific elements of Greek ontology and Newtonian determinism in the doctrine of Marx. The teleological notion of change within a deterministic context of fixed ends is unmistakably implicit in the Marxian theory. The class dynamic seems to have been conceived as an efficient cause, antecedent,
and the eventual communal society as the final cause, consequence.

The historical development is a process of economic determinism.

Human effort and intelligence, as a factor in social development, is, in Marx's "science," largely discounted. This is true at least for historical development prior to the "kingdom of freedom." The forces inherent in the class dynamic, however, will of necessity run their mechanical course. Which means that "The task which Marx set himself in Capital was to discover inexorable laws of social technologist." In the Marxian scheme, then, generalizations drawn from metaphysical sources too often function as mere historical prophecy.

Of basic significance for methodology is the fact that, if inquiry is to be effective, generalizations must function as directing hypotheses which have "... a directive function in control of observation and ultimate practical transformation of antecedent phenomena..." Two critical logical conditions of scientific inquiry,

7 Karl Popper, in his The Open Society, interestingly discusses Marx's conception of freedom. He concludes that Marx was "a friend of the open society," a believer in freedom. This follows from Marx's conception of two "kingdoms," those of necessity and freedom. The first is characterized by "... the material side of social life, and especially its economic side, that of production and consumption, as an extension of human metabolism, i.e., of man's exchange of matter with nature." In this phase of history, man is not free; he will, however gain the "kingdom of freedom" when economic necessities, metabolism, no longer deterministically condition thought. Man can then make his own history.

8 Ibid., p. 385.

9 Dewey, op. cit., p. 566.
"controlled observation" and "practical transformation," are not fulfilled in the Marxian analysis. These logical requirements are of fundamental concern because it is only through continuing observation that particular problems can be determined on the basis of their causes as these in turn are determined by both material forces and the play of ideas. And unless there is a solution of particular problems through the intended efforts of man, there is, of course, no standard by which effective inquiry can be established and scientific method defined.

Generalizations in the Marxian doctrine reflect, of course, the conception of science of his time. The extra-scientific idea of necessity and determinacy were the crucially determining factors in nineteenth century science. The idea that the universe was a block and determinate affair suggested the conception of a single comprehensive causal law to explain all phenomena. Marx's conception of man's material necessities in the institutional framework of a class society as being the determining factor of social development in a monistic, block-universe theory of causation. This, as will be shown, critically conditions the methodology of any such conception of causes. The result is a methodology which makes scientific inquiry all but impossible.

As Dewey so validly points out, the need for answers to particular social problems is met by the "logic of general notions," i.e., Marxism, with principles universally valid and "... not preferred for what they may be worth in connection with special
historic phenomena," but with "... a universal meaning that covers and dominates all particulars." The result of this is that "The social philosopher, dwelling in the region of his concepts, "solves" problems by showing the relationship of ideas, instead of helping men solve problems in the concrete by supplying the hypotheses to be used and tested in projects of reform." The notion that conceptual subject-matter should consist of universal principles from which particulars are to be subsumed has these results for inquiry:

... (universals) prejudge the characteristic traits and the kinds of actual phenomena that the proposed plans of action are to deal with. Hence the work of analytic observations by which actual phenomena will be reduced to terms of definite problems... is intrinsically compromised from the start. The "generalizations" are of the nature of all-or-none contradictory "truths." ... one theory must be accepted and the other rejected in toto.

For economic analysis, such logic means, for one example, that "Marxian economics would be a poor basis for running a central bank or anticipating the effects of a change in the rate of discount."  

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10 Dewey, Reconstruction in Philosophy, p. 149.
11 Ibid., p. 149.
12 Ibid., p. 151.
14 As quoted by E. R. Walker in From Economic Theory to Policy, p. 175.
An examination of classical economic theory leads to the conclusion that the conceptual difficulties besetting Marxism no less vitiate the former. This is to be expected as both doctrines spring from the same logic—that of universal principles. With respect to classical economic theory, however, it is necessary to consider more than the logical import of its methodology. An examination of certain aspects of its content is required to show how un-scientific doctrines become scientific. This will turn on a discussion of the psychology of orthodox economics; for it was the use of psychological data which enabled Keynes to re-conceptualize classical doctrine, delimit a problem, and offer "specified operations" for its solution.

That the psychology underlying classical economic doctrine is hedonism is perhaps familiar enough. It is of much interest and relevancy, however, to note why and how this psychology arose and how it has affected the conceptualizing of classical theory. Its origin, as is true of all thought, was in the social needs of the time. Hedonistic utilitarianism was a rationale for a social development and was conceived in the ideational context of Newtonian science.

The psychology of utilitarianism was monistic—that is, man was conceived to be motivated solely by a desire to avoid pain and seek pleasure. Thorsten Veblen's phrasing is quite to the point:
The hedonistic conception of man is that of a lightning calculator of pleasures and pains, who oscillates like a homogenous globule of desire and happiness under the impulse of stimuli that shift him about the area, but leave him intact.15

The easy equation of pain with labor, or disutility, and pleasure with profit, or utility, is the psychology rationale of classical economic doctrine. Other motivations are recognized, but peculiarly:

The subjective effect of fatigue is a feeling of disinclination for work.... This disinclination is akin to pain. Few men can work for the sake of work itself; the work of the scientist or the poet need not, however, be attended by any disinclination; he is often driven on by a kind of demonic power....16

Rather than add another trivial criticism of this necessary abstraction of the pain-pleasure calculus, the concern here is to examine further this psychology to understand better why it gained currency and, eventually, how it is justified in economic analysis.

The social need for a secular philosophy was because "The industrial revolution was bound in any case to give a new direction to thought. It enforced liberation from other-worldly concerns by fixing attention upon the possibility of the betterment of this world through control and utilization of natural forces...."17 Utilitarianism, as the rationale which fulfilled this need "... made good and evil matters of conscious experience. ... (it) brought them down

16 L. V. Birck, The Theory of Marginal Value, p. 4. (italics mine.)
Why this philosophy with its significant underlying psychology, which seemed to offer a more intelligent morality and promise a more humane life, took its one-sided course is cogently explained in this brilliantly perceptive interpretation:

An old theological doctrine of total depravity was continued and carried over in the idea of an inherent laziness of human nature which rendered it averse to useful work, unless bribed by expectations of pleasure, or driven by fears of pains. This being the "incentive" to action, it followed that the office of reason is only to enlighten the search for good or gain by instituting a more exact calculus of profit and loss. Happiness was thus identified with a maximum net gain of pleasures on the basis of analogy with business conducted for pecuniary profit, and directed by means of a science of accounting dealing with quantities of receipts and expenses expressed in definite monetary units.

This subsequent perversion of utilitarianism as an ideological rationale justifies no criticism of its conceptual scheme; for, as later discussion will show, the latter was a necessary logical instrument in economic analysis. The fact that an "Explanations of events on the basis of free, unimpeded manifestation of wants was used on the practical side as active propaganda for an open-market economic regime with all political and legal measures adapted to it," was simply a condition of political structure.

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16 Ibid., p. 291.
19 Ibid., p. 213.
and social development. How hedonistic utilitarianism was a necessary abstraction for economic analysis is the concern of the following discussion.

In previous discussion it was shown that abstraction is a function of language and a necessary condition of reflective thought. Things in their concreteness are either means used or ends enjoyed. They become abstractions when freed from connection with any particular existential application. Theorizing, then, is simply a process of abstracting, through symbols, the traits of actual things and, through inference, attempting to determine their relations and, when acted upon, their consequences. For classical economics, given its historical context, its necessary basic abstractions are these:

... in Economics we abstract the common quality of all economic situations, the allocation of scarce means to satisfy a system of wants. We abstract the common behaviour of men in such a situation—the maximization of net advantages—and we abstract the common phenomenon of diminishing returns to scarce factors in use.21

All of which means that "Abstraction is simply an instance of the economy and efficiency involved in all intelligent practices."

A particular point of interest here is that, despite the obvious necessity of abstraction, economists often defend their theories against criticisms of abstractness on the basis of the need for abstraction. To the extent of this writer's study, it is not unfair to conclude that some classical economists do obfuscate the issue of abstractness. A legitimate criticism of orthodox doctrine is

on the basis of certain rarefied abstractions too far removed from concreteness because the extreme refinement of the analysis is carried along on basic postulates in need of revision. There are interesting psychological explanations for the longevity of abstractions. One writer observes that "If a conceptual scheme is highly satisfactory to those who use it, neither a few old facts which cannot be reconciled nor a few new ones will cause the concept to be abandoned."  

"Satisfactory" in the above quotation seems to be of real significance. One economist, in criticism of the abstractness of classical doctrine, refers to this as a condition of "theoretic blight." He says "Theoretic blight may be caused...by admiration of the aesthetic qualities of the conceptual schemes which can be built up from unrealistic premises." It is not unfair to say that this has been a peculiar affliction of classical economics. And the ultimate of theoretic blight in economic analysis is the extreme use of mathematical symbols.

22 J. B. Conant, On Understanding Science, p. 106.


24 This is not meant as a depreciation of the use of mathematics in economic analysis. Mathematics is, of course, indispensable to an extent in economics, but to what extent is debated among economists. To give further force to Walker's argument, however, it is interesting to note one author's views on Alfred Marshall, an able mathematician and one of the few great economists, and his opinion of mathematics in economics. Joseph Viner says "... (Marshall) had grave mistrust of the consequences of unrestrained employment of formal mathematics in economic analysis. ... (mathematics) yielded him so that aesthetic delight that it for all reason alone became suspect to him as a worthy occupation. Mathematics... (was) Marshall's flesh-pots... when he did succumb he...shielded them from the young and susceptible by confining them to footnotes and appendices..." (Spiegel, op. cit., p. 723).
The classical economic doctrine has been criticized from two sides—more seriously from socialist economists but also now and then from its own expositors. It is doubtful whether any of the more significant contrary facts have not been brought forth in criticism. And some orthodox economists seem not to understand the logical justification for certain assumptions of the doctrine. Confronted with contrary facts, one classicist attempts to deny one basic assumption through the logically surreptitious maneuver of pointing to the almost conceptual obscurity of an assumption as this appears in the many removes of the completed analysis. Lionel Robbins, in an attempt to discount the function of utilitarianism in classical doctrine, argues that the concept of the "economic man" is only an expository device—a first approximation used very cautiously at one stage of development of arguments which, in their full development, neither employ any such assumption nor demand it in any way for a justification of their procedure. The inducement to offer such logical defenses is aptly expressed by Bell who observes that:

Mathematical symbols and diagrammatic methods have materially aided in exactness and clarity of exposition. The utility-disutility, pain-pleasure calculus, or hedonistic psychology loses some of its mysticism and metaphysics when clothed in the refinements of recent analysis.

That the "clothing" of an assumption in refined analysis obscures it is granted: that the pain-pleasure calculus is "metaphysical" and "mystical" is not granted. As a conception that is logically necessary the hedonistic assumption has some basis in fact. The logical challenge to the critics of this psychology is to offer a conceptual scheme which will effectively integrate the significant facts contrary to this "first approximation." How Keynes did precisely this is a striking example of how new data can be integrated with old abstractions in such a way as to offer directing hypotheses for the solution of a definite problem. How the psychology of utilitarianism is a logically necessary abstraction in economic analysis requires some discussion of value theory.

A consideration of economic value theories in the orthodox doctrine reveals not only brilliant conceptualizing but also the logical need of the "utilitarian calculus" in the analysis of a market economy. First of all it is necessary to give the meaning of economic value:

Free goods, i. e., such as are desired but of which there is no scarcity... have no positive marginal utility... and are therefore without value.... Things which besides being useful are also rare... i. e., of which some people desire more, have value and are called economic goods.28

In another succinct statement an explanation of the mechanism of valuing in a market economy is given:

We ... have a system of unlimited wants and scarce means for their satisfaction. The purpose of an economy is to distribute these satisfactions, to guide (production) into the channels that will yield satisfaction. The mechanism of guidance and distribution is the price system. 

With these basic conceptual necessities of value theory pointedly given, further discussion of the historical development of value theory will show how eventually the notion of a calculative maximizing of satisfactions becomes necessary to economic value theory and the further analysis of the phenomena of exchange.

Adam Smith was the first economist in the Western tradition to offer a refined analysis of the significant elements determining economic value. Though his own value theory is a two-sided one and not too well integrated, it seems he was mindful, but somewhat vaguely on the point of utility, of all the factors which ultimately determine value. Separately, but nowhere with integration, Smith discusses value as a function of labor, cost of production, and demand. His labor-cost theory of value held that the worth of a good was determined by the amount of labor crystallized in it.

The cost of production concept was more inclusive and was explained in this way: "In the price of corn for example, one part pays the rent of the landlord, another pays the wages... of labourers, ... and a third pays the profit of the farmer." Smith noted that the condition of supply and demand in a given market may cause a

29 B. S. Keirstead, op. cit., p. 41.

30 Adam Smith, Wealth of Nations, p. 81.
price, value, greater or less than the "natural value" of goods, the cost of producing them. The inadequacy of Smith's value theory was his failure to appreciate the function of marginal utility in the demand price for goods. He apparently considered only the absolute utility of goods and for this reason gave almost exclusive emphasis to supply cost as the determinant of value.

