PERSONAL CAUSATION

The Internal Affective Determinants of Behavior

Richard de Charms

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The publisher has gone to great lengths to ensure the quality of this reprint but points out that some imperfections in the original may be apparent.

Preface

This book is primarily intended to make a theoretical contribution, to suggest a somewhat novel way of approaching the problems of human motivation, to break from tradition. I have tried to show that a break is necessary because traditional treatments of motivation are constrained by several philosophical presuppositions which, when carefully analyzed, appear to have a restricting and, in some cases, a trivializing effect on research in motivation.

A break is not a breakthrough. In this age of sonic booms and supersonic breakthroughs, some seem to feel that psychology is on the brink. In my opinion progress comes in small cumulative steps, and although I speak of a break, I think of it as a break with a way of thinking but not with the results that have been produced by that way of thinking. I hope that my contribution builds on rather than detracts from what exists.

At times I have had to fight the temptation to rail against some of the more dogmatic proponents of objectivism in psychology. I hope I have succeeded in overcoming this urge because the objectivist's revolt in psychology has had a commendable rigorizing effect on thinking. But now, after having learned from the discipline of objectivism, we can afford to bring our increased knowledge to bear on other aspects of human behavior. I still recommend the discipline of operational analysis as training for careful thinking. In fact, my greatest fear is that this book may be taken by some as an invitation to reject completely the tough-minded approach and used as an excuse for undisciplined thinking.

The aim of this work is to stimulate the reader to think on a broad scale about big problems and to temper these thoughts with the detailed facts of empirical investigations. I see the book as a proper major source in a course where the aim is that of intensive analysis of some broad theoretical problems. I have allowed myself the luxury of dealing primarily with the things that seem important to me, and only to the extent that these things seem important to others will the book be useful and challenging to them.

In writing this book I have experienced a conflict between my desire

to make a theoretical contribution and the necessity to present material as in an advanced text. I have tried to speak to the student who has some background in general psychology and an interest in relating basic concepts of learning and motivation to the behavior of human beings in social interaction. I have not covered the waterfront nor even given complete literature surveys in selected areas. This is not a work for a survey course. In short, my resolution of the text versus scholarly contribution has been to provide enough basic material so that the reader can consider with me a few of the aspects of the outer reaches of our knowledge. I have recorded some of my own speculations and have encouraged the reader to take up the challenge of applying both rational and empirical tools to the understanding of human behavior.

The book developed out of, and was first intended for, my advanced graduate seminar in motivation. Over the past ten years these students have come from a variety of fields and subfields, from physiological to social and clinical psychology and from sociology and education. At first I drafted separate papers based on the readings from original sources that were assigned to the seminar. As a result, an early draft of the book was more a series of essays than an integrated unit and the completed work may still have vestiges of this lack of unity.

The three major sections are related to the historical development of my own thinking. In my early seminars I developed intensively the "legacy of learning theory," discussing in detail Hull and Neo-Hullians. An attempt to integrate this body of literature with the concept of affective determinants of behavior and the relationship of affect to stimulation led me to the speculations about the discrepancy hypothesis and mediating mechanisms presented in Chapters 3, 4, and 5.

A lingering uneasiness about mediation and reinforcement theory became a major preoccupation primarily as the result of discussions with Dr. Peter Ossorio who introduced me to recent philosophic debates concerning causes and motives and to the contributions of the everyday language philosophers. This rekindled my interest, stemming from undergraduate days at Swarthmore, in philosophical presuppositions. I claim no expertise in this area but felt compelled to report the conclusions of an extensive excursion into it. I was faced with the dilemma of having developed a position under the heading of mediating mechanisms that seemed to represent only one level of discourse and could apparently never satisfy my desire for some broader conception of motivation. The result of this reading in philosophy was a radical change in my own rather para-mechanical thinking about causation and motivation as well as a start on a reconceptualization of the basic problems of the relationship between thoughts and action, attribution of motives, and intrinsic

aspects of motivation. I have retained Part II where I have tried to push the para-mechanical conception as far as possible, and have discussed why I find it inadequate. In Parts III and IV, I have attempted to broaden the concept of motivation by introducing the idea of personal causation.

An author who writes a book over a period of six or seven years gains advice from many sources. My primary sources of help and encouragement were Professors David C. McClelland and John W. Thibaut. Professor McClelland molded my interest in motivation in my first two years of graduate study at Wesleyan University. Later, in 1965, he provided the opportunity for me to spend a year at Harvard University at which time he read and commented on early drafts of many of the chapters of the book. Professor Thibaut broadened my interests in social psychology when I was finishing my graduate studies with him, and, more recently, he read the entire manuscript and made many suggestions that have made it a better and more unified book. One cannot express thanks adequately for such help. I assume personal responsibility, of course, for the shortcomings of the work.

At some point all of the following read parts of the developing manuscript and provided valuable comments and criticism: J. Aronoff, J. W. Atkinson, R. E. Callahan, W. W. Charters, Jr., Nina de Charms, O. J. Harvey, E. E. Jones, H. H. Kelley, P. Ossorio, A. W. Wirth, and probably others whom I have forgotten.

The intellectual crucible of the graduate seminar has been an invaluable place to discuss ideas, and my debt to my students is inestimable. I owe a special debt to Drs. Thomas E. Johnson and Carl E. Pitts for hours of stimulating discussions. Others who stand out because they have contributed empirical evidence are W. J. Bridgeman, Virginia Carpenter, P. N. Davé, K. Dougherty, H. S. Gall, A. Kuperman, G. Moeller, R. Schaub, D. Schmidt, R. Walker, E. J. Wilkins, and Sally Wurtz.

Much of my own and my students' research has been supported by a contract from the Office of Naval Research ONR 816 (11) through the Social Science Institute at Washington University. At the same time the Graduate Institute of Education at Washington University has provided the freedom and the intellectual climate of inquiry that has made research and writing possible. A semester at the University of Colorado gave me extra time to develop Part II of the book and the sabbatical from Washington University that I spent at Harvard really brought completion of the work into view.

Many have helped with the manuscript. My secretary, Mrs. Lola Latta, has successfully kept things relating to the manuscript in order despite all my propensities to lose and confuse. Lois Blackwell, Alison Ullman,

Vera Costain, Mary Hughey, Tedi Zweig, Nancy Sachar, Dennis Shea, and Sue Garcia have all aided in the preparation of the manuscript. They all have my sincere thanks.

At home my wife, Nina, and son, Christopher, have given help and encouragement and tolerated my obsession.

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RICHARD DE CHARMS

St. Louis, Missouri
March, 1968

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PERSONAL CAUSATION

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PART I

BASIC PROBLEMS AND PRESUPPOSITIONS

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Chapter 1

SOME BASIC PROBLEMS OF MOTIVATION

The psychology of motivation is beset by a paradoxical situation arising from the fact that "motives" are concepts devised by men to help them explain or predict behavior. Scientifically trained psychologists have developed a concept of motive that is radically different from the everyday notion of motive as used by a layman and applied to his fellow human beings. The layman assumes that a human being, under normal circumstances and within limits, chooses to act in the way he does. If you want to know why a man did something, you look for an explanation that is uniquely associated with him as a person. More often than not a person's behavior can be explained in terms of psychological aspects of him as a person. The scientifically trained psychologist looks for explanations in terms of physical things often external to the person or physical events within his body but often not what the layman would call "psychological."

The layman seems to have a concept of "mental" events that precede and direct behavior and of a unique "person" within which the events occur. The psychologist, on the other hand, deals primarily with "physical events" and physical organisms with no apparent unique characteristics that cannot be explained in terms of physical characteristics of the organism or physical events in the past that have affected the organism. Put in everyday language the question "Why did he behave that way?" is most often translated by the layman into "What led him to *choose* to do that?" It is more often translated by the psychologists to "What conditions *made* him do that?" The first interpretation implies that something within the person was free to choose; the second interpretation implies that something other than the person himself forced or determined his behavior. The first interpretation assumes that the individual is a person who controls his own behavior; the second interpretation assumes that physical forces control his behavior. In terms of causes, the layman takes it for granted that a person *causes* his own behavior, a psychologist

assumes that a person's behavior is *caused;* for the layman, a person *is* a cause, for the psychologist, a person is *not* a cause.

The basis of the layman's explanation is a "mind" or "person" that is not any specific physical part of the human organism but some "essence" of the individual. It is natural to assume something of this nature because we all experience it in ourselves. However, the psychologist has found no physical basis for "mind" and has great difficulties with the concepts of "self" or "person"; he has made great strides in understanding behavior without such concepts. Modern psychology viewed as the science of behavior has accepted the assumption that ultimately *it will be possible to explain human as well as animal behavior in terms of the basic principles already known from the other physical sciences by studying in detail the physical, chemical, biological, and physiological events surrounding particular behavioral acts.*[1]

The enormous value of a program of research designed to explain behavior in terms of physical events has been proved in the last fifty years of psychology. Psychologists no longer accept pseudo-explanations in terms of some "essence" or "mind" within the physical organism that guides and directs it; they no longer appeal to a ghost in the machine. Rather, they look for physical events that regularly precede specific behaviors. The layman's concept has proved to be of little help and to be misleading in many instances. The trouble with the layman's notion is that it can explain anything after it has happened by saying that the "mind" caused the behavior, but it leaves the "mind" of the individual as a completely unpredictable agent. Since no two "minds" are thought to be alike and each one is free to choose its own behavior, we are forced to the conclusion that ultimately behavior is unpredictable. Such a conclusion is unacceptable either to the layman or the psychologist for both are attempting to understand and predict behavior and both are, in fact, capable of doing it.

Implicit in the layman's thinking is the notion that the "mind" *causes* the body to act. The psychologist, accepting a different concept of cause, assumes that only physical events can cause other physical events or have any influence on them. Since there is no evidence that "mind" is physical, the psychologist rejects the notion that the "mind" causes behavior.

The crux of the problem of the two types of explanation of behavior seems to lie in two nineteenth century philosophical debates, one known as the "Mind-Body Problem" and the other involving specification of the meaning of the word "cause." We will accept the psychologists' position

[1] Later this statement will be referred to as the thesis of the sufficiency of atomic description following Bridgman (1959).

and reject the concept of "mind" as an explanation of behavior. In doing this, we reject the notion that "mind" conceived of as a nonphysical "essence" can cause behavior. We will go further and reject the word "cause" even as a description of the relationship between two physical events. *The concept "cause" implies more than is ever empirically demonstrated to occur in the physical world between two objects or two events.*

For the author of a book entitled *Personal Causation* to reject the word "cause" may come as a surprise. It is the result of a futile attempt to find any empirical meaning in the word. In the company of many psychologists and philosophers, we have arrived at the position that as an empirical description of observed relationships between physical events the word has no meaning. As Bertrand Russell says: "The law of causality . . . like much that passes muster among philosophers, is a relic of a bygone age, surviving, like the monarchy, only because it is erroneously supposed to do no harm" (Russell, 1918).

We reject the word "cause" as most often used because it does do harm, we believe. Nevertheless, we use it in our title because the concept does have meaning, a very important meaning, that is implicit in the layman's conception, but has misled him to attribute causes to the "mind." The source of meaning of "cause" cannot be demonstrated empirically. The meaning comes from a source of knowledge that is available to everyone personally but comes to him privately from his own feelings and behavior. Such knowledge is to be called "personal knowledge" (cf. Polanyi, 1958). A type of personal knowledge is the knowledge of personal causation.

The concept of causation is crucial in what follows, but the way we use it here may be quite different from that with which the reader may be accustomed. A complete explication of the last two paragraphs cannot be given without laying some preliminary groundwork. In doing this we shall attempt to define "personal causation" and show its relation to the more common concept of motivation. We shall investigate the concept of cause most often associated with motivation and note the possible harm that this conception can bring to the psychology of motivation. We shall ask and try to answer the question "Where does the concept of causation come from?" and, as a result, propose that the psychology of motivation must accept from the physical sciences a program based on the ultimate reduction of psychological phenomena to physical events, and at the same time must account for the persistent fact that human beings believe themselves to be "causes" and this belief affects their behavior. From this perspective we shall review some current approaches to the concept of

motivation and conclude our introduction with an overview of the rest of the volume.

Personal Causation Defined

Personal causation is the initiation by an individual of behavior intended to produce a change in his environment. The concept is basically a motivational one, but the term "motive" has come to be used in a way that often excludes some of the major aspects of personal causation. In order to bring a little more precision to the idea of motivation and at the same time broaden its scope, we have chosen the phrase personal causation.

Motives and Causes

Motives are often considered the causes of behavior and the two concepts have much in common. Science is sometimes defined as a search for causes and, although the concept has apparently been very useful in the physical sciences, an empirical basis for the idea of causation itself has not been found. As the philosopher David Hume argued, the causal inference is extremely persuasive, but it is impossible to isolate an empirical referent in the phenomena of apparently causal sequences that uniquely indicates the presence of causal necessity. Phenomenologically causes seem to "exist," but they cannot be reduced to an empirical aspect of physical events. As a result of this paradoxical situation, while the philosophers argue about the epistemological status of the concept of cause, the less philosophically minded scientists use the concept in one guise or another to help them to understand physical phenomena.

If we accept the notion that motives are the causes of behavior, we are propelled into the controversy over the meaning of the concept of causation. Phenomenologically we have very little trouble with causation and, if we do not try to define it too precisely, we get along quite well using the term and communicating with others. In order to avoid unnecessary complications, let us look at the simplest case of a causal sequence involving only physical objects and try to develop a parallel example of motivation by using the basic assumptions from the physical objects example.