That Smith and other early classicists did not understand fully the function of marginal utility in value determination is a point of general conclusion among economists. A complete explanation of the difference between marginal and absolute utility, and the effect of this on demand and price, was long in coming—it was not until the latter part of the nineteenth century that value as a function of marginal utility was explained in a complete analysis. Three economists, Stanley Jevons, Karl Menger, and Leon Walras, working independently of each other, gave, within a period of three years, extensive and similar expositions of marginal utility. That value theory was incomplete without an explanation of marginal utility is retrospectively obvious; that marginal utility itself was not a complete theory was not appreciated by the founders of marginalism. First, however, a brief explanation of marginal utility.

Marginal utility turns on the psychology of hedonism. A common fact is that human beings can generally satisfy desires to the point of satiation. Equally obvious is that the first swallow of water in the satisfaction of thirst is much more desired, and hence of greater utility and value, than that swallow which fully satisfies
the thirst. Which means, of course, that desire decreases in proportionate ratio to an increasing consumption, and value likewise. The conclusion to be drawn from this is that "The marginal utility decreases as the number of units of the goods owned by the individual increases, while the total utility increases: therefore Marginal and Total Utility vary in opposite directions." This was not fully understood by the early economists. The "diamond and water paradox" was just that to Adam Smith because he failed to see that diamonds, being scarce relative to the demand for them, with the marginal unit of exchange being relatively early in the series of a sufficient supply, demanded a high price; while water, being of plentiful supply, is valued by a marginal unit which is close to nil. The last unit in a supply series is the price determinant because it is interchangeable with all other units.

There are other important aspects of marginal utility. The desire for a good determines its relative utility to the prospective purchaser. But purchasers have to equate the utility of a good with the marginal utility of their income, the utility of income being determined by its amount. Thus, if we assume two prospective buyers, A and B, with incomes of $50 and $100 respectively, and equally desiring a given good, then we can conclude that A would demand twice the amount of the good for the same expenditure as

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would B. This follows because the marginal unit of income spent has twice the utility for A as for B. On the basis of this functioning of marginal units, a demand schedule can be drawn which will show the different quantities of goods which consumers with different incomes would purchase at certain prices. And a composite demand schedule means that increasing quantities of goods offered for sale, which means a decreasing marginal utility for the consumer, can be sold only at lower prices. From these facts of valuation, then, the marginal lists concluded that scarcity, or utility, determines economic value.

The fact of utility, or scarcity, was, however, only one side of a complete value theory. The inclusion of supply cost was necessary for a unified theory. And there is wide agreement among economists that Alfred Marshall has quite well integrated the several factors determining value. His "Principles" give heavy emphasis to the problem of value. The crucial emphasis in Marshall's thought on value theory relates to the effects of time and situation in value determination. The function of each of these in determining price is necessary to an explanation of value. Marshall comes directly to the point in integrating the functions of supply and demand in economic valuing. First of all, from the demand side, and this is of brief time and with a fixed supply, he says that "... when a thing already made has to be sold, the price which people will be willing to pay for it will be governed by their
desire for it, with the amount they can afford to spend on it."\textsuperscript{32}

With respect to production, though, producers will, given sufficient time to adjust the use of the factors, set a supply price sufficient to cover the factor costs. From this it is concluded that "... the longer the period, the more important will be the influence of the cost of production on value. ... the influence of changes in cost of production takes as a rule a longer time to work itself out...."\textsuperscript{33} That each, supply and demand, is mutually determined and thus are co-ordinate factors in value is the necessary conclusion.

The foregoing has shown in broad outline how the utility-disutility calculus, as a logically functioning abstraction, explains economic value by contributing to the conceptual subject-matter of economic analysis. Whether marginal calculation is a permissible postulate, whether it has any psychological basis in fact or best be determined with reference to a critique of utilitarianism which, to this writer, is the most cogent yet presented. As hedonistic utilitarianism is further examined in light of Dewey's criticisms, we are able to argue better the logical necessity of this psychology for economic analysis.

Dewey's critique of utilitarianism and explanation of valuing regarding economic goods give emphasis to two concerns—in the former, deliberation is of crucial import, and, in the latter, the


\textsuperscript{33} Ibid., p. 349.
functioning of economic values in valuation is the crux of his discussion.

The conception of motivation underlying hedonism is simple: desire is conceived to be some ineluctable force that simply values leisure and disvalues pain. These are gross terms and offer no differentiation of desires except in the broad sense of equating pain with onerous labor and utility with leisure. The function of intelligence in this process of valuing is to calculate future joys and dissatisfactions. And this, offered as a complete psychology, seriously misconceives the nature of intelligence.

Contrary to the idea of intelligence in utilitarianism, thought is prospective, outlooking, because the imaginatively rehearsed consequences of a proposed action is to give meaning to present activity. And desire is not an ineluctable force; rather, impulse is the *sine qua non* of activity and desire is culturally configured impulses. For this reason, "habit, occupation, furnishes the necessity of forward action..." The purpose of deliberation in action is not simply to compute future satisfactions and pains mathematically. Dewey better conceives the function of the latter in thought:

Joy and suffering, pain and pleasure, the agreeable and disagreeable, play their considerable role in deliberation. Not, however, by way of a calculated estimate of future delights and miseries, but by way of experiencing present ones. The reaction of joy and sorrow, elation and depression, is as natural a response to objects presented in imagination as to those presented in sense. \(^{34}\)

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That present activity, and not future feelings, is the subject-matter of calculation is of practical significance. Dewey explains it in this way:

The calculative theory would have it that this subject-matter is future feelings, sensations, and that actions and thought are external means to get and avoid these sensations. If such a theory has any practical influence, it is to advise a person to concentrate upon his own most subjective and private feelings. It gives him no choice except between a sickly introspection and an intricate calculus of remote, inaccessible indeterminate results.3b

Dewey has doubtlessly pointed up the more serious inadequacies of the psychology of utilitarianism. The implications of this for economic valuing will be discussed after an examination of how Dewey conceives economic values to function in valuing.

With respect to prices as value-data in an act of valuation, Dewey writes to the point almost in epigram. We can do no better than to quote his conclusions in their concise entirety:

Practical judgments do not... primarily concern themselves with the value of objects; but with the course of action demanded to carry an incomplete situation to its fulfillment. The adequate control of such judgments may, however, be facilitated by judgment of the worth of objects which enter as ends and means into the action contemplated. For example, my primary (and ultimate) judgment has to do, say, with buying a suit of clothes; whether to buy and if so what? The question is of better and worse with respect to various objects. But the judgment will be a judgment (and not a chance reaction) in the degree in which it takes for its intervening subject-matter the value-status of various objects. What are the prices of given suits? What are their

36 Ibid., pp. 201-2.
styles in respect to current fashion? How do their patterns compare? What about their durability? How about their respective adaptability to the chief wearing use I have in mind? Relative, or comparative, durability, cheapness, suitability, style, aesthetic attractiveness constitute value traits. They are traits of objects not per se, but as entering into a possible and forseen completing of the situation. Their value is their force in precisely this function. The decision of better and worse is the determination of their respective capacities and intensities in this regard. Apart from their status in this office, they have no traits of value for knowledge.37

This, of course, is quite consistent with Dewey's larger theory of value. In an indeterminate situation, objects figure as potential means, and their traits are data of valuation. Objects have value when they function in a capacity of efficient means to an intended outcome. Thus, for us as consumers, an economic good is without value until judgment of its traits confers efficiency of means, value, on it. In intelligent choice, then, our estimate of utility is a much more complicated process than the precise reckoning of magnitudes of satisfaction on the basis of the utilitarian calculus. At first glance Dewey's theory of value seems to be in a different universe of discourse from that of utilitarianism; but further examination reveals that, from another perspective, Dewey himself, even though his criticisms of the "calculative theory" are valid, confirms the necessity of some critical assumptions in hedonistic utilitarianism for economic analysis.

Buying and selling is a two-way proposition--what confronts the buyer in an organized market does not hold for the producer;

that is, price to him already reflects a determinate value. For
"independently of the situation requiring practical judgment,
clothes already have a given price, durability, pattern, etc. These
traits are not affected by judgment. They exist; they are given."38
Presumably, then, the given price of the seller is an evaluation
of the good as it has figured as a means in the process of produc­
tion and perhaps to some further end. His judgment of the value
of the good is already a complete one. For our purposes, this
leaves the consumer to be considered. What are the implications
of Dewey's explanation of consumer choice and evaluation for the
conceptions of hedonism and subjective valuation underlying
classical economics? Does it mean that the "economic man" is a
figment of the economist's imagination? Of course not; for we know
that "artificial simplification or abstraction is a necessary pre­
condition of securing ability to deal with affairs that are complex."39
Further treatment of the necessary basic abstractions of economic
analysis will show in particular how the valuing process of the
"economic man" of classical doctrine integrates with Dewey's con­
ception of valuation. The demonstration of this, of course, will

38 Ibid., p. 363.
give support to the logical use of the conception "rational, economic
man" and some critical logically deduced principles which follow from
this basic abstraction.

A significant observation by Dewey on the restricted subject-
matter of classical economics is suggestive of the reasons for the
necessity of basic conceptions of economic analysis and also points
to a conceptual inadequacy of orthodox economics. He says:

When economists were told that their subject-matter
was merely material, they naturally thought they could
be "scientific" only by excluding all reference to dis­
tinctively human values. Material wants, efforts to satisfy
them...are then taken to form a complete and closed field.\(^{10}\)

That "material wants, (and) efforts to satisfy them" are, of
necessity, the first concern of economic analysis is the point of
present discussion. And Dewey's own arguments will be drawn upon
to prove the logical primacy of material wants in economics. It
will be shown in chapter five, however, that the "closed field"
of material needs and the narrow psychology of utilitarianism
are precisely what vitiated classical theory. But there is the
conceptual necessity for first delimiting the subject-matter of
economics to the "material concerns" of human behavior.

Economics, in its broadest sense, seems to cover the universe.
It is true that "all ends and motives are economic in that they
require the use of objective resources in their realization...."\(^{11}\)

\(^{10}\) Ibid., p. 283.

\(^{11}\) Frank H. Knight, The Ethics of Competition, p. 33.
The fact of the scarcity of resources, however, sets the problems of economics. Economics concerns itself with man in his activities of producing and exchanging goods that are scarce relative to their different desired uses. Man, in his efforts to satisfy his varying wants with scarce means, produces and exchanges wealth and thus becomes the subject of economics. Economics becomes, then, "... a study of mankind in the ordinary business of life; it examines that part of individual and social action which is most closely connected with the attainment and with the use of the material requisites of well being." ¹² That the "closed field" of material needs, commerce, is initially the proper study of economics is justified in this sense:

All materials of experience are equally real; that is, all are existential and each has a right to be dealt with in terms of its own especial characteristics and its own problems. ... each type of subject-matter is entitled to its own characteristic categories, according to the questions it raises and the operations necessary to answer them. ¹³

In light of the foregoing, the psychological abstraction which postulates man in his economic experience as rationally maximizing his wants seems to follow after the facts of commerce, being a necessary conceptualizing of an existing mode of activity. Previous discussion has shown that the conversion of an aspect of activity into a complete psychology, from which are derived ethical norms,


¹³ Dewey, op. cit., p. 216.
is no ground for criticism of economic science in its use of this logically necessary abstraction. Imputing to human behavior narrow material interests is simply a recognition of this aspect of the motives of man as a conceptual necessity for scientific analysis. Thus we are forced to the conclusion that "The economic man," the familiar subject of theoretical discussion has been mistreated by both friends and foes; but such a conception, explicit or implicit, underlies all economic speculation. 1

"Economic man," then, as a "characteristic category" of the subject-matter of economics, raises the further question of just how man must act to maximize his gains. The isolated psychology of "dinner table" motives is, in the beginning, conceptually indispensable. For economics, in order to develop a conceptual framework which would rationalize man's business behavior could not delve into the complexity of human motivations, even in the realm of buying and selling. The diversity of human motivation was not one of the questions raised by economics. The complexity of the material precluded this. The "subjective interests" of the consumer, "relative, or comparative, durability, cheapness, suitability, style, aesthetic attractiveness," which play against an economic good are not the proper study of economics. Economics concludes that whatever trait is the determinant which gives utility, value, to the

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Knight, op. cit., p. 35.
good is subject to the principle of diminishing utility. Dewey himself conceives value-data solely in terms of the consequences of behavior. For economics, then, the obvious conclusion is that:

... scientific economics is restricted in its data to behaviour facts. It cannot deal with feeling facts, except as a mode of expressing behaviour facts, for two reasons. In the first place, the facts of desire and satisfaction cannot be accurately observed and measured, and scientific economics must dogmatically and rigorously identify them quantitatively with their objective expressions in measurable goods or services taken up or given off....