In the time-honored billiard ball example when the cue ball strikes the eight ball on a billiard table the explanation of the movement of the eight ball is sought in terms of physical laws of mechanics. The object that makes a unique contribution to the movement of the eight ball is the cue ball. We are wont to say that the cue ball *causes* the eight ball's move-

ment. The word "cause" may, in this instance, be taken to mean that we are in the habit of attributing causes (the precise meaning of the word "wont" in the previous sentence). If we probe the empirical evidence for the source of attribution of causation as Hume did, we find that it lies in observed situations of (*a*) concomitant variation (if the cause occurs, then the effect always occurs) or (*b*) temporal sequence (the cause must precede the event). Yet we can conceive of situations in which both of these criteria are met but in which we would not attribute causation (the rooster crows and the sun rises). This is because we usually resort to a third criterion that demands that there be a *necessary connection* between the cause and the effect, that the cause can be assumed to produce the effect in an efficient way that implies some intrinsic conjunction between cause and effect. Hume found no empirical referent for a necessary connection in any single instance of a causal sequence, and hence attributed this last and most stringent criterion to an inference process resulting from habit. We have seen A precede B so often that we infer that A has some necessary connection with B because of a propensity of the human being to learn by repeated experience.

As a result of this analysis, Hume is interpreted as saying that causes do not exist, but what he actually said was that he could find no physical basis for the crucial element, namely necessary connection. It is often overlooked that Hume started with the assumption that cause is a phenomenological given, that we do attribute causes and that the causal inference is often very useful in science (Lamprecht, 1925). There is something more than mere contiguity and temporal sequence. We can find no empirical referent for the "more," but it is certainly phenomenologically present when we observe a causal sequence. If we could find some empirical basis for the apparent necessary connection, we might feel that we understood and could explain the movement of the eight ball better; but as it stands even without this we can do a good job of predicting its movement.

There are several assumptions that are basic to this analysis of causation that may be found in instances of motivated behavior. The eight ball is assumed to be normally stationary until some external source of energy impinges upon it. This statement contains three assumptions: (*a*) the normal state of physical objects is *static equilibrium;* (*b*) the cause of the change from the normal state is a *source of energy;* (*c*) the cause is *external* to the object in which it produces the change or effect. In addition to these it is implied that (*d*) the effect is *movement.* If we accept the most important aspect of the Humian position, we will assume further that (*e*) the attribution of causation is *learned* and (*f*) the causal concept

helps us *predict* future events but cannot be accepted as an explanation.

Now let us apply these assumptions to a motive sequence. A rat is standing on the right side of a Miller-Mowrer shock box that has an electric grid for a floor and a low barrier separating the right and left sides of the box. Electricity is applied to the grid on the right side where the rat is and he quickly leaps over the barrier into the left side where the grid is not charged. This is clearly an example of motivated behavior. Do all the assumptions fit? (*a*) The rat is relatively still; (*b*) the shock or cause is a *source of energy;* (*c*) it is *external* to the rat; (*d*) the effect is *movement* of the rat; (*e*) after several experiences both the rat and the observer have *learned* about the relationship between shock and behavior so that (*f*) in the future the behavior may be *predicted.*

The example derives from an analysis of motivated behavior (Miller, 1951) that takes "drive" as its central concept, assumes that it is an energizing source, and defines drives as "strong stimuli which impel action" (Dollard & Miller, 1950, p. 30). This is one of the most consistent and most valuable versions of drive theory, the drive-stimulus-reduction theory.

The example given makes the analogy between a causal sequence and a motive sequence seem very close and demonstrates the seductiveness of attempting to understand motivation by using the concept of causation. There is great value in stripping the two sequences to their bare essentials, however, because it shows that the closeness of the analogy is more apparent than real. Furthermore, it clarifies the basis for some of the basic problems of motivation theory. If we question whether the normal state of the organism is to be motionless, we question the assumption of static equilibrium. If we question whether a motive provides the force to start behavior, we question the assumption that a motive is a source of energy as well as that of static equilibrium. Having gone this far we may question whether the "cause" of behavior is always external to the motivated object (the organism). Further, we have been using the term "behavior" as if it implied only movement of organisms and we may question whether "behavior" does not mean more than physical movement. What we are saying so far is that with regard to assumptions (*a*) through (*d*), there are reasons for questioning the accuracy of the analogy between causes and motives, and these reasons lead us to most of the current controversies in motivation theory.

Assumptions (*e*) and (*f*) (learning and predicting) are of a different stripe, and bring us to a problem that must be confronted before we can really make judgments about the other assumptions because the problem is the most central one, namely: Where does the concept of causation

come from? If we cannot arrive at some position of agreement on this problem, we might as well not even discuss the others since they only arose because we were attempting to use the causal concept to help us understand motivation.

Where Does the Concept of Causation Come From?

The answer to this question is a critical point of departure in this book. Simply stated our answer to the question is: *We get our knowledge of causation from our knowledge of motivation.* Up to now we have been trying to clarify our knowledge of motivation by using causation. It is the major proposition stated here that this approach is just backwards. The first "cause" that any of us knows is ourselves. When we are motivated, we cause things to happen. We have immediate knowledge of our "motives" prior to any knowledge of physical causes. What we all know from childhood is that we do things and something happens in our surrounding environment—*we* cause effects in the physical world. The most important *thing* in the world for a newborn child is his own body. He learns about it first and what it can do in relation to other things. He learns that he is a causal agent. Only later does he become concerned about what one non-self object can do to another. By that time he has learned that he himself is a cause that has effects and that he is motivated to cause effects. It is therefore only natural to assume that other things are motivated to cause effects and that there are meaningful reasons why another person acts as he does; reasons that are similar to his own, i.e., motives. It is even natural, although incorrect, for the child to assume that physical objects are like himself and therefore have motives like his to cause effects. As Piaget (1929) has shown, the child must learn not to make what we call "magical" attributions to things as if they were people. Human beings, and probably animals too, know without learning about their own simple motives or reasons for acting, and they soon learn to act in a way to satisfy these motives, and along the way they learn that things are caused because *they cause them!* If a child does not learn to cause things to happen he cannot live.

Seen in this light, it is not surprising that the causal inference is very persuasive. We have all learned to make the inference in one of the most important and most ubiquitous learning experiences of our life. At the same time, it is not surprising either that we cannot find external empirical evidence for it. It is not learned in the way that Hume suggested, by the simple repetition of contiguous events in the external world, but by the much more powerful repetition of observing ourselves cause effects in the physical world.

The implications of this analysis are far reaching for both of the concepts under consideration, causation and motivation. For one thing, it should be clear that if we are right about the origin of the concept of causation in personal experiences of motivation, then seeking to explicate motivation by analogy to the concept of causation is like trying to "reduce" an explanation of atoms to a discussion of molecules. The former (motivation) is primary and more fundamental than the latter (causation).

Recognizing motivation as the more fundamental involves us in one of the most difficult problems of psychology and philosophy; namely the validity of knowledge derived primarily from our own private experiences. This type of knowledge is sometimes called subjective knowledge and is considered scientifically to have a lower status, that is, to be less valid, than so-called objective knowledge. We shall try to show, following the work of P. W. Bridgman (1959) and Michael Polanyi (1958), that *personal* knowledge can be a valid source of scientific insight since, in fact, all scientific knowledge derives ultimately from individual private experiences of the sort engaged in by the scientist when he observes the results of an experiment. The problem is not to make science "objective" by taking all individual experiences out of it. This, in fact, is impossible because ultimately the scientist must experience and then interpret the results of his experiment. No, the problem is to systematize these experiences so that they may be communicated to others so that they too can experience them personally, i.e., to verify the personal experience and hence personal knowledge of their colleagues.

For the time being, we will propose without further justification that science is based on personal knowledge and that one form of this knowledge, which is common to all men, is the knowledge of oneself as a causal agent. One type of personal knowledge, learned in childhood by all human beings when the baby learns to distinguish himself from others and other things, is the knowledge of personal causation. Personal causation is, then, the knowledge of oneself as a causal and motivated person, and, in addition, personal causation forms the basis upon which all men learn to attribute motives to other people and ultimately to attribute causes in the physical world.

Accepting this premise involves us in several apparently logically opposed or contradictory propositions, reminiscent of Immanuel Kant's logical antinomies. The most obvious is the subjective-objective distinction, already mentioned, that has most often been resolved in the physical sciences by accepting "objective" knowledge as valid and by rejecting "subjective" knowledge as invalid. Up to a point, this is quite reasonable in the physical sciences in which the "things" to be investi-

gated are "objects." But is it reasonable in psychology in which the "things" to be investigated are not only "objects" in the physical world but also "subjects" in the psychological world, i.e., persons? Following the precepts of physical science, psychologists have tried to resolve the subjective-objective antinomy by rejecting the subjective. We will maintain that in psychology we cannot solve the problem this way. We are really impaled on the horns of the dilemma, since in dealing with persons we are at one and the same time dealing with a physical object in time and space and with a psychological subject who has personal knowledge and intentions.

This problem never becomes more apparent than when we attempt to explain motivational phenomena. We may know all the objective facts in the situation, for example, a murder; we may know the cause of death, the person who committed the act, all the necessary information about his temporal and spatial position and his physical capability to perform the act, and yet we may lack a legal "motive" or what we might prefer to call the reason or explanation for his act. Legal evidence attempts to present the facts, but the physical facts never pass judgment on a man. It is the jury that passes sentence, and the jury is made up of persons who have personal knowledge and put their knowledge together with the physical facts in order to arrive at a verdict that is the result of attributing a motive to the accused person. Once the facts are in, it is the responsibility of the jury to establish "intention."

Juries are required to attribute motives and establish intention, but psychologists have resigned from this responsibility and attempt to establish only the physical facts in the situation. This is because they have chosen to emulate the physical sciences and to rule out subjective aspects such as "intentions" and have reduced "motives" to physical states of biological deficiency or to external physical sources of energy.

Basically, psychology has pursued in detail one level of analysis attempting to treat a person (or animal) as a physical object. Knowledge deriving from this level of analysis is abundant and is basic to the understanding of motivated behavior. But it is not enough; it does not answer all the questions we have to ask about behavior; it leaves us with predictions about physical movement but without explanations of behavior that stem from truly psychological aspects of the person. We must complement our knowledge of persons as objects with another level of knowledge of persons as animate beings possessed of the capacity for personal causation. A complete science of behavior must face the subjective-objective dilemma and investigate and weld together phenomena from both levels, i.e., physical sources of energy that produce movement of

the body as a physical object, and psychological sources that also result in bodily effects; it must also simultaneously view the person as a subject who is the personal cause of his own behavior, who has intentions and carries them out within the boundaries of his physical limitations. Behavior is a function not only of physical events but also of personal causes. It is not enough to know what a person did, we need to know about his intentions as well in order to explain his behavior completely. We have thus raised the most basic problem for a psychology of motivation.

Let us try to be as clear as we can about what we are suggesting. We are not proposing a substitute for what now exists under the heading of the psychology of motivation. What we know about motivational phenomena is necessary, and further investigations using present techniques and theories are also necessary to the understanding of the psychology of motivation. Rather we are emphasizing something that is widely accepted, namely, that present theories are not sufficient to account for human motivation. We propose that the analysis of first-person aspects of a human being as a subject be added to the third-person aspects stressed by Behaviorism that treats the person as a physical object.

Having set our sights for something more than what exists at present, let us look briefly at what exists.

Current Approaches to the Concept of Motivation

There is no good way to categorize simply current motivation theories. One set of polar concepts, however, may be useful if we try to understand in advance some of the complexities of the dimension for which the concepts are the end points. The concepts refer to the locus relative to the organism where variables are sought to explain behavior. At the crudest level this locus may be within the organism (internal locus of explanation) or outside the organism (external locus).[2] For example, in the previous discussion of the layman's concept of motivation, we said that he looks for explanations of behavior from within the person. This may be taken as the extreme internal pole of the bipolar dimension. At the other extreme, we may place Behaviorism in the most rigorous form as proposed by Watson (1913), the so-called "empty-organism" or "sawdust" psychology, that assumes that nothing within the organism need be considered.

Neither of these extreme positions is tenable, but current approaches to motivation may be seen as attempts to reconcile the obvious advantages of dealing with observable physical events such as stimuli and responses

[2]The dimension derives from Heider's (1958) concept of "locus of causality."

with the nagging fact that human beings appear to be motivated from within.

If the proposed dimension were as simple as external-internal all would be well, but it isn't. To a certain extent, since extreme external Behaviorism has proven inadequate, all theories must take into account variables within the organism. Thus, pure stimulus-response (SR) theories have become stimulus-organism-response (S-O-R) theories. The critical problem then becomes what is meant by "within the organism" and how far "in" does the theorist go? Those most resistant to penetrating the organism attribute to it "reinforcement histories" and, using this one internal-type notion, go on to try to predict behavior and account for the reinforcement histories in terms of external events. Such a position we shall call an Empirical Reinforcement theory (Skinner, 1953, is the outstanding example) and place it near the external end of our continuum.[3]

A cautious step toward "internal" analysis is made by physiological psychologists who may be said to pursue the thesis of the sufficiency of atomic description most rigorously. In its purest form, physiological psychology accepts only physiological facts as explanations of behavior, but, as a matter of fact, we are far from a complete explanation of behavior in physiological terms.

A bolder step along the same line, often given the opprobrious name "physiologizing," constitutes an attempt to bridge the gap between what is known physiologically and what is known behaviorally with hypothetical constructs. This speculative bridge building has resulted in many testable hypotheses and some major advances. Theorists may be seen as starting their bridge from the side of the gorge nearer to the molar facts of behavior or from the side nearer to the molecular facts of physiology. Behavior theorists who have sought to define reinforcement in terms of physiological deficits or their concomitants [*a priori* reinforcement theorists such as Hull (1943)] are near the behaviorist side, while theorists who have developed physiological models (such as Hebb, 1949) are nearer the other side.