The restricted realm of the satisfaction of material wants is warranted by the necessity to reduce the complexity of economic phenomena to a few basic operational concepts. Man has material, physiological, wants and these are subject to the law of diminishing utility. From this basic principle are deduced the correlative concepts of demand and supply schedules, the law of diminishing marginal productivity, etc. The logic of classical economics, though, was not an experimental logic. These necessary abstractions did not operate as directing hypotheses which would control observation and select data for the determination of particular problems. The basic notions of the orthodox doctrine were regarded as universal truths, thus the need to test their effectiveness by the consequences which ensued from their operations was not recognized. The development of the "science" then became largely a matter of

refining the ramifying deductions of the "first truths."

It seems that social scientists, in their concern with methodology often fruitlessly engage in polemics with respect to the function of values and ends in scientific inquiry. Discussions of this aspect of methods seem to be circular—there is first the assertion that science is impartial to ends, that science concerns itself with means only; then there are the criticisms of this view which point to the value aspects of science. The futility results from the failure to distinguish between judgment as logical and as ethical. Until this distinction is made, the dispute cannot but turn on charge and countercharge of "value-ridden" and "value-free."

Lionel Robbins, subscribing to the "value-free" conception of science, flatly states that "When we are faced with a choice between ultimates, it (science) enables us to choose with full awareness of the implications of what we are choosing."\[^{46}\] The half-truth of this statement invites the non sequitur that "Economics is neutral as between ends. Economics cannot pronounce on the validity of ultimate judgments of value."\[^{47}\] How this is logically indefensible can be better shown from the references of criticisms which damage but do not refute Robbins's notion of science. Barbara Wootton


partially, but not critically, refutes Robbins's disclaimer of end-concerns in science in saying that "I do not think we can allow even the present economists wholly to disown the normative qualities of their work. They are in effect committed to the approval of the principles of economy (of intelligence)." The difficulty here is that intelligence does not dictate definite ends to the exclusion of others. Obviously, though we all commit ourselves to the method of intelligence, we are still confronted with a choice among the different ends that compete for our interests. And granting the necessity of intelligence to choose ends and means in "strict conjugate relation to each other," the choice is first of all a function of habit and interest, and ultimately of ethics, but not a dictum of science. Wootton scores again, ethically, not logically, when she points to the "... contrast between what the physician advises for personal health and the imposition on economists not to preoccupy themselves with means." The insistence that economists advise for economic health is morally commendable, but Wootton seems not to realize the choice of means, and how these constitute logical ends, which orthodox economists have proffered for economic efficiency. On this point, Robert Lynd, in critical argument against Robbins's idea of science, Wootton, Lament for Economics, pp. 134-5. Dewey's phrasing. Ibid., p. 250.
shows more understanding of the function of values in science. Lynd's discussion is an admixture of moral exhortation and logically valid criticism. For instance, he says that "... it (orthodox economics) tacitly assumes that private, competitive business enterprise, motivated by the desire for profit, is the way for a culture to utilize its technical skill to supply its people with needed goods." The moral condemnation is complete when he levels this accusation: "The task it has accepted has been largely that of rationalizing a fait accompli." The latter charge is morally indefensible and patently oblivious to the genetic-functional nature of science. It is one thing to prefer consciously the ethical norms of a system of thought; and this sometimes seems to be the case when more often the explanation is this:

All inquiry proceeds within a cultural matrix which is ultimately determined by the nature of social relations. ... since the conceptions standardized in previous culture provide the ideational means by which problems are formulated and dealt with, even if certain problems were felt at a particular period (past or present), the hypotheses required to suggest and guide methods of their solution would be absent. 'There is an inalienable and ineradicable framework of conceptions which is not of our own making, but given to us ready-made by society—a whole apparatus of concepts and categories, within which and by which individual thinking, however daring and original, is compelled to move.'

51 Robert Lynd, Knowledge for What?, p. 143.
52 Ibid., p. 143.
Conant has briefly the conclusion to be drawn from this: "It takes a new conceptual scheme to cause the abandonment of an old one." The tacit assumption of private competition does underlie orthodox doctrine; but Lynd's moral castigation simply obfuscates the issue.

There is some recognition by Lynd of the genetic-functional procedure of science; but, by not realizing fully the logically functional role of values in science, he is unable to meet effectively the argument offered by Professor Robbins. Lynd offers partial truth in asserting that:

The confusion that exists between social scientists professions to eschew all questions of value and what he so patently does is a confusion in the point at which valuing is applied. Values may be and are properly and necessarily applied in the preliminary selection of "significant," "important" problems of research. They may be but should not be applied thereafter to bias one's analysis or the interpretation of the meaning inherent in one's data.

The ideational and value matrix of culture, of necessity, conditions inquiry, and, in so doing, value-conditions the selection of problems of research. Moreover, it has been argued that this fact sets a logical condition for inquiry. Ends of social inquiry can best function logically and practically only "on the

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54 As quoted by A. H. Hansen, A Guide to Keynes, p. 6.

55 Lynd, op. cit., p. 83.
basis of the tensions, obstructions, and positive potentialities that are found, by controlled observation, to exist in the actual situation." Dewey, agreeing with Lynd, of course, that values should not bias the interpretation of data, shows further, though, with brilliant perception, the distinctive logical necessity of value-judgments in inquiry. In so doing, Dewey "cuts the ground right from under" Robbins's argument:

The soundness of the principle that moral condemnation and approbation should be excluded from the operations of obtaining and weighing material data and from the operations by which conceptions for dealing with the data are instituted, is, however, often converted into the notion that all evaluation should be excluded. This conversion is, however, effected only through the intermediary of a thoroughly fallacious notion; namely, that the moral blames and approvals in question are evaluative and that they exhaust the field of evaluation. For they are not evaluative in any logical sense of evaluation. They are not even judgments in the logical sense of judgment. For they rest upon some preconception of ends that should or ought to be attained. This preconception excludes ends (consequences) from the field of inquiry and reduces inquiry at its very best to the truncated and distorted business of finding out means for realizing objectives already settled upon. Judgment which is actually judgment (that satisfies the logical conditions of judgment) institutes means-consequences (ends) in strict conjugate relation to each other. Ends have to be adjudged (evaluated) on the basis of the available means by which they can be attained just as much as existential materials have to be adjudge (evaluated) with respect to their function as material means of effecting a resolved situation. For an end-in-view is itself a means, namely, a procedural means.56

In light of the foregoing, Robbins's conception of science simply does not provide for the effective functioning of ends in

56 Dewey, op. cit., p. 496.
inquiry. His notion of ends in scientific inquiry is a one-sided attain of "objectives already settled upon." The insistence that science excludes ends because "it cannot pronounce on ultimate judgments of value" is a confusion of the logical with the moral in inquiry. The confusion results from the failure to understand the genetic-functional nature of science. An appreciation of this basic aspect of science shows the necessary functioning of ends (consequences) in the corpus of the economic "science" of classical doctrine which Robbins has so persistently defended. The postulates of orthodox economic theory, seen in their historical context, clearly reveal their necessity as ends of logical judgment in inquiry.

The controlling "normative quality" of traditional doctrine is, as Wootton points out, the concept "economic efficiency." This is inclusive enough, however, to be almost innocuous. We all are for efficiency no less than we renounce sin. It is only when the abstraction "efficiency" is translated into social actualities that the "conjugate relation" of social modes, as means, and efficiency, as end, is seen in its logical necessity. The first condition of the reciprocal relationship of ends and means in social inquiry is the logical necessity of conceiving ends "only on the basis of the tensions, obstructions and positive potentialities" of existing conditions. How the actual state of social conditions of the time of the early English classicals determined, in their inquiry, ends as logical—which subsequently became "social" through moral choice—
can be easily demonstrated. An explanation of this initial phase of the genesis of classical doctrine shows clearly why some social scientists profess impartiality to social ends even while giving tacit approval to obtaining objectives which reflect the logical judgments of prior inquiry.

What were the "tensions" existing in Adam Smith's England? Economically, the more acute ones were the mercantilistic policies which were causing a serious struggle between government and commercial enterprisers. In broad reference, the critical obstacles to economic and social efficiency were the social class structure which economically favored the landed aristocracy, the monopoly of land giving the landlord a differential surplus which was not a return for productive services, and the emphasis on the sovereignty of the crown which tended to subordinate the individual to class interests. In brief mention, the positive potentialities were the increasing productiveness of individual effort, the economic advantage of division of labor, free exchange, and the pursuit of self interest.

How then did these "negative" and "positive" conditions figure as logical judgments in the inquiry of Adam Smith. The integration of social obstacles and positive developments as logical means-ends appears almost obviously in the thought of Smith. The potentially productive conditions of freedom of contract, property, economic mobility, exchange, etc. were unmistakably conceived by
Smith as efficacious means to economic efficiency and social justice, not as morally preferred but as logically decreed. The obstacles to freedom of enterprise, social forms and political structure, were logically negative as means and/or ends to wealth. Thus the need for freedom of self-interest was initially a logical judgment but only subsequently a controlling social ideal. The means-ends relationships of logical judgment is socially significant because it requires, if there are to be ensuing consequences to afford a test for logical validity, the reconstruction of the "associated activities" of the human data of social study. Thus effective social inquiry must evaluate social ends in a very distinct and necessary way. Surely, to deny or not to appreciate this critical necessity of the "science of society" "reduces inquiry... to the truncated and distorted business of finding out means for realizing objectives already settled upon." As Dewey so conclusively has it:

... there are judgments which are formed with express reference to entering integrally into the reconstitution of the very existential material which they are ultimately about, or concern. ... the judgments in which this phase is explicit--namely, judgments of practice and historical judgments--are special instances of the reconstructive transformation of antecedent problematic subject-matter which is the end-in-view and the objective consequence of all inquiry.57

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57 Dewey, op. cit., p. 492.
Interestingly enough, the necessity of logical judgment in
inquiry to figure as means to social reconstruction seems to be
"recognized" by Robbins in spite of his avowal that science cannot
pronounce on the worth of social ends. In his defense of the early
classical economists, he asserts that: "We do not get these men
(Smith, Ricardo, Malthus) in their proper historical setting
unless we realize that, in the context of their day at least, they
were reformers."\footnote{58} That the early classicals were at one and the
same time scientific inquirers and social reconstructionists is
emphatically implicit in this observation:

I find it hard to understand how anyone who has
given serious attention to the actual works of these
men, however much he may disagree with them, can question
their integrity and their transparent devotion to the general
good. But this view is not general in our own day. It has
become fashionable to dismiss them and their ideas, not on
grounds of logic or assumption, but on the grounds of
alleged class interest. \footnote{59}

In the next chapter, the discussion of the Keynesian economic
analysis is intended to demonstrate how Keynes avoided the more
serious logical errors of classical economics. More important,
though, is the central aim of the chapter which is to show how
the Keynesian analysis meets the basic logical conditions of
scientific social inquiry and thereby reconstitutes some significant
aspects of the classical analysis.


\footnote{59} \textit{Ibid.}, p. 20.
The treatment of the Keynesian analysis will be prefaced with a rather broad consideration of the theory of marginal productivity. Marginal analysis was the conceptual framework in which Keynes cast his own analysis. Keynes accepted some postulates of the classical doctrine and rejected others. To appreciate the original and distinctive elements in Keynesian economics, it is necessary to note the critical points in neo-classical marginalism refuted by Keynes. The general outline of marginal analysis which follows will give emphasis to those elements in marginalism which figure most significantly in the Keynesian theory.

How marginal analysis functions from the side of demand has been shown. It has been pointed out in previous discussion that consumer demand determines price in the short run because supply is fixed and presumably will be offered for sale regardless of the demand schedule. What marginalism means with respect to production, or supply, will complete the broad outline of the theory. This treatment of the production function will be on the basis of long-run equilibrium. In this case factor cost becomes the determinant of price. Marginal calculations in production determine the allocation of resources and the distribution of income. These are basic concerns of marginal analysis and are of critical importance in Keynes' thinking.
The theory of marginal productivity is commonly referred to as "neo-classicism." Marginal analysis differs from the earlier classical doctrine in that marginalism, although building on the fundamental assumptions underlying the theories of Smith, Ricardo, and Mill, gives a more integrated value theory and better explains how forces in operation at the margin determine supply, allocation, and distribution.

Another distinctive characteristic of neo-classicism is the fact that it focuses on the operation of the firm. Indeed, the analysis is sometimes referred to as the "theory of the firm." In the management of firms, the entrepreneurs compute marginal costs and productivity; and these calculations determine supply, the use of different resources, and the returns to the factors. Along with the entrepreneur, the suppliers of the different factors are presumed to make the marginal calculations which determine the demand price of those factors.

The basic economic factors are held to be land, labor, capital, and management. The entrepreneur functions as the mechanism through which the forces of demand and supply determine the allocations of the other factors to the end of efficiency, or the optimum use of resources. The ultimate demand for consumer goods is, of course, the raison d'être of the entrepreneur. His decisions reflect the conditions of demand and supply in both the short-run and the long-run phases of the market. On the assumptions of the free mobility of factors, pure competition, and the principle of

1 Government should be included in any present analysis, but the pure theory of marginal analysis does not consider government as an economic factor.
diminishing returns, the manager of the firm calculates in a very
definite way to use, adjust, and allocate the factors.

The two determinants of the use of a factor are its cost, demand price, and productivity, or value. Assuming fixed amounts of other factors, the variable factor will be added in successive units until the last (marginal) unit contributes to production a value that is equal to its price or cost. The relative productivity of a factor decreases as its use is increased, and its relative cost increases, also. By varying the amounts of the factor, the entrepreneur can determine the point of equilibrium, the marginal cost and yield of a factor input being equal. As Alfred Marshall, the economist who first developed the theory of marginal productivity, explains the process:

Every agent of production, land, machinery, skilled labour, unskilled labour, etc., tends to be applied in production as far as it profitably can be. If employers ... think that they can get a better result by using a little more of any one agent they will do so. They estimate the net product... that will be got by a little more outlay in this direction, or a little more outlay in that....2

For distribution, the cumulative effects of firms calculating the uses of the factors at the margin means this:

The net aggregate of all the commodities produced is itself the true source from which flow the demand prices for all these commodities, and therefore for the agents of production used in making them. Or, to put the same thing in another way, this national dividend is at once the aggregate net product of, and the sole source of payment for,

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all the agents of production within the country: it is divided up into earnings of labour; interest of capital; and lastly the producer's surplus, or rent, of land and other differential advantages of production.  

From the side of the factors, the suppliers of labor and capital also make definite calculations at the margin. The disutilities of labor and deferred consumption are equated with the utilities of wages and interest payments. Workers will accept employment at a money wage which will give a real wage equal to the disutility of the total hours worked. Capital goods will be supplied to that point where the disutility of present consumption foregone is equal to the utility of the future interest income. Interest is the payment necessary to balance the diminished utility of future income with the greater utility of present income. The real value of wages and interest is determined by the value of the least valued unit in use, which is, of course, the marginal unit. J. B. Clark explains how wage standards are set: "... every laborer gets what would be lost to the employer if any one man now in the force were to stop working." And, of course, for capital, "...no form of capital can claim and get for its owners in a year a larger fraction of its cost than the least productive form produces." The units of a given kind of labor or capital are interchangeable,

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3 Ibid., p. 536.
4 J. B. Clark, The Distribution of Wealth, p. 166.
5 Ibid., p. 186.
and thus the marginal unit sets the price or value for all other units. The relative productivity of a given factor determines its share of the total income.

Though quite brief in outline, this description of marginal productivity under competitive conditions points to the critical factors in the operation of the economy. The free actions of all economic factors would eventually lead to an adjustment of demand and supply in all relationships with the result being demand and supply in balance and an efficient use of all resources. Automatic adjustment of supply and demand relationships would insure optimum use of resources. The necessary frictions of a highly technological, dynamic economy would cause temporary "frictional" unemployment; but over the long-run competitive relationships would effect full employment of all factors. The critical mechanisms by which full employment was assured were wages and the rate of interest. Flexible wage and interest rates would allow entrepreneurs, on the one hand, and laborers and capital suppliers, on the other, to adjust wages to labor's productivity and the use of capital to its productive need. Real wages in excess the marginal product of labour will cause unemployment. A reduction in wages will lead to lower costs, and hence lower prices, which in turn cause an increase in demand and thus an increase in employment. If wages are temporarily more or less than the marginal product, a flexible wage rate will provide for the necessary adjustment to effect full employment.
The use of capital goods and the payment of interest function similarly. The demand for capital will fluctuate in terms of its changing productivity. The supply of capital will likewise vary with the interest rate. Savings and capital demand are mutually determined. Excessive interest rates will decrease the demand for capital, and an interest rate below the "natural" rate will increase investment demand. Whatever the condition, whether savings are in excess of capital demand or vice versa, the interest rate will vary in such a way as to induce greater consumption or more savings. The point of equilibrium will be demand and supply in balance. These equating forces come automatically into play, and in a free-market economy they are supposed to insure full use of all productive factors.

Economic science prior to Keynes was incapable of explaining why the economy did in fact develop quite differently from the postulated consequences of the assumptions of classical doctrine. This is not to say that the conditions of imperfect competition, oligopoly, monopoly, etc., had been overlooked. On the contrary, they had been explained and, in fact, brilliantly analyzed, so far as their effects on production and prices were concerned. But the fact of unemployment was the crucial development which classical analysis could not adequately explain. Contrary to the classical assumption that a competitive system tended to equilibrium at full employment, recurring crises marked by severe under-employment has beset free economies. Traditional theory had to take note of the
fact that the free market, except in time of war, was continually plagued with under-employment. It could not, however, regard the recurrent instances of under-employment as anything more than temporary deviations, separate and quite unnecessary accidents, caused now by a too rigid wage rate, now by prices set at too high a level, or again by consumer goods being produced when the demand was for producer goods. In short, under-employment meant that someone had failed to act in accordance with the "natural laws" of the market. The theory had been beautifully wrought; it was logically consistent and deductively impeccable, but it could explain the basic characteristic in free economies of continual unemployment only as a series of temporary abberations.

Empirical studies had amassed data which largely refuted the critical premises of orthodox doctrine. But the findings of positive studies were without conceptual integration. That is, they had the effect of proving the negative; but the analytical framework necessary to relate facts in such a way as to allow for the clear formulation of a definite problem was missing. As Dewey so cogently has it:

Understanding or interpretation is a matter of the ordering of those materials that are ascertained to be facts; that is, determination of their relations. In any given subject-matter there exist many relations of many kinds. The particular set of relations which is relevant to the problem in hand has to be determined.  

Ibid., p. 511.
The "institutionalists," who were critical of orthodox doctrine, did not have this important analytical tool. Thus we are reminded of Kant's dictum which George Soule neatly applies to this economic passe: "We had theory without facts and facts without theory."  

That economic science, with respect to the problem of employment, was pretty much at an impasse prior to Keynes would not now be denied. The critical question confronting economic theory had to do with the kinds of facts necessary to an analysis which could formulate the definite problem of unemployment under existing conditions. Positive studies had brought out all kinds of data relative to the business cycle. But, as Dewey has it in the foregoing quotation, the need was to relate what was determined as fact in that particular way necessary to a definite problem. In short, the conditions of depression had been quite well explained; but, from the classical perspective, no one could adequately explain the "why" of those conditions—that is, the real reasons for the continual depressed state of open markets. That Keynes has continued brilliantly to an analysis of the true causes of unemployment is today the consensus of economists. Why he was able to do this seems not to be appreciated even by those economists who have become his most able interpreters. That he was able to do it is

7 George Soule, Strength of Nations, p. 126.

8 This is to say that Hansen, Dillard, Harris, etc. have not explicitly explained the function of "behaviour facts" in the Keynesian analysis from the perspective of the crucial insight of the quotation by Dewey. This in spite of the fact that Keynes himself defines the employment problem and explains his analysis (Chpt. 18, General Theory; Chpt. 15, "New Economics") in strict correspondence with Dewey.
simply a matter of an insight which, interestingly, Dewey himself expressed ten years prior to Keynes' "General Theory." The importance of this insight for effective economic analysis justifies presenting here Dewey's full elaboration of it:

The importance of modes of experiencing for control of experienced objects may be illustrated from economic theory. A study of various economic essences or concepts is possible—definition, classification and dialectical reference to one another of such meanings as value, utility, rent, exchange, profit, wages, etc. (Certainly such was the almost exclusive concern of classical doctrine.) There is also possible a positivistic study of existential economic regimes resulting in description of their structures and operations. (The progressive trend as classical analysis became more refined and irrelevant). If the presence and operation of dispositions and attitudes be neglected, these alternatives exhaust the field of inquiry. After the study of objective essences nor of objective existences is available, however, in problems of policy, in management of economic events. When the "psychological" factor is introduced, say, a study of the effects of certain ways of experiencing, such as desire...habit...insecurity...practice...the situation changes. Factors that are within control are specified, and a fuller degree of deliberate administration of events is possible. The objectivity role of personal dispositions in conditioning their occurrence enables us to interpret and connect them in new ways, which are susceptible of greater regulation than were the other ways. Banks, stores, factories do not become psychical when we ascertain the part played in their genesis and operation by psychological factors; they remain as external to the organism and to a particular mind as ever they were, things experienced as are winds and stars. But we get a new leverage, intellectual and practical, upon them when we can convert description of ready-made events and dialectical relation of ready-made notions into an account of a way of occurrence.9

The basic significance of psychological data in the Keynesian analysis will be shown in the treatment of the different elements

9 Dewey, Experience and Nature, pp. 236-7. (italics mine)
of that theory. Psychology is so fundamental to the main postulates of Keynes' theory of employment that it may well be termed a "psychological theory of employment." The error of traditional analysis was, of course, to convert the abstraction of the "economic man" into a complete psychology and thereafter assume its universality. Thus it did not serve a "directive function in control of observation." As Keynes himself says, "... the theory we devise in the study of how we behave in the market should not itself submit to market place idols."\(^{10}\)

Keynes presented his theory in the conceptual and analytical framework of the classical doctrine. This fact evoked the following comment from one economist:

'It is remarkable that so original a brain (Keynes) should be bound by the form of the theoretical schemes on which it was trained, even when challenging their practical conclusions. Preoccupation with the problem of building a theory in terms of the traditional concepts would seriously limit the performance of most men in the creation of new conceptual schemes.\(^{11}\)"

What is surprising, of course, is the author's surprise. He seems not to appreciate at all the significant primary logical condition arising from the fact that "conceptions standardized in previous cultures provide the ideational means by which problems are formulated and dealt with." Moreover, "An inquirer in a given special field

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\(^{10}\) Seymour E. Harris, editor, *The New Economics*, p. 186.

\(^{11}\) Walker, *op. cit.*, p. 72.
appeals to the experience of the community of his fellow workers for confirmation and correction of his results." Seymour Harris expresses well the foregoing logical necessities for economic theory in our culture:

Long before the days of the General Theory, Marx had put forth a theory of exploitation, inadequate wages, and deficiency of demand. But theories associated with Socialism were not palatable in a free enterprise system. It remained for a bourgeois economist, whose views would command some respect among economic practitioners in a capitalist society, whose presentation could more readily be understood than Marx's, and whose views might more easily percolate, to convince the economist first, and the lay public second, of the dependence of demand on wages. Frequent references to the necessary logical conditions of scientific social inquiry have been made as these were relevant to particular phases of past discussion. The discussion of the Keynesian analysis to follow will be carried along against the summarizing criteria of scientific method in social inquiry. In Dewey's phrasing, these criteria are:

In fine, problems with which inquiry into social subject-matter is concerned must, if they satisfy the conditions of scientific method, (1) grow out of actual social tensions, needs, "troubles"; (2) have their subject-matter determined by the conditions that are material means of bringing about a unified situation, and (3) be related to some hypothesis, which is a plan and policy for existential resolution of the conflicting social situation.

Reference has already been made to the problem of sustaining full employment as perhaps our most critical social concern; and

13 Seymour E. Harris, op. cit., p. 549.
the concluding phase of the chapter will be a treatment of the hypothesis in the Keynesian analysis which is a definite and practicable plan for resolving the problem of unemployment. How the problem of under-employment, as conceived by Keynes, had its "subject-matter determined by the conditions that are material means of bringing about a unified situation" is much less obvious and requires somewhat extended explanation. To fulfill this logical need, it is necessary to meet a related logical requirement. This logical criterion has to do with the functioning of conceptions and data in inquiry. Dewey explains it in this way: "... fact-finding procedures are necessary for (1) determination of problems and for (2) provision of data that indicate and test hypotheses; while formulation of conceptual structures and frames of reference is necessary to guide observation in discriminating and ordering data."15

How this reciprocity of fact and conception figures in the Keynesian analysis is best described by Keynes himself, who explains the general conceptual structure of his theory in this way: "... it is an outstanding characteristic of the economic system in which we live that, whilst it is subject to severe fluctuations in respect of output and employment, it is not violently unstable."16 From this Keynes draws a significant conclusion:

... the evidence indicates that full, or even approximately full, employment is of rare and short-lived occurrence.

15 Ibid., p. 507.

Fluctuations may start briskly but seem to wear themselves out before they have proceeded to great extremes, and an intermediate situation which is neither desperate nor satisfactory is our normal lot.  

But the truly fruitful insight, the necessary basic conception, the one so cogently expressed by Dewey, is thus stated by Keynes:

Now, since these facts of experience (above) do not follow of logical necessity, one must suppose that the environment and the psychological propensities of the modern world must be of such a character as to produce these results. It is, therefore, useful to consider what hypothetical psychological propensities would lead to a stable system; and, then, whether these propensities can be plausibly ascribed, on our general knowledge of our contemporary human nature, to the world in which we live.