A priori reinforcement theorists, those who look for a response-independent definition of reinforcer, often take a rather strong position concerning the driving (or motivational) force behind behavior. This force may be a stimulus (shock) that is actually external or an internal stimulus (pain) that is the result of external events (shock or deprivation). Although attempts are made to account for internal stimuli, their source is sought in external events. The next step "into" the organism is the

[3] In one sense it does not belong on the continuum at all because implicit in the empirical definition of reinforcement is a denial of any motivational force.

postulation of "affect" in affective arousal theories (e.g., McClelland, Atkinson, Clark, & Lowell, 1953; Young, 1961). Affect is another gap-bridging construct, but the gap here is between the physical or physiological and the psychological or phenomenological. Affect may be treated as a physiological response, but it often carries connotations of "feeling." It is here that we first encounter the subjective-objective dilemma discussed earlier. Although it may creep in to reinforcement theories when reinforcement is erroneously allowed to take on the subjective connotation of "reward," the concept affect is often used in arousal theories precisely because it has both subjective and objective connotations.

Once the subjective aspect is raised, we are closer to the internal end of the dimension if we make the arbitrary assumption that theories that deal with a subjective "self" or "person" are more "internal" than those which deal primarily with physiological phenomena within the organism.[4] The postulation of an entity such as a "self" or a "person" within which motivational phenomena are sought opens new vistas for the theorist. The "person" can be thought of as active [as in White's (1959) concept of competence, Goldstein's (1939) self-actualization, Maslow's (1962) "growth-motivation," or Allport's (1955) "Becoming"] whereas an organism is primarily reactive. In the former an internal psychological entity is postulated within which we may assume the locus of motivation for behavior lies.

Heider (1958) has made a distinction between perceiving the locus of causality for behavior as external or as internal to the person. The "self" theorists clearly look for an internal locus, all others mentioned previously look for something less central (in our sense) as the source of behavior, and often these "more external" theorists seem to assume many of the aspects noted earlier of para-mechanical explanations. Motion (behavior) of a naturally immobile object (organism) is produced by an external force (drive-stimulus). Crude as this analogy is, it is at least more precise than present concepts of "self," "person," or "mind." But to attempt a full explanation in terms of only one type of theory is a mistake because both types of explanation are necessary.

In the present volume we will be most concerned with the behaviorally oriented theories. For this reason we have chosen the major examples for further elaboration.

[4] We have included this different type of "internal" on our dimension, despite the fact that it may seem forced, because the arbitrary separation of objective and subjective phenomena stands in the way of progress in the motivation area. It is precisely the bringing together of these two that is needed, and in Chapter 2 we shall see that their separation is the result of a category mistake stemming from false assumptions inherited from the philosophic discussions of the mind-body problem.

Reinforcement Theories

One of the basic problems confronted by reinforcement theories is the definition of a reinforcer. A definition is an attempt to make communication about the concept possible. At the most fundamental level, a reinforcement theory assumes that the prediction and control of behavior must rely on stimuli outside the organism, and reinforcers are seen as such stimuli. This approach to the problem of motivation is characterized by reductionism. The concepts are most often derived from behavioral observations in the animal laboratory and definitions attempt to reduce all terms to operations and/or quantifiable observed behavior. Stimuli and responses are the basic elements of study. The reader need hardly be told that the major figures contributing to this approach are Skinner at Harvard, and Hull and other learning theorists most of whom were associated in some way with Yale University in the 1930's and 1940's. The development of the concept of reinforcement forms the *most important cumulative effort of relevance* to the psychology of motivation. This development will be discussed in detail in later chapters.

Phenomenologically the term *reinforcement* has taken on some of the connotations of pleasure and pain, and some theorists are willing to talk about positive and negative reinforcement. This may seem an odd turn of events in view of the original meaning of the term which can be recaptured if one thinks of the meaning of "reinforce" in the phrase "reinforced concrete." Originally an event was seen to be reinforcing in the sense that it *strengthened* the bond between a stimulus and a response. Obviously, at this simple level the notions are outmoded, but the surplus meaning which reinforcement has taken on tends to give the illusory satisfaction of an explanation. Meehl (1950) has clearly pointed out, in his discussion of the circularity of the law of effect, the absolute necessity of some external definition of reinforcement which is independent of the response under study.

A Priori *Reinforcement Theories*

The earliest reinforcement theories attempted to give an *a priori* answer to the question "What is a reinforcer?" Under the influence of Darwinian notions of survival, an early contender for the primary criterion for explaining motivated behavior was the reduction of basic physiological needs. Obviously, if these needs were not reduced, the organism would ultimately die. Therefore, it was logical to assume that the surviving species were those with some built in connection between responses and need-reduction.

Under the influence of attempts to explain the learning of new re-

sponses, however, it became obvious that many responses persisted which were not associated with primary need-reduction, and that new responses were often acquired when the evidence for primary need-reduction was minimal. The concepts of primary and secondary drive and primary and secondary reinforcement were *invented* to account for these phenomena.

The notion of reinforcement, although first used primarily by associationists to connote the strengthening of a bond between a stimulus and a response, carried with it a strong implication of something pleasant, good, or satisfying. This hedonistic connotation persisted despite great philosophical controversy over psychological hedonism—the postulate that human beings seek pleasure and avoid pain. Thorndike (1913) laid the cornerstone of reinforcement theory with his ennunciation of the Law of Effect. His statement used the terms "satisfaction" and "dissatisfaction." Despite his careful behavioral definition of a satisfying state of affairs (a reinforcer) as something which the animal tended to approach or did nothing to avoid, the hedonistic flavor was transmitted through the term "satisfaction." Behavioristically oriented learning theorists avoided the connotations of satisfaction with the notions of need, drive, or tension reduction.

Empirical Reinforcement Theory

Skinnerian (1953) reinforcement theory solves the problem of what response will be chosen of those possible by assuming, as did *a priori* theorists, that the criterion involved is past reinforcement. His definition of a reinforcer, however, is completely empirical and firmly tied to responses. Stated in terms of probabilities, *any response which is reinforced will tend to increase in probability of occurring. A reinforcer is defined as anything that increases the probability of a response.* This completely tautological couplet is, in fact, extremely valuable in learning theory. Given something, X, which has been shown to increase the probability of a response in the past, we can predict that X, used in conjunction with a desired response, will increase its probability, i.e., produce learning.

The pursuit of *reinforcement,* although it has given us some of the best experiments and theorizing relevant to motivation, has also led in another direction. Paradoxically, the development has been carried by more empirically zealous psychologists down the road of reductionism to one logical conclusion about the concept of motivation—*reductio ad absurdum.* In a behaviorist tradition that eschews theorizing and subjective states, shuns first-person explanations, embraces third-person

analysis of the organism as a physical object, and defines a reinforcer as anything that will increase the probability of a response, the concept of motivation is not needed and the only consistent position is to drop it entirely. In this respect, Skinner's analysis of behavior in terms of reinforcement is most consistent. Much of the evidence customarily cited as demanding the use of the motivation concept can be handled by the deft use of a Skinnerian definition of reinforcement, and the concept of motivation turns out to be excess baggage. In this sense, the Skinnerian approach constitutes a *reductio ad absurdum* of motivational concepts. Skinner (1953) refers to many motivational concepts such as hunger, thirst, interest, a sense of achievement, incentive, goal, and intent as "explanatory fictions." The inference contained in the phrase is that they do not explain or that they in turn need explanation. As such, they may be discarded.