Psychology is the critical subject-matter of the Keynesian analysis, as indeed it must be. Why Keynes shook the world of classical economists with reverberations, the effect of which has gained him the distinction of being compared with Alfred Marshall, David Ricardo, and Adam Smith, is ultimately referable to the consequence of his "new psychology." The insight of the consequences of psychological propensities for economic theory enabled Keynes to explain under-employment stability, to show therefore what was crucially lacking in classical doctrine, and, most important, to come up with the solution to full employment. Along with the conception of the functioning of behavior-patterns in determining employment levels, it was necessary for Keynes to formulate another frame of reference to explain adequately economic conditions of equilibrium.

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17 Ibid., pp. 249-50. (italics mine)

18 Ibid., p. 250. (italics mine)
at less than full employment.

The orthodox analysis was in terms of full-equilibrium. The contrary fact of continual unemployment meant to Keynes that full-employment equilibrium was only a special case, and economic theory was in need of a general theory to explain why the economy was stable at any particular level. Keynes accepted the neoclassical theory of value and distribution; he believed traditional theory was valid in this sense:

If we suppose the volume of output to be given, i.e., to be determined by forces outside the classical scheme of thought, then there is no objection to be raised against the classical analysis of the manner in which private self-interest will determine what in particular is produced in what proportions the factors of production will be combined to produce it, and how the value of the final product will be distributed between them.  

Thus Keynes would say that "when 5,000,000 men are employed out of 10,000,000 willing and able to work, there is no evidence that the labour of these 5,000,000 men is misdirected"; but the point is that "It is in determining the volume, not the direction, of actual employment that the existing system has broken down."

In his attempt to explain the volume of employment, it was necessary for Keynes to cast his theory largely in terms of macroeconomics, or aggregates. The classical scheme was really a

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20 Ibid., p. 379.
21 Ibid., p. 379.
"Theory of the firm," or micro-economics. The burden of orthodox analysis was to explain the adjustment of costs by the entrepreneur. The assumption of sufficient effective demand for full employment would, of course, lead logically to an emphasis on "firm analysis," an analysis which would explain the rational behavior of entrepreneurs in adjusting costs which in turn would determine the allocation of factors and distribution of income. There was really no need for a theory of aggregate employment or effective demand. For regardless of the state of demand for the factors, the adjusting mechanism of flexible wages and interest rates would bring about a total use of all economic factors. This Keynes denied; therefore, his first problem was to explain why demand was not always adequate to insure full employment.

The crux of an explanation for levels of effective demand less than that of maximum output was the negation of "Say's Law." J. B. Say, a French economist of the nineteenth century, insisted (in criticism of Thomas Malthus, who believed that there could be a lack of effective demand for total production if there were gross inequalities in distribution) that production was undertaken for exchange and eventual consumption. Goods, therefore, were exchanged against goods. People entered the market to produce goods; goods were produced for exchange. There could not not be a lack of demand, for supply created its own demand. Say's assumption of total effective demand was necessary to classical doctrine. For if
the economy gravitated to full employment demand would have to be assumed. The continual lack of an effective demand for total output required an explanation of the economic forces which caused employment and production to become stabilized at less than the maximum level. This called for an analysis in aggregate terms. Keynes did this and resuscitated the theory of effective demand from the mesmerism of Say's Law.

Keynes explained the supply schedule in conventional terms. That is, for the whole economy, there was a supply price for any given level of employment and output. The proceeds necessary to induce a given volume of employment were expected to cover the costs of all factors, including normal profits. The significant element here is that the schedule is for aggregate supply and, conceived in Say's terms, the expected proceeds are sufficient to cover factor costs. The demand function, however, requires an analysis quite different from that of traditional theory. The proceeds from the sale of output is income to the factor groups and hence potential demand. Aggregate demand may or may not be adequate for maximum output. If there is equilibrium at full employment, it is because consumption demand and investment demand give a total demand equal to the supply price. Experience shows that consumption demand is less than unity, and, at the level of full employment, investment demand is not sufficient to cover the disparity between what is earned and what is consumed. Thus the
economy usually stabilizes itself at underemployment levels. There
will be, then, some level below full employment at which effective
demand is sufficient to cover the supply price of that volume of
employment. In other words, what is not being consumed is being
invested, and thus total demand is equal to the total output at
that level.

This aspect of the Keynesian analysis shows clearly that it
meets Dewey's criterion: "A generalization in the form of a
hypothesis is a prerequisite condition of selection and ordering of
material as facts." 22

As Dewey points out, the directive function of conceptions is
seen in the necessity for selection of certain materials as facts
in a case of inquiry. Data are not "given" to inquiry; they are
"taken." With Keynes it is clear that his analysis proceeds from
a generalization, as a hypothesis, which changes very much the
presumed factual status of some basic material in economic experience.
The Keynesian hypothesis that the level of employment is deter-
mined by effective demand means that, contrary to classical doctrine,
the idleness of economic factors need not be a voluntary act but
may rather reflect the disparity between the necessary demand for
the total use of resources and the present level of the employment
of factors. This initial hypothesis of Keynes' further means that

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the existence of unemployment need not be an aberration or dis­
turbance in the economy but often is a "natural state of equilibrium."
The fuller development of Keynes' analysis will show how the data of
economics are given significantly different factual status from that
of traditional doctrine.

The explanation for under-employment equilibrium hinges on
the consumption function. The idea of the consumption function
in the Keynesian analysis reflects the effective operation of the
logical reciprocity of conception and fact previously set forth.
The hedonistic calculus postulated an "economic man" who would
consume his entire income. This led logically to Say's Law and
the attendant assumption of automatic adjustment of supply and
demand at maximum production. For Keynes, however, the fact of
excessive saving suggested a new conception of consumption. It
is this continuous interaction between observed facts and concepts
which Dewey has in mind when he says that "The pattern of inquiry
involves actively co-operating divisions of labor between perceptual
and ideational subject-matters."^{23}

The psychology of hedonistic utilitarianism assumed that
individuals would consume their entire income because wants were
insatiable. The truth is, though, that "Consumption wants can be
satisfied. At least capital goods, savings, are every day preferred
by thousands of persons to bigger houses, or more servants, or

^{23} Ibid., p. 498.
picnics. People do not always and forever want more jam on their bread. This propensity for saving was the psychological datum which, when analyzed by Keynes, enabled him to offer a conception of demand which completely refuted Say’s Law. And, interestingly enough, an explanation of the fact of savings and/or deferred consumption turns on a theory of knowledge. Keynes himself has the explanation in cogent expression:

The whole object of the accumulation of wealth is to produce results, or potential results, at a comparatively distant, and sometimes at an indefinitely distant, date. Thus the fact that our knowledge of the future is fluctuating, vague, and uncertain, renders wear in a peculiarly unsuitable subject for the methods of the classical economic theory. This theory might work very well in a world in which economic goods were necessarily consumed within a short interval of their being produced. But it requires I suggest, considerable amendment if it is to be applied to a world in which the accumulation of wealth for an indefinitely postponed future is an important factor; and the greater the proportionate part played by such wealth-accumulation the more essential does such amendment become.25

The first “amendment” to classical doctrine which this newly-conceived functioning of knowledge logically implies has to do with effective demand. The fact that all income earned is not consumed is obvious enough. To relate this to its psychological causes required considerable revision of classical assumptions, beginning logically with demand and including the other more significant

functions in the orthodox doctrine. The pervasiveness of the
propensity to save gives the conclusion that "... the prevailing
psychological law seems to be that when aggregate income increases,
consumption—expenditure will also increase but to a somewhat lesser
extent." The import of this, however, as Keynes sees it, is that
"This psychological law was of the utmost importance in the develop­
ment of my own thought, and it is, I think, absolutely fundamental
to the theory of effective demand as set forth in my book." It
is more than fundamental, it is his theory of effective demand.
The importance of the critical functioning of psychological data
in the Keynesian analysis is precisely that "A general knowledge
of dispositions and attitudes renders us the same sort of intellectual
and practical service as possession of physical constants." The
significance of this fact for economics cannot be over­
stressed. As Dewey says, "Neither the study of objective essences
nor of objective existences is available...in problems of policy,

It is interesting to note that Keynes, conceiving the func­
tion of future calculations in economic behavior as quoted above,
confirmed Dewey's idea that the purpose of projecting the con­
sequences of proposed actions is to give meaning to present activity.
As Albert G. Hart expresses it in The New Economics (p. 115), "This
process of bringing anticipations out from between the lines... (teaches that)...the driving force of the economy lies in the future,
but in the future as visualized in the present."

27 Ibid., p. 190.
28 Ibid., p. 190.
29 Dewey, Experience and Nature, p. 238.
in management of economic events." Later consideration of the logical means to full employment as conceived by Keynes will show clearly that in each instance the policy recommendation is on the basis of psychologic data. In Keynes' scheme, the propensity to save, and to invest, and the preference for liquidity become as real in their existence as factories and banks. This study will undertake to show that, according to Dewey, the "knowledge of dispositions" as offered by Keynes does render an "intellectual and practical service" in a very critical way in the management of economic events.

If the consumption level is less than unity, the foregoing conclusion is that effective demand will be equal to a given consumption schedule plus the amount of investment at that level. Employment levels off at the point of the sum of consumption and investment demand; and this is characteristically less than full employment simply because a less-than-unity consumption schedule logically implies, because investment demand is derived from consumption demand, that the investment schedule will not be sufficient to cover the gap between the level of consumption and effective demand at full employment. Thus at any level of stabilized employment the proceeds from that volume of output will be divided at some ratio between consumer goods and producer goods. With the consumption level assumed to be constantly less than unity, and progressively decreasing as income increases, the amount of invest-
and necessity to maintain increasing levels of employment will
also increase in greater proportion to consumption expenditures.
The Keynesian theory of effective demand is best presented in
diagrammatic form.

This is Keynes's theory of demand as depicted by
Alvin H. Hansen. Z, D measures output and supply price, and
N employment. D₁ is consumption expenditure, and D is the
sum of consumer and investment expenditures. Z is aggregate
supply price. N₁ is the point of effective demand and
volume of employment.

With technology and labor skills given, Keynes assumed an
invariant relationship between employment and output and also a
given supply price. It will be noted that at a low level of
employment demand will exceed supply. As output and income are
increased, total demand increases absolutely but proportionately
less than income. Employment will continue to the point of inter-
section between Z and D which is the point of effective demand.
If we start from less than full employment, any
increase in employment must be divided between con-
sumption output and investment output in a manner which
corresponds to the way in which income receivers choose
to divide their increase in income between consumption
expenditure and savings.\(^\text{31}\)

An increase in employment must be divided between consumer
and investment goods on the basis of the present proportion to
ensure sale of the increased output; but investment must increase
proportionately more as consumption will increase absolutely but
proportionately less. In the absence of a relative increase in
investment, employment will decrease to the original level because

\(^\text{30}\) Keynes, op. cit., p. 98.

\(^\text{31}\) Dudley Dillard, The Economics of John Maynard Keynes, p. 35.
"... output and employment will reach an equilibrium only at the point where income exceeds consumption by the actual amount of investment." The basic import of which is that, with a propensity to consume less than unity, Say's Law is repudiated, and full employment cannot be assumed to be the natural equilibrium toward which the economy tends.

To this point the treatment of Keynes' theory of effective demand show clearly that "Relevant theoretical conceptions come into play only as the problem in hand is clear and definite...."

Savings do, of course, result in part from an unequal distribution on income. This is not, however, a complete explanation of the propensity to consume. More equal incomes would surely increase consumption and narrow the gap between consumer demand and total demand. But even so, there is an element of doubt in economic activity which places a heavy premium on liquid assets and induces saving; whereas an atmosphere of confidence would tend to the opposite effect. Thus, as Keynes pointed out, the tendency of the economy to move away from full-employment equilibrium must be explained on the basis of that behavior which causes consumption and investment to fall short of a maximum output level. The essential significance of behavior is that it is out-looking, anticipatory. The present state or trend of a free economy cannot  

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32 Ibid., p. 37

be explained in terms of what individuals conceive future prospects to be. With this insight, Keynes was able to explain better the facts of economic activity and to construct an analysis which defined a problem and offered logically specified operations for its solution. As one noted economist puts it, "From the standpoint of pure theory, the use of the method of expectations is perhaps the most revolutionary thing about this book."34 (General Theory) A treatment of the Keynesian analysis in its logical unity will show the crucial functioning of expectations in that analysis and explain further how fact and conception reciprocate their functions in defining a problem and proposing its solution.

An obvious necessity of inquiry into any complex subject is, if there is to be control of that subject, to find the independent variables which determine the changes in that material. Equally necessary is the determination of those more stable elements which constitute the constants of the material investigated. The more validly these are determined, the more likely are the independent variables to be legitimately isolated. For "Every intelligent act involves selection of certain things as means to other things as their consequences."35 The aspects of the economy assumed by Keynes to be constant certainly seem to be the ones least susceptible to change in the short run. In the Keynesian scheme, the given

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34 From a review of the General Theory by J. R. Hicks as quoted by Seymour Harris in the New Economics, p. 36-7.
factors "are the quality and quantity of labor and capital equipment, existing techniques, degree of competition, consumer tastes, and the social structure which determines the degree of distribution." 36 To be sure, these "objective conditions" ultimately determine the level of employment and productivity. This, however, is not the problem being dealt with. The specific problem is to ascertain the causes of under-employment in the short run. These causes are changing expectations. In isolating these factors, Keynes fulfilled an important logical requirement: "The lesson, as far as method of social inquiry is concerned, is the prime necessity for the development of techniques of analytic observation and comparison, so that problematic situations may be resolved into definitely formulated problems." 37

How completely the Keynesian analysis verifies Dewey's notion of the problem of economic theory is seen in the nature of the independent variables. Each is a function which is rooted in a behavior pattern. They severally constitute the determinants of income and employment. The psychology underlying each will be briefly examined and its consequences for income and employment noted.

The behavior patterns which determine the propensity to consume are related to individuals as consumers and as entrepreneurs. Individually, people refrain from spending for the following more

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36 Hansen, op. cit., p. 165.

important reasons: (1) to build up a reserve against unforeseen contingencies, (2) to enjoy interest, (3) to enjoy a sense of independence, (4) to bequeath a fortune, and (5) to satisfy pure miserliness. Common business practices which lead to savings are the motives of enterprise, liquidity, rising incomes, and financial prudence. These, in economic jargon, determine the "position and slope of the consumption schedule." All of which is to say that the total force of these propensities on income determines how much of a given income will be spent and how much of an addition to income will be spent. As previously stated, the consequence of a propensity to save for employment is a demand schedule which is not sufficient to maintain full employment. In fact, to maintain a level of employment above that very low level at which total demand is consumer demand alone, the inducement to invest must function. On the assumption that the propensity to consume is unchanging, the position of the investment demand curve determines whether the level of employment will be low or high. Keynes' analysis of investment is significantly different from that of classical doctrine.

In the traditional analysis, which was cast in terms of a full-employment equilibrium, investment and savings were reciprocal functions, with the rate of interest being the mechanism by which

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the two were equated. For example, an increase in saving would cause a decrease in the interest rate to the point where it would induce investment sufficient to absorb the increased savings. Conversely, a decline in investment demand would lower the rate of interest which in turn would have the effect of calling forth just the amount of savings equal to the decreased demand for capital goods. A varying rate of interest would thus equate savings with demand for capital, and there would be no excessive savings which would mean a decrease in effective demand. Keynes' analysis of the factors of saving, investment, and interest shows that the classical theory had in fact no determinate theory of interest. The explanation for this with respect to method is simply "... the failure to satisfy the institution of factual and conceptual subject-matter in strict correspondence with each other...". Keynes' interest theory is an impressive example of this logical condition.

Classical analysis could offer an investment demand schedule for different levels of income and a savings schedule for given incomes. The point of intersection of the two schedules would give the rate of interest. As Keynes points out, however, the theory is indeterminate because a change in investment demand will cause a change in income. With changes in income, depending on the direction, there will be more or less saving than previously. Saving is a

function of income and thus varies in the same direction as income.
The rate of interest cannot be determined unless the amount of
income is known. And income cannot be known unless the interest
rate is known because interest is a determinant of investment and
hence of income. The orthodox theory of interest is inapplicable to
an economic system of shifting equilibriums of income and employment.

Keynes was able to offer a determinate theory of interest on
the basis of his analysis of these psychological factors which
function in our use of money. A significant psychological datum
regarding use of money had been obscured by the utilitarian calculus.
Better analyzing human behavior, Keynes was able to discover anew
a function of money which had been submerged in classical analysis.
In so doing, another important variable in the determination of
employment was brought forth by Keynes. It is unlikely that Keynes
would have been so singularly successful in his analysis of interest
had he not been acting on that insight into the function of psychology
in economic theory expressed by Dewey.

This general development of Keynes' interest theory will, as
it must, begin with a consideration of the role of money in free-
market economies. As Keynes himself explains it, money has a two-
fold function:

Money, it is well known, serves two principal purposes. By
acting as a money of account, it facilitates exchanges
without its being necessary that it should ever itself come
into the picture as a substantive object. In this respect
it is a convenience which is devoid of significance or real influence. In the second place, it is a store of wealth. So we are told, without a smile on the face.\textsuperscript{41}

As Keynes further points out, money as "a store of wealth" did not figure in classical economics because it was seen to be a "barren asset"; so "Why would anyone outside a lunatic asylum wish to use money as a store of value?"\textsuperscript{42} This question would have real standing if the classical theory had offered a more valid theory of knowledge. Utilitarianism, the rationale of traditional doctrine, postulated a calculable future. Uncertainty and risk were of little or no significance in the economic behavior of orthodox doctrine. Ignoring the facts of uncertainty and insecurity, the classical economists could not appreciate the vital function of money as a store of value. Keynes, having a more realistic psychology, was able to formulate validly the "liquidity preference function."

The desire for liquidity has already been pointed to in part. Its effect on the propensity to consume was implied. For present discussion, though, the concern is with liquidity preference as a determinant of interest. Why it is a determinant of interest is best explained in Keynes' own phrasing. The particular significance of money as a store of value is the crux of the explanation:

\textsuperscript{41} Harris, op. cit., p. 186.

\textsuperscript{42} Ibid., p. 187. (italics mine)
partly on reasonable and partly on instinctive grounds, our desire to hold money as a store of wealth is a barometer of the degree of our distrust of our own calculations and conventions concerning the future. Even though this feeling about money is itself conventional or instinctive, it operates, so to speak, at a deeper level of our motivation. It takes charge at the moments when the higher, more precarious conventions have weakened. The possession of actual money lulls our disquietude; and the premium which we require to make us part with money is the measure of the degree of our disquietude.

Instead, then, of interest being a measure of the productivity of capital and the payment for foregoing consumption, it is simply the payment necessary to offset liquidity preference.

Keynes conceives three motives for liquidity preference. They are (1) the transaction motive, the demand for money to carry out business deals, (2) the precautionary motive, the desire for cash for likely contingencies, and (3) the speculative motive, the holding of money for the purchase of securities. The first two motives are conditioned by the volume of business and are interest-elastic except at very high rates. The speculative motive is the most significant because it measures our calculations of the future; and, in so doing, reflects pessimism or optimism which means high or low liquidity preference which appreciably affects the interest rate and, hence, investment demand. The other effect on the interest rate is the quantity of money. Assuming an unchanging liquidity preference, an increase in the quantity of money would lower the rate of interest and a decrease increase it.

Ibid., p. 188.
Thus Keynes offers a determinate theory of interest in that it is determined independently of income. Hinging the rate of interest on the investment demand schedule is to overlook liquidity preference as the cause of the interest rate. Changes in investment mean changes in income, and changes in income shift the investment schedule.

This broad outline of Keynes' interest theory is sufficient for the purposes of this study. The particular concern here is to note how Keynes used psychological data to formulate what most economists today consider to be a valid theory of interest. The theory of interest, as well as the other important functional factors in the Keynesian analysis, will be expanded in later discussion having to do with these functions as they relate to recommendations for economic policy.

Preceding discussion has mentioned the co-determinants of employment, i.e., consumption and investment. Interest is an independent variable in the Keynesian scheme which, along with the marginal efficiency of capital, determines the level of investment. A brief treatment of the "expected marginal efficiency of capital" will show how Keynes' analysis of capital turns on a psychology which is seriously contrary to the classical conception of behavior.

This is true except for one qualification. As both Dillard and Hansen point out, the level of income determines the demand for money for transactions. What is left over from this primary demand for money is available for the speculative motive. Thus changes in income have at least an indirect effect on the rate of interest.
By marginal efficiency of capital Keynes means the highest rate of profit which is expected to be earned from an additional, or marginal, unit of a given type of capital good. Investors calculate capital earnings quite differently than it had been previously supposed. The earnings of capital had hitherto been figured on the basis of their current physical yield. In the classical scheme, the rate of profit on investment was always a realized earning. This made for more exact figuring, but it had little to do with the real forces which determine the investment demand schedule. Classical analysis neglected the role of expectations in capital demand and therefore seriously misconstrued the determinants of investment.

The marginal efficiency of capital, as Keynes analyzes it, has two determinants, supply price and prospective yield. The potential investor computes the marginal efficiency of capital on the basis of expected returns from the use of a capital good over its entire use. These earnings will be expected to vary, progressively diminish. The investor can figure his rate of return on the basis of the ratio of annual returns to the cost of the good. In this way a present value of the good is given. Thus the expected future yields of a capital good determine its marginal efficiency. Obviously, the greater the expected returns in relation to cost, the higher is the marginal efficiency. The marginal efficiency of capital and the rate of interest determine the demand price of investment. In short, then, a low interest rate increases the rate
of investment and a high rate depresses investment activity.

In the Keynesian analysis, investment becomes the most crucial factor in the determination of employment. The originality of his analysis is that he has shown, because of his revolutionary use of psychological data in his analysis, the precarious forces determining the volume of investment. The nature of these forces determining investment and their implications for economic stability are pointedly drawn by Keynes. In regard to investment, "The outstanding fact is the extreme precariousness of the basis of knowledge on which our estimates of prospective yields have to be made."\(^4\)\(^5\) Therefore investment decisions were irrevocable prior to markets for security exchanges, "... the Stock Exchange revalues many investments every day and the revaluations give a frequent opportunity to the individual... to revise his commitments."\(^4\)\(^6\) The volume of investment becomes susceptible to any sudden shift in expectations. The shifting sand of the hunches and guesses of investors thus become the foundation of economic activity. From this, a serious conclusion is drawn:

Speculators may do no harm as bubbles on a steady stream of enterprise. But the position is serious when enterprise becomes the bubble on a whirlpool of speculation. When the capital development of a country becomes a by-product of the activities of a casino, the job is likely to be ill-done."\(^7\)

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\(^4\) Keynes, op. cit., p. 149.

\(^5\) ibid., p. 151.

\(^7\) ibid., p. 159.
A brief summary of Keynes' theory of employment will be given prior to a discussion of the logical means to full employment implied in the theory. In his theory, Keynes assumes the given factors (supra, p. 17) to be constant over a relatively long period of time. The liquidity preference schedule and the quantity of money determine the rate of interest. The rate of interest and expected marginal efficiency of capital, which is determined by the cost of capital goods in relation to their prospective yields, are the determinants of investment. The propensity to consume and the volume of investment determine output and/or employment. As the average propensity to consume is rather constant, investment is the critical determinant of the amount of employment.

How the independent variables of Keynes' theory may be controlled for increased employment is a logical function of the analysis. The logically necessary means to full employment in the Keynesian framework are seen, it is expected, as to deny the effectiveness of the logical means implicit in classical theory. The recommended measures for increasing employment given by orthodox analysis logically followed from the premises of that analysis; but without a theory of effective demand the older scheme would implement measures for increasing employment which had quite the opposite effect. The error in classical analysis was a basic one as Keynes explains it:
I doubt if many modern economists really accept Say's Law that supply creates its own demand. But they have not been aware that they were tacitly assuming it. They have discarded these older ideas without becoming aware of the consequences.

As previously pointed out, it had long been assumed that the rate of interest was the effective instrument for maintaining full employment equilibrium. The interest rate would correlate savings with investment demand and thereby insure sufficient demand for the full use of available resources. There were, to be sure, probable developments which would cause unemployment (supra, p. 142). Pre-Keynesian economists believed that a flexible wage policy could be relied upon to increase employment. A consideration of the assumptions underlying the classical wage theory will show the impracticability of that theory for relieving unemployment. Keynes showed that a manipulation of wage rates was not practicable for raising employment because the expected effects on demand would not be realized as was assumed.

There are several variations of the classical wage theory. The fundamental thesis was that a reduction in wages would lower costs, a decrease in costs meant higher profits. With increased profits entrepreneurs could lower prices which meant an increase in demand and hence more employment. Another variation of the wage theme was that reduced wages, resulting in increased employment, would increase, even at a lower wage level, total wage income and thus

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Harris, op. cit., p. 193.
increase demand. Each of these theories suffers from indefensible assumptions. There is the assumption that prices fall proportionately less than real wages, or that aggregate demand is unchanged, or that some component of demand is unchanged. The latter implies usually that the price and income of a non-wage factor is maintained at the original level which means, of course, that there will be, with real wages reduced, a substitution of labor for this factor. The classical wage policy was ineffective as a means to increase employment because the analysis of the effects of a wage cut was in terms of costs alone. By ignoring the effects of wage cuts on the consumption function—there would be no reason to consider consumption if it were assumed to be unity—pre-Keynesians neglected the consequences of reduced wages for effective demand. Classical wage policy suffered the same inadequacies as the general theory—the analysis was in terms of changes in costs for the individual firm and did not consider the aggregate effects of lowered wages.