Affective Arousal Theories

For emphasis we may say that the affective arousal approach is primarily characterized by the often unstated assumption that motivational phenomena have as their ultimate referents hedonistic states of pleasure and pain. The basic concept for such an approach is *affect;* a term which must be defined as the experiencing of these states. The basic problem for such a position is to make communication about such states possible. At the most fundamental level, the affective arousal approach assumes that the understanding of behavior must take into account states within the organism, that is, explanation from "within." Although the emphasis lies "within," the importance of outside influences is not denied.

The concept of affective arousal was integral to the position taken by Young (1936). He, as well as McClelland *et al.* (1953), assumed that stimuli are characterized by positive, neutral, or negative hedonic tone. Positive stimuli are sought out; negative stimuli are avoided when possible. The question naturally arises—What stimuli produce affect? As in the case of the question—What is a reinforcer?—one can take an empirical approach, as Young (1961) did, or one can attempt to find a theory which will tell in advance what types of stimuli will produce positive, neutral, or negative affect as McClelland *et al.* (1953) did.

The basic criticism of affective arousal theories is their inherent reductionism: the stress on "the stimulus" which produces affect. It is difficult to conceive of one specific type of stimulus which ultimately will turn out to be associated with all motivated behavior and hence form the criterion which is the quest of a motivation theory. The philosopher, Gilbert Ryle

(1949) probably makes this criticism most clear. Basically, Ryle is relegating affect to the category of a "para-mechanical myth." To say that a "thrill," "glow," or "tension" impels the animal to action is an oversimplification based on the notion of para-mechanical causation that some outside source of energy must strike the individual and produce action or at least goad him into it. This criticism may be met by postulating two aspects of affect.

Affect as the result of a specific stimulus is the easiest way for us to conceive of it, probably because of the pervasive influence of stimulus-response psychology. Although probably an oversimplified conception, it raises the important question of what stimuli produce affect. Despite Ryle's criticism, it is obvious that some behavior is the result of affective stimuli, the best example being the avoidance of noxious stimuli. The anticipation of specific positive stimulation is also clearly a determinant of some behavior. Such a conception of affect, therefore, need not be discarded. It is clear, however, that exploratory behavior, play, and things such as growth, competence, and self-actualizing behavior are probably not accompanied by any specific stimulus elements which may be isolated.

Affect as a result of broader aspects of experience which guides and directs behavioral sequences such as play and exploration is a concept that we must entertain, though it is much more difficult to grasp and to make explicit. In this connection, we must investigate the relationships between affect and behavior over and beyond affect produced by specific stimuli. We must broaden the concept beyond the notion of a specific stimulus that goads behavior and consider affect as the result of general sequences of behavior.

What can be said about reinforcement and affective arousal theories in general? First, they are both attempts to reduce motivational concepts to stimulus and response events conceived of as physical phenomena in the world. Second, both positions treat the subject of a psychological experiment as a physical object. These approaches stress objectivity and supply us with the physical restrictions within which behavior occurs. They are striving to reduce all psychological phenomena to physical, chemical, and possibly biological determinants. In dealing with motivated behavior the implication is strong that what is to be explained is movement and that it is to be explained in terms of physical forces impinging on the organism. Pushed to the extreme, both positions imply that psychological behavior is to be explained in the same terms as physical movement of objects, i.e., the laws of physical mechanics. Although the flavor of para-mechanical explanation is strong, it is obvious to everyone that

the explanation of human behavior demands more than laws based on a para-mechanical myth.

A priori reinforcement theories as well as affective arousal theories seek to explain behavior apparently originating from within the organism by means of para-mechanical forces (stimuli such as drives or affect) which impel motion. Can it be said that drive-stimuli or affect cause behavior? Certainly not in any mechanical sense similar to the cue ball "causing" the eight ball to move. At best, these approaches try to explain psychological phenomena by a loose analogy to physical mechanics. At worst, they lead us to think of behavior as simple physical movement of an object and of motivation as a physical force.

Bridgman, the father of operationism in physics, points out that the positions derive from the basic thesis of the sufficiency of atomic description.

> This attitude may be formulated in a very general way in the statement that it is not necessary to assume any new principles not already operative in the physics and the chemistry of non-living matter in order to explain the functioning of living matter. It may alternatively be given a more specific and sharpened formulation .... "Given a complete description in physical terms of any organism, then there is nothing more to give, in the sense that all the present behavior of the organism and its future behavior in a completely specified environment is fixed" (Bridgman, 1959, p. 201).

As Bridgman says, this thesis may, in fact, be correct in physics and even in psychology; but "in the present state of technology we are fantastically far from being able to implement such a thesis to the extent even of being able to specify the state of all the atoms in the brain, to say nothing of deducing the future unrolling of such a system" (pp. 201–202).

Empirical reinforcement theory is assumed by Bridgman to accept the thesis of the sufficiency of atomic analysis, but it seems to us that Skinner has proposed a concept unique to psychology that may in fact be reducible to atomic description, but that at first appears more amenable to present day technology. The concept is contained in the phrase "reinforcement histories." Skinner has resigned from the position of trying to explain motivated behavior and takes as his burden the prediction of behavior from knowledge of past histories of reinforcement. This position may be called "the thesis of the sufficiency of reinforcement histories" for the prediction of behavior. Like the atomic description thesis, the reinforcement history thesis has been useful as a program to guide research; but, ultimately, the postulate that the prediction of behavior must depend on complete knowledge of the reinforcement history of human beings is

equally as "fantastically far" from the capability of present day techniques as is complete atomic description.

Neither the atomic analysis thesis nor the reinforcement history thesis has to be abandoned in order to broaden the concept of affect to something more than a specific anticipation that cues off behavior. But the more general concepts that have been proposed lack the apparent clarity that results from the more mechanistic conception of affect.

The Concept of Competence—Mastery and Control of the Environment

White (1959) in a seminal article proposes the concept of competence as a crucial element bringing together the diverse evidence cited in criticism of drive theories.

> I now propose that we gather the various kinds of behavior just mentioned, all of which have to do with effective interaction with the environment, under the general heading of competence. According to Webster, competence means fitness or ability, and the suggested synonyms include capability, capacity, efficiency, proficiency, and skill. It is therefore a suitable word to describe such things as grasping and exploring, crawling and walking, attention and perception, language and thinking, manipulating and changing the surroundings, all of which promote an effective—a competent—interaction with the environment. . . . I shall argue that it is necessary to make competence a motivational concept; there is a *competence motivation* as well as competence in its more familiar sense of achieved capacity (White, 1959, pp. 317–318).

After asking whether the behaviors cited might be accounted for by specific intrinsic motives or a limited number of broader motives, he says: "I believe that the idea of a competence motivation is more adequate than any of these alternatives and that it points to very vital common properties which have been lost from view amidst the strongly analytical tendencies that go with detailed research" (p. 318).

Effectance is the name given by White to the basic motivational aspect of competence. The affective side of effectance is the "feeling of efficacy," the behavioral manifestations are "the fixing of some aspect of the stimulus field so that it stays relatively constant—and it also involves the focalizing of *action* upon this object" (p. 322). Behavior resulting from competence motivation is "directed, selective, and persistent, and it is continued not because it serves primary drives, which indeed it cannot serve until it is almost perfected, but because it satisfies an intrinsic need to deal with the environment" (p. 317).

The major examples given are drawn from Piaget's (1952) descriptions of his own children and how they emphasize play in a contented state.

Competence motivation is not something that overcomes strong bodily urges, but is a "need to deal with the environment" under conditions in which intense hunger, pain, or fear are absent. On the other hand, "there are plenty of instances in which children refuse to leave their absorbed play in order to eat or visit the toilet" (p. 321).

The concept of competence is an excellent example of recent trends away from notions of specific behavior-prodding stimuli toward a more inclusive analysis of trends in the flow of behavior. What White sees as the most essential aspect of playful exploratory behavior is "the continuing transaction which gradually changes one's relation to the environment" (p. 322). In order to capture this essence, one must forego the apparent clarity achieved through analysis of individual transaction with the environment. This poses a critical and unresolved problem. In order to predict a specific act, we look for a criterion that differentiates this act from other possible acts. Such a criterion may be the presence of a drive or a stimulus or affect. It could be the "feeling of efficacy" in some anticipatory form. But if we follow White's argument, there may not be any such criterion available for each individual act. The analysis takes on a broader, more comprehensive explanatory aspect but loses its specific predictive ability.

White is not proposing *the* motive of human behavior, but suggesting one which is important. "It does not include behavior in the service of effectively aroused drives. It does not even include activity that is highly random and discontinuous, though such behavior may be its most direct forerunner" (p. 323). One of the conditions for competence motivation to appear is apparently contentment or at least low drive state. This is reminiscent of the proposal by Maslow (1954, 1955) of a hierarchy of motives. According to Maslow, drives, such as hunger, thirst, and sex, must be dealt with in a satisfactory manner before higher motives come into play. Maslow makes a distinction between deficiency motivation and growth motivation. The notion of growth motivation has its roots in Goldstein's (1939) concept of self-actualization and is similar to Allport's (1955) "Becoming" as opposed to "Being."

In this sketch of major trends, we have chosen to present White's position in some detail to stand as a representative of a general trend emphasizing the striving, outgoing aspect of behavior rather than the defensive essentially passive nature. This trend with its strong supporters in Maslow, Goldstein, and Allport among others, seems to us at once immensely important in its attempt to capture neglected aspects of motivation with an analysis of larger units of behavior, and, at the same time, frustratingly imprecise. In this day of strong reductionistic influence, we

find it difficult to deal with these larger hunks, but are increasingly convinced that such a level of analysis is necessary.

Summarizing our discussion of current approaches to motivation, let us emphasize the following distinctions. Research dealing with motivational phenomena has been primarily under the influence of reinforcement theory. The major proposition is the thesis of the sufficiency of *reinforcement histories* in predicting behavior. In general, theorists have defined reinforcement in terms of increased probability of a response leading to an *empirical* specification of what is a reinforcer, or they have attempted to analyze organismic states and come up with an *a priori* definition of a reinforcer.

Some considerations deriving from attempts to specify the theoretical aspects of a reinforcer have led to the suggestion of *affective arousal* theories. *Affective arousal theory* has concentrated effort on the problem of what stimuli produce affect. More general experiential states such as *competence, achievement, self-actualization* have been proposed as determinants in the organization of broader sequences of behavior.

Program for a Complete Explanation of Human Motivation

Accepting the necessity for a *program* based on the atomic description analysis and the reinforcement history thesis, what is needed for a complete explanation of motivation is something based on a first-person analysis of personal knowledge and personal causation. Accepting the fact that man is a type of animal, we are proposing to take advantage of the fact that, since man is being studied by man in psychology, there is a unique source of knowledge applicable to this situation that is not applicable when man studies other animals or physical objects. This unique source derives from the fact that being a man gives the scientist more insight into the private world of another man than of another animal. If I make inferences about a stone based on my own personal experiences I will surely be wrong, and the same is probably true if I make inferences about other animals. But in my own personal experiences, I have a valuable source of knowledge from which to make inferences about other men. The inferences may not always be correct, to be sure, but they clearly give me an edge in dealing with other men as compared to dealing with physical objects. In short, to attempt vigorously to avoid anthropomorphism in dealing with physical objects is only sensible. Objectivity is the goal. But to extend this aspect of physical science to the study of human psychology is absurd. In psychology we can afford to be anthropomorphic and this does not make us necessarily anthropocentric.

Sources of Knowledge

The source of knowledge about most of the motivationally or affectively toned concepts such as hunger is available to all, but it is essentially a private affair. A feeling of hunger, an incentive, an intention, that is, one of Skinner's "explanatory fictions," would be accepted far more readily by a layman as psychological phenomena than would the number of hours of deprivation or an orienting response. In fact, these "explanatory fictions" are used by the layman as if they were valid explanations. They have been rejected for the most part by psychologists for two reasons: (1) they appear to be inadequate as explanatory concepts, and (2) they are subjective states.

The first reason is perfectly valid if true. The second can no longer be accepted. The purging of psychology of all subjective phenomena has served an important function in exposing pseudoexplanations. In addition, strict adherence to behavioristic analysis has most often resulted in parsimony. When behavioristic zeal leads to ignoring psychological phenomena, simply because they are subjective or private, without investigating their importance first, then the procedure is arbitrarily limiting the field (see Koch, 1964, for an elaboration of this).

Skinner has ruled out subjective and, hence, motivational concepts, not because they are private events but because they are inadequate explanations. "The objection is not that these things are mental but that they offer no real explanation and stand in the way of a more effective analysis" (1964, p. 80). Such a statement is based upon the historical fact that mentalistic philosophies have hindered the advancement of behaviorism. The present state of sophistication in psychology, however, will help to avoid the old pitfalls and there are reasons for turning to an analysis of some of the subjective phenomena in their own right.

Clear understanding of the behaviorists' reservations may be used as a backdrop to insure caution against using subjective states as terminal data. The mere fact that these states are originally private, however, is no deterrent to studying them. As Skinner points out, the private-public controversy boils down to the success in communication within the verbal community. An experimenter who observes a rat turning right in a maze is experiencing a private event. The fact that it can be more adequately communicated through the verbal community does not make it essentially different from other private events which are less easily communicated although it may make it more useful scientifically. What is needed is an adequate means of communication about so-called subjective states, not the rejection of them. Skinner himself says, "The extraordinary strength of a mentalistic interpretation is really a sort of proof that in describing

a private way station one is, to a considerable extent, making use of public information" (1964, p. 91).