Methodologically, the import of the classical wage policy was a violation of a significant logical norm:

Since transformation of a problematic situation...is effected by interaction of specially discriminated existential conditions, facts have to be determined in their dual function as obstacles and as resources; that is, with reference to operations of negation (elimination) and affirmation, the latter being determination of materials as positively agreeing with or reinforcing one another.\textsuperscript{9} 49

\textsuperscript{9} Dewey, \textit{op. cit.}, p. 499.
There is no doubt but that a wage cut for a single firm means a reduced real wage for its employees and increased profits for the employer. This will induce a price cut which in turn will increase the sales of the firm. As more workers will be needed to produce the additional output, employment will increase in this particular industry or firm. Other things being equal, this increased employment resulting from a wage reduction in a single firm or industry can be only temporary. The decrease in the real wages of the workers in a single enterprise will affect the demand for the products of other industries. The classical theory of wages is cast in a too limited perspective. The effect of lower wages on aggregate demand is ignored. When the theory proposes an economy-wide wage reduction, the analysis becomes even less tenable.

Dudley Dillard gives a penetrating analysis of the probable consequences of a general wage reduction. Waiving all the real difficulties of a wage cut throughout the economy, he assumes one anyhow. With unemployment, a reduction in wages, which means lower costs for individual firms, would, it is assumed, induce employers to hire additional workers. Whether the initial effect of increased employment can be maintained depends on changes in the independent variables of consumption, investment and interest rates. The entrepreneurs' expectations of increased profits from lower real wages will be realized only if the marginal propensity to consume is unity, thereby clearing the market of the additional goods produced, or there is an increase in investment demand sufficient to cover the gap between increased consumption and increased income.
With respect to consumption, experience teaches that it is constantly less than unity. There is no reason, then, to expect that the consumption function alone is sufficient to absorb the increased production resulting from reduced wages. The outlook for investment is the same:

...an increase in investment demand will occur only if there is an increase in the marginal efficiency of capital relative to the rate of interest since these two factors are the determinants of the inducement to invest. There is nothing in the nature of a wage cut that will lead directly either to a rise in the marginal efficiency of capital or to a fall in the rate of interest.50

This conclusion follows from the probable indirect effects of wage cuts on the independent variables of the system.

In all probability, "Insofar as the distribution of income is affected, there will be a redistribution from wage earners to other income recipients, especially entrepreneurs and rentiers."51 This unfavorable effect on demand will no doubt offset the increase in demand resulting from price reductions. If it is certain that there will be no further wage cuts, the expected marginal efficiency of capital will be raised. In the absence of this certainty, the anticipation of further reductions in wages will tend to depress the investment demand schedule. Interest rates are most likely to be favorably affected. The fall in prices releases money for liquidity preference. Thus the rate of interest is lowered. Now

50 Dillard, op. cit., p. 212.

51 Ibid., p. 213.
this will affect demand, however, depends on the simultaneous effect of changes in the propensity to consume on prospective yields. If the increase in income is going mainly to high-savings groups, the effect on demand will not be favorable to investment outlook. The conclusion is that a temporary decrease in the interest rate will eventually be offset by the failure of consumption to increase sufficiently to clear the market of increased goods.

In the first place, though, insuperable difficulties confront proposed wage cuts. It is simply unrealistic to advocate a general wage cut for an economy wherein strong, independent, and competitive labour unions flourish. It is extremely unreasonable to suppose that all labor unions will voluntarily accept an appreciable wage cut. It is not likely that William Green's objective of "here, now" will be universally reversed. It is too much to suppose that the competition of labor unions to resist reduced wages would not work serious inequalities among labor groups— the stronger groups could hold out longer. Moreover, fairness would require a proportionate money income cut for non-wage earners. This complicates an already highly untenable proposition. It seems that general wage cuts are more appropriate to authoritarian governments. Hansen explains quite well the certain effects of economy-wide wage reductions when he says "... from the standpoint of economic institutions it (general wage reduction) is confronted with the unescapable fact that such a reduction means a deflation of the entire cost structure.
The collapse of an established cost structure is no light matter, involving as it does a fundamental reorganization of the entire inter-relationship of prices.\footnote{52}

This discussion of wage policy as a means of increasing effective demand illustrates well the serious logical error of classical analysis regarding the wage function in employment. It was assumed that the problem of unemployment was a quite definite one—a matter of simply reducing real wages so that employment would increase as a result of increased profits and decreased prices. The serious obstacles to wage reductions and resulting complications have been pointed out. Dewey explains well the logical relevance of this discussion on wage policy in this way:

On the practical side...it is commonly assumed that the problems which exist are already definite in their main features. The consequence of this assumption is that the work of analytic discrimination, which is necessary to convert a problematic situation into a set of conditions forming a definite problem is largely foregone. The inevitable result is that methods for resolving problematic situations are proposed without any clear conception of the material in which projects and plans are to be applied and to take effect. The further result is that often difficulties are intensified.\footnote{53}

Keynes' argument for increasing employment is much more realistic and convincing. His argument, of course, follows logically from

\footnote{52} Harris, op. cit., p. 213.

\footnote{53} Dewey, op. cit., p. 193. (italics mine)
his analysis. The Keynesian theory is much more practicable than classical economics because Keynes takes account of the instruments of policy already functioning. This fulfills the important logical necessity in social inquiry of projecting ends on the basis of positive potentialities in the actual situation. And, as Dewey also pointed out, means and ends must be projected in "strict conjunctive relation to each other." Of all logical conditions of social inquiry already pointed out as being fulfilled by the Keynesian analysis, the means-ends relationship, the most crucial of all logical necessities, is the most striking logical quality in Keynes' inquiry. In a most definite way, full employment functions as a procedural end-in-view. A consideration of the Keynesian logical means to increased employment shows further the refined logic of effective inquiry wherein a. and becomes the next means in the means-ends continuum.

Any implemented policy for increasing employment will, of course, have to affect one of the independent variables. The direct determinants of employment are consumption and investment, the sum of which is effective demand. The determinants of consumption and investment are several in number and amenable to manipulation. Thus, whereas pre-Keynesian economics put almost exclusive stress on wage policy for attacking unemployment, it is now seen that the means to increasing employment relate to other variables and are
to be utilized socially. The forces inherent in the market cannot maintain a full use of resources. The necessary logical alternative is to use the instruments of government to implement those measures required to raise employment. For "Realistic social thinking is precisely the mode of observation which discriminates adverse and favorable conditions in an existing situation, 'adverse' and 'favorable' being understood in connection with the end proposed." and the economic measures required of the government by the Keynesian theory are, in each instance, simply an enlargement of functions already in force. Even laissez-faire in its extreme form would have the government to coin and issue money. With the interest rate functioning as it does in the determination of employment, monetary policy becomes a significant means for relieving unemployment.

With a given quantity of money, an increase in liquidity preference will increase the rate of interest and depress investment. Central bank policy can be directed in such a way as to offset the adverse effects of an increased propensity to hoard on investment demand. If we assume the elasticity of the liquidity schedule, an increase in the quantity of money will lower the interest rate and, if the marginal efficiency of capital is not falling, increase investment. The Federal Reserve Board can increase the quantity of

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Ibid., p. 500.
money by lowering the reserve requirements of member banks, reducing
the discount rate on loans to member banks, and buying securities
in the open market. In the first instance, the effect is to
increase the loanable funds of member banks; in the second, lower
discount rates encourage more borrowing by the member banks from
the Federal Reserve Banks which increases available funds for
investment purposes. The purchase of securities in the open market
by the central banks increases the quantity of money and thus
reduces the rate of interest by satisfying the liquidity preference.
Such monetary policy is easy to implement and will increase the
quantity of money because all such transactions are carried out
with "check-book" money.

From the perspective of the Keynesian analysis, monetary
policy is an important element in the determination of employment.
According to the classical theory, the rate of interest adjusts to
the marginal efficiency of capital. When it is seen that the
adjustment occurs the other way around, the significance of avail-
able money for neutralizing liquidity preference and reducing
interest rates is better appreciated. This significance can be
overestimated, however. With a high level of business activity and
a high marginal efficiency of capital, monetary policy can operate,
along the above lines, to maintain the going rate of interest. In
the slough of a depression, though, the expected marginal efficiency
of capital may be so low that even a negative rate of interest would
have little effect on investment demand. But this need never happen if the government has pursued the right fiscal policy.

By fiscal policy, Keynes means public finance, the program of taxing and spending by the government. Keynes' analysis leads logically to public finance as the necessary balancing factor in the development of the economy. It has been shown that decisions to save and invest are made independently of each other. The nature of the economy is such that private investment is not likely to be adequate to maintain a level of full employment. This is particularly true of advance capitalist economies. For in advance stages of development, incomes are high and the propensity to save likewise. Not only for the reason previously mentioned (supra, p.166), but also because the progressive accumulation of capital lowers the marginal efficiency of capital. As the economy matures, then, savings and investment are likely to vary in opposite directions. A declining marginal efficiency of capital is a secular development; thus, the developing disparity between private investment and consumption progressively widens. The consequences is a chronic state of under-employment. Compensatory spending by the government is the necessary means to full employment. Keynes interprets the need in quite serious terms:
Whilst, therefore, the enlargement of the functions of government, involved in the task of adjusting to one another the propensity to consume and the inducement to invest, would seem to a nineteenth-century publicist... to be a terrific encroachment on individualism, I defend it, on the contrary, ...as the only practicable means of avoiding the destruction of existing economic forms in their entirety...55

The taxing policies of the government can function as a mechanism for raising the propensity to consume. A progressive tax system has the effect of shifting potential demand from the segments of the economy where the propensity to save is high to groups who have a high propensity to consume. This assumes, of course, that social benefits will accrue to low-income groups through transfer payments. Progressive tax rates do not figure in the recommended measures of classical theory. According to that doctrine, capital formation depends on the superfluity of the rich for investment funds. Thus it was believed that a low propensity to consume was necessary for the growth of capital. This being a significant example that "Directing conceptions tend to be taken for granted after they have once come into general currency. In consequence they either remain implicit or unstated, or else are propositionally formulated in a way which is static instead of functional."56

55 Keynes, op. cit., p. 380.
56 Dewey, op. cit., p. 507.
The actual situation is very much the other way. At less than full-employment, a high consumption standard is more conducive to an increase in capital goods. If all resources are employed, an increase in capital of necessity means a decrease in consumption. But the normal state of the economy is under-employment, with idle resources and excessive savings. Saving seems to be as certain as incomes. The continual problem is to find investment outlets for savings. A proper tax program will tap excess savings and shift the benefits to increase effective demand. A taxing policy should be adjusted, however, to the phases of the business cycle. A low volume of business activity will be accelerated in proportion to the expectation of profits. In this instance, progressive tax rates could have regressive effects on investment. Even though monetary policy could be used to regulate the rate of interest and tax policy to raise consumption, Keynes' analysis gives the logical conclusion that public investment is the more effective, if not the ultimately necessary, means to full employment. A declining marginal efficiency of capital may decrease to the point where the negligible but necessary cost of bringing borrower and lender together would figure as a depressant to investment. Social benefits would probably induce increased consumption, but, even so, they constitute no direct demand for goods. With inequality of incomes and rapid capital growth within the present economic structure, Keynes' theory suggests that the direct effects on demand of public investment is
the more effective way to full employment.

Before discussing the need for and advantages of government investment outlays, it is necessary to consider briefly the way in which investment multiplies income. The ratio of consumption to income determines the increase in income which results from additional investment. If the propensity to consume were unity, an increment of investment would, assuming no leakages, permanently raise the level of consumption and income equal to the amount of the investment. This much is certain. It is arguable that an initial outlay of investment, by raising consumption, will induce further investment and accelerate employment even more. Keynes prefers to consider the direct effects of investments on demand. This can be determined on the basis of the marginal propensity to consume.

If the ratio of consumption to income is 80-20, say, an initial investment will increase consumption by eighty per cent of the amount of the investment expenditure. Simple arithmetic shows that, as the 4:1 consumption ratio is applied to progressively diminishing amounts of income, the income accruing from the original investment outlay eventually plateaus out. And, of course, the higher the marginal propensity to consume, the greater the absolute increase in income from an investment expenditure. The significant point here is the necessity to continue investment if full employment is to be reached. Two factors, a marginal propensity to consume less
than unity and leakages, require successive investment expenditures to achieve a level of maximum output.

A critical logical necessity which the investment multiplier fulfills is this one:

With respect to social subject-matter in particular, failure to translate influential speculations into formulated propositions is especially harmful, for only explicit formulation simulates explanation of their meaning in terms of the consequences to which they lead and promotes critical comparison of alternative hypotheses.

Investment opportunities open to the government are limited only by the technology of the country. In our case, the economic activities of the government range from printing instructional pamphlets in producing political parties. The government can, of course, assure control of all productive functions, but this is in another universe of discourse. The particular production undertaken by the government is not as important as the volume of government investment and the means of financing it. An initial outlay of investment will not accelerate employment to the maximum because of the propensity to save and leakages resulting from paying off debts, import purchases, sales from existing stocks, etc. At levels of under-employment, the need for government expenditures to increase income and consumption is acute and will continue at full employment unless private investment has increased enough to bridge the gulf between consumption and total demand—which is not

Rid., p. 500.
At full employment it would generally be preferable for the government to finance its investment from taxes. Given full use of all factors, the serious concern is then to forestall any inflationary tendencies in the economy. At full employment, the marginal efficiency of capital is low, and investment by the government is not favorable to private investment. Furthermore, it is more advisable for the government to attempt to increase consumption ever more by subsidies to low-income groups financed from tax revenues on the more likely sources of excessive savings. This is in contrast with the appropriate tax policy for the recession stage of the business cycle. A tax dollar here that might have otherwise been invested would have the zero multiplying effect on income downward as it does upward in the recovery stage. But if the economy is beset with unemployment, the necessary fiscal policy will be deficit-financing. Liquidity preference is high, and so is the rate of interest. The issuance of bonds to finance investment will, of course, increase the money supply and reduce the interest rate. This increases investment demand. New investments by the government, with unemployment high, should be on the basis of an integrated monetary and fiscal policy in order to realize optimum benefits.