The problem with personal knowledge is to convert it from the private realm to the public realm. Bridgman (1927) gave science a tool for making scientific concepts public through operationism, i.e., the technique of defining concepts in terms of physical operations that can be reproduced by any scientist. Some of the difficulties inherent in a pure operationism will be discussed in Part IV of this book, but the value of attempting to operationalize psychological concepts should be obvious throughout the book. Furthermore, it should be clear that defining concepts in terms of physical operations is the result of a programmatic position that accepts the thesis of the sufficiency of atomic analysis.

On the face of it, operationism may appear to be useless as an approach to establishing the validity of private concepts that constitute some of the content of personal knowledge, especially the knowledge of personal causation, and one might well hesitate to suggest that operationism of any type is applicable to personal knowledge. It was Bridgman (1959) himself, however, who suggested the type of operation that may be applicable to personal knowledge. In order to understand this bold step, we must investigate in some detail Bridgman's presentation. This will be done in Chapter 2. For the present, we need only note that we believe that psychology has a technique for applying operational analysis to concepts derived from personal knowledge. This technique, known as content analysis and applied to thought sampling, will be discussed and criticised in detail in Part III of this book.

An Overview

In this first chapter we have raised many problems, but the reader may be asking himself, "What are the basic problems of motivation theory?" We have not provided a conventional list such as, What is a motive? Is all behavior motivated? Is a motive a directing or an energizing agent? These are not the basic problems. In fact, they may be pseudoproblems growing out of specific orientations to science. The most basic problem derives from the fact that motivation is a concept invented by men to help understand behavior. The concept is not forced on us by experimental data or empirical observations publicly communicated, and a science of behavior based on presuppositions that preclude anything but objective evidence is fooling itself if it uses the motivation concept. Motivation is something we know from within ourselves, from personal causation, and we know it in a different way from the way we know ob-

servable facts in the physical world of objects. The most basic problem, then, is to reconcile this type of knowledge with the vast store of more objective knowlege already at hand.

Inevitably, we must try to understand the presuppositions that we take with us in our attempts to explain behavior and this involves us in some very old philosophical debates. In Chapter 2, we try to uncover some of the presuppositions by presenting three basic dilemmas under the headings of the Mind-Body Problem, Causation, and Hedonism.

The first must be unearthed because Descartes and the philosophers have bequeathed to us a conception that supports not only the rejection of the concept of Mind but has promoted a conception of psychology that cannot include the very evidence upon which the concept of motivation is based. We do not have to postulate a "mind," but we must include in our psychology such eminently psychological concepts, which occur only to one individual and are not objectively observable, as thoughts, perceptions, affect, and ultimately motives. The controversy over causation is unearthed in order that we may realize the problems involved in using the concept and may avoid the attractive but erroneous approach to explaining motives in terms of "physical causes" as well as the trap of explaining behavior as caused by thoughts or affect, for instance. The philosophical debate over hedonism forms the roots of explanations of behavior in terms of pleasure or pain, i.e., affect.

All three dilemmas are considered so that we may build upon firm ground and a solid understanding of the past. All three bear on the central problem for motivation, that of reconciling objective with personal knowledge, of investigating the human being as a physical object in third-person terms, and, at the same time, as a psychological subject in first-person terms.

Once we have confronted these problems, we can go on to the more conventional problems. In Part II of the book, we pursue the rather mechanical notion that affect spurs behavior. On the assumption that certain stimuli arouse affect within the organism, and the postulate that behavior will be directed toward maximizing positive and minimizing negative affect, a very general theory of motivation can be developed. Two basic questions are posed by the affective arousal position. The first is: What stimuli in the world produce affect? The second is: How do stimuli acquire the capacity to produce affect? We draw these questions from arousal theory, but we cite evidence from many diverse sources. By the simple gambit of assuming that drive-stimuli produce affect, we are enabled to include an enormous literature which is important to any treatise on motivation. This literature is primarily the result of attempts

to answer the question: What is reinforcement? It forms the most solid empirical foundation upon which to build a motivation theory. We have attempted to ask the question in a way that will integrate this reinforcement literature with evidence stemming from affective arousal theories.

At the conclusion of the discussion of stimulation and affect it appears that a specific state of fear or hopeful anticipation may precede some motivated behavior, but apparently it cannot account for all motivated behavior. A more general concept of affect or ultimately of the motivated state appears needed. In Part III, we consider a development in motivation theory that was originally based on the specific concept of affect but broadened to include investigating motivated states through the analysis of thoughts. Here the problem of the relationship of thoughts to behavior is raised in the context of the achievement motive, the human motive measured by thought samples about which most is known. Part III attempts to present and critique the research produced by this technique as well as to elucidate the basic question of the relationship of thoughts to action. Careful analysis of thought samples is presented as the most advanced (yet still very crude) technique of operational analysis of first-person subjective states. An attempt is made to shed some light on the problem of intrinsic motivation from this perspective using the concept of personal causation.

Up to Part III in the book, we shall be concerned with the concept of motivation as it was developed in the theories of psychologists—the results of psychologists' attempts to understand human beings. This may make it appear that they are the only ones in this game or that they do it in a unique way. In fact, all men gain knowledge of their fellow men through observations in interaction with them—all men develop concepts that help them understand their fellow men. Psychologists, generally of the social variety, have studied the process by which men form impressions of other men and attribute to them traits, intentions, and motives. In Part IV, we present the evidence from these studies under the headings of the perception and knowledge of persons, the attribution process, and inferred motives. The data derive from studies in the area of person perception and shed some light on the phenomenology of motivation.

In Part IV, it appears that an important aspect of the attribution process is the inference that behavior originates from the person's own intentions as compared with the inference that behavior is done because he was forced by someone or something else to behave in the way he did. Apparently the perception of motivation in another person affects the behavior of the observer. This raises the question: What about the perception of motivation in self—does this affect behavior? This is the basic

question for a theory of Personal Causation. The last section of Part IV of the book attempts to elaborate the concept of Personal Causation and to present some evidence indicating the effects of personal causation on behavior.

In writing the book, our thinking has been most influenced by two concepts. The first, as is evident in Parts II and III, is the concept of affect. We took as a working definition of motive the one presented by McClelland *et al.* (1953) in which affect is primary, namely, *"A motive is the redintegration by a cue of a change in an affective situation"* (p. 28). We do not take this as "the ultimate definition." In fact, we will not present such a definition. The concept of motivation is not something that can be defined in one sentence. Our concept is presented in the entire book.

The second seminal concept that influenced our thinking, as may be seen most clearly in Part IV, is Heider's (1958) concept of the perceived locus of causality for behavior. Attributing to the self rather than to others the distinction between the perception of an internal or an external locus for causality helped us to reconcile the objective-subjective or first-person–third-person dilemma. This was further clarified for us by Polanyi's (1958) discussion of personal knowledge and resulted in our eventual acceptance of the word "causation" in the special sense of "personal causation."