The Keynesian analysis teaches that it is only in this way that the economy can be made to operate so as to sustain the employment
of all who are willing to work. Keynes proposed no more than these general principles as procedural means to full employment. To blueprint his recommendations would have been to deny the integrity of his inquiry. In his own words, "...we must recognize that only experience can show how far the common will, embodied in the policy of the state ought to be directed to increasing and supplementing the inducement to invest...."

The broad reference to the economic policy of the Keynesian analysis is pointed to the critical elements of that logically required policy. This is adequate for the purpose of showing how the logical judgments of Keynes' inquiry are scientifically refined and significantly different from classical theory. Not only were his hypotheses suggested by the empirical facts of the semi-capitalist economics of the twentieth century, but they also served "to guide observation in discriminating and ordering data." The mutual independence of fact and conception is dramatically exemplified in the Keynes' economics. The institutional facts of inequality of incomes, excessive savings, and chronic unemployment suggested the hypothesis that the continual depressed state of the economy, as it did not follow of logical necessity from the classical scheme, probably means "that the environment and the psychological propensities of the modern world must be of such a character as to produce these results." It was seen how the data of propensities

Keynes, op. cit., p. 377.
to assume, to hoard and to invest were discriminated and ordered
to support the further hypothesis that employment was a function of
effective demand. The observed fact, to name a quite significant
one, of employment rising in the early New Deal days and then
suddenly dropping in 1938 when government expenditures were cur-
tailed gives striking validity to his theory of the investment and
demand functions.

Another important scientific aspect of the theory was that
the inquiry was into particular conditions at a certain time; for
"any problem of scientific inquiry that does not grow out of actual
(practical) social conditions is fictitious; it is arbitrarily set
by the inquirer instead of being objectively produced and controlled."59
Effecite inquiry must be relative to time and place—problems do
not exist universally. Interestingly enough, some economists reject
Keynes' analysis because it was not a seeking for timeless truth.
Seymour Harris gives the deserved back-handed slap to such
"Newtonians" when he says that "Those who seek universal truths
applicable in all places and times had better not waste their time
on the General Theory."60

The logically necessary policies of the Keynesian theory also
show how logical judgment in social inquiry of necessity pertains
cases that have a reconstructive effect on objective conditions and

60 Dewey, op. cit., p. 500.
value... This follows from a fundamental logical need:

... until in any doubtful and undesirable situation
are never all of a piece... they are themselves changing any-
how in some direction, so that the problem is to institute
nodes of interaction among them which will produce changes
in the direction that leads to the proposed objective
consequences.61

Keynes' "nodes of interaction" necessary to "the proposed objective
consequences" of full employment require a reconstruction of some
basic social values. The recommended re-distribution of income,
the disappearance of the "functionless investor," the emphasis on
spendthriftness, and government functioning as an economic factor
cut painfully against our cultural grain. On this point Keynes'
analysis is exceptionally brilliant and impressively scientific.
his logical ends-in-view were conditioned at one and the same time
by both the tensions and positive potentialities seen to be existing
in his and our cultures. In the decade of the '30's, even though
most of us subscribed to a laissez-faire policy, we were becoming
receptive to any kind of moderate proposal which seemed to promise
an end to the immoral anomaly of want amidst plenty. Of much importance,
too, professional economists were seeking for a modified theory which
would make the leap from the nineteenth to the twentieth century.

61 Keynes was far from proposing complete equality of income.
To the contrary, he says "For my own part, I believe there is social
and psychological justification for significant inequalities of
incomes and wealth, but not for such large disparities as exist
today." (General theory, p. 374.) Regarding the functionless investor,
Keynes had this to say: "Interest today rewards no genuine sacrifice,
any more than does the rent of land. ...there are no intrinsic
reasons for the scarcity of capital. ...Thus we might aim in practice
...at an increase in the volume of capital until it ceases to be
scarce, so that the functionless investor will no longer receive a
bonus...." (General Theory, p. 376)
At the same time a progressive income tax had been accepted, government had enlarged its functions considerably, and the barons of industry wore their crests somewhat askew. This impressionistic delineation of negative and positive elements in the actual situation of the '30s is not without empirical validity. To continue in broad terms, the singular success of Keynes' analysis would seem to attest to its effective integration of statistics and positive means in the economic situation to formulate a definite problem and to offer logically conceived and socially practicable reconstructed "rules on interaction" for the solution.

A related aspect of the foregoing logical criterion of social inquiry has to do with how the fruits of inquiry are presented. As one writer concludes:

Keynes' great contribution...was to adapt economics to the changing institutional structure of modern society. Economics had failed to keep pace with the developments of science, of changes in the market-place...and in general with institutional developments. 62

This does not claim too much for Keynes. And perhaps it is true that truth will not forever be denied, but how and to whom the truth is offered makes a difference in its reception. As Dewey says, "In the case of social inquiry, associated activities are directly involved in the operations to be performed; these associated activities enter into the idea of any proposed solution." 63 This

62 Harris, op. cit., p. 1.
condition of social inquiry may seem to be almost a-logical. It is of basic significance, however. How else can we explain the fact that so much of the crucial data in the Keynesian analysis was already known but not been harnessed to the "underworld of economics?!" Though it was un-integrated and adrift in conceptual unruly, economists especially were not oblivious to these floating proclivities of truth. Over and above the need for conceptual integration and formulation of a definite problem, there is the necessity to use the theoretical structure in vogue. If these are essentially abstracted to and have a vested interest in the given intellectual framework are to be persuaded to accept modification of it. Kerner was prescient regarding this logical condition:

"This book is chiefly addressed to my fellow economists, although I am sure the general public, whom I must first convince... to bring in an issue the deep divergencies of opinion between fellow economists which have for the time being almost destroyed the practical influence of economic theory...."

A correlative logical procedure to the above is the curious matter of the evaluation of ends. The persistence of the belief that "science can have no truck with ends" has no doubt retarded imaginative and effective social inquiry. The fact is that:

The notion that evaluation is concerned only with ends and that, with the ruling out of moral ends, evaluative judgments are ruled out rests, then, upon a profound misconception of the nature of the logical conditions.

Kerner, op. cit., pp. v-vi.
conditions and constituents of all scientific inquiry. All competent and authentic inquiry demands that out of the complex web of existential material, certain material be selected and weighed as integral.

Full employment was a logical function in Keynes' inquiry. This enabled him to evaluate logically existential material as relevant data that would otherwise have remained "useless in control of inquiry. How logically significant becomes such psychological material as the propensities to save and hoard, usually sanctioned thrift is logically weighed and rejected as a means to the end of full employment. Freedom of enterprise is no longer held to be a prerogative of the individual only. The agency of government is re-evaluated and logically invested with power to function as an economic factor. The non-productive function of the rentier, a social value, is seen to be logically indefensible as an effective means to capital formation. The upshot of logical evaluation in the Keynesian analysis is that the hitherto controlling means of enlightened self-interest is seriously modified by the proposed social instruments to economic efficiency and abundance. Such is the way of science, and such is the Keynesian analysis.

The Keynesian theory seems near to a complete act of inquiry. It is not within the scope of this study to attempt a documentation of the pro and con opinion regarding the worth of Keynesian economics. Suffice it to say that even the critics of Keynes would acknowledge

Dewey, op. cit., p. 197.
the significant developments in governmental economic policy in
the last two decades to be Keynesian-inspired. Few economists,
businessmen, government leaders, or concerned citizens would today
deny the necessity of appropriate government measures to sustain
effective demand. Political oratory wars over the old shibboleths,
but actual legislative enactments have been increasingly along
Keynesian lines. The least that can be claimed for Keynes' policy
is surely this:

...Keynes and his followers have provided a rationale
for a full-employment public investment policy so simple,
so clear, and so convincing, that few democratic govern­
ments will be able to forego its adoption when all is no
longer quiet on the employment front.66

Possibly more can be claimed. As was true earlier of classical
demand as expressed by Largvet, many economists would agree that
it now appears that Keynes' teachings are "settling down into the
common sense of the nation." Soon perhaps, we can say, against
Dewey's criterion, that an indeterminate situation (unemployment)
has been transformed "into one that is so determinate in its
constituent distinctions and relations as to convert the elements
of the original situation into a unified whole."

66 Harris, op. cit., p. 161.
In summary, therefore, Dewey contends that inquiry is autonomous, that effective inquiry is its own logical validation. It follows, then, that inquiry into fruitful inquiry is the necessary procedure for discovering the logical norms of scientific method. Dewey's theory of science rests on the conclusions he has drawn from his many studies of different kinds of actual inquiries. Against the conception of scientific method which Dewey offers, the present study has examined classical economics and found it to violate certain conditions which Dewey regards as necessary to any fruitful inquiry, namely: (1) inquiry must be into real problems—difficulties which arise from existential difficulties; (2) concepts must function as instruments for the formulation of propositions which are plans of action designed to resolve definite problems; and (3) the inquirer must discover the relevant empirical facts which determine a problem, suggest a hypothesis, and afford in turn the test of the hypothesis. In brief, classical analysis has been pretty much confined to a study of relationships between concepts without reference to their empirical base, if any. When actual economic phenomena have not corresponded to the logically implied particulars of the premises of the classical system, the deviations have been considered to be "un-natural." Because the conceptual content of the classical analysis is largely a corpus
of assumed universal principles and their logical implications, the theory has not been very useful as an instrument for dealing with particular and real economic problems.

The study of the methodology implicit in Keynesian economics, from the point of view of its consistency with Dewey's theory of knowledge, reveals that Keynes's analysis fulfills the more significant criteria of scientific social inquiry as set forth by Dewey. In the first place, Keynes cast his analysis in the conceptual framework of classical economic doctrine which not only dominated the study and teaching of economics but also constituted the rationales of pervasive socio-economic values. Thus he met the first requirement of Dewey's logical scheme, namely, that social ends must be postulated in light of whatever ideational and value elements are giving direction to the organized activities of a given social group at the time of the inquiry.

To set forth clearly a problem which arises from actual social disjunctions is the indispensable point of departure in Dewey's theory of inquiry. The disparity between the predicted tendency toward full employment of all resources as an automatic result of free markets and the actual, hard facts of depression, unemployment, and non-use of material resources was precisely such a disjunction. To determine the means to full employment under these objective conditions was the definite problem formulated by Keynes.
That social study can be scientific and fruitful only to the extent that perceptual and conceptual subject-matters function as co-operating divisions in inquiry is a proposition central to Dewey's method. The Keynesian analysis recognises and makes explicit this continuous reciprocal functioning of fact and idea.

The need to evaluate existential materials as means to a social end-in-view is a critical procedure for Dewey. The logical demonstration in the Keynesian system that government is the only existing means to certain important economic ends sharply pinpoints the similarity between his and Dewey's conception of the nature of logical judgment in social inquiry.

The central role of psychological data in Keynes's theory bears out Dewey's claim that economic study, in order to be scientific, must discover those "modes of experiencing" which are ultimately the crucial materials in the management of economic affairs.

The mutual validation of Dewey's logical theory and the method of inquiry actually employed by Keynes may well be significant for the study of economics. On the one hand, Dewey is widely recognized as having interpreted with much insightfulness the nature of experimental science; and, on the other, economists generally agree that Keynes has at one and the same time reconstructed some basic elements in classical analysis and determined the necessary means
to full employment in our kind of free-market economy. Dewey's theory and Keynes's procedures fit together so well that the theory provides a rationale—one might say a logic—for the actual inquiry. What is more important to the purposes of the present study, however, is the fact that, to reverse the perspective, the success of the Keynesian analysis gives empirical validation to the logical criteria for science as set forth by Dewey. This correspondence between the logical philosophy expounded by Dewey and the procedures followed by Keynes allows us to say that one of the major instances of effective inquiry in human history has in fact observed what Dewey has set forth in theory as the crucial logical requirements of successful inquiry. Thus it would appear that Dewey has provided a lead for the social sciences that will permit them to achieve the scientific status to which they aspire, while at the same time compel them to work with human materials of the culture as it exists as study is conducted. The classical pattern is no more appropriate in social sciences generally than it has here been shown to be in economics specifically.

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This is not to suggest that Keynes deliberately followed any such conception of scientific method as Dewey has elaborated in his "Logic." He may or may not have done so; the point here is simply that if he had done so, his procedures and results could well have been exactly as they were.
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NB: This is a list of references, not a page from a document.


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