

SECOND EDITION

MOTIVATION

Theories and Principles



2nd
edition

Motivation

Theories
and
Principles

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This edition is dedicated to five of
the primary reasons for writing at all:
Joel, Amy, Meredith, David, and Stephen

Preface

The overall purpose and approach of this second edition of *Motivation: Theories and Principles* remains the same as the first. It is an experimentally oriented survey of theory and research on animal and human motivation. This is not to deny the usefulness of clinical approaches, especially as a source of hypotheses, but space is limited and choices have to be made.

There are several noticeable differences between the two editions, however. First, the bulk of the book has been rewritten, even where new material has not been extensively added. This has resulted in some abbreviation of certain sections, and hopefully a greater readability, without loss of basic ideas. Second, there is a partial reorganization. Most notably, Chapters one and two were combined, and two new chapters were added. These are the new Chapter two (Emotion) and Chapter fifteen (Job Motivation and Job Satisfaction). The emotion chapter is explicit recognition of the greater need to integrate “emotional” and “motivational” concepts and phenomena. Given the plethora of theories of emotion, this is not a simple task for a textbook where the author is not intending to present a newly-integrated theory of emotion/motivation. The addition of material on industrial motivation and job satisfaction may serve as a bridge between the broad range of concepts in the psychology of motivation and the more specific concerns of management and industrial psychology. In point of fact, there is a large amount of first-rate research and theory in industrial motivation which is relevant to more general theories, but which is not usually represented in general motivation textbooks. This is to the detriment of such books, including the first edition of this one.

Third, the overall text has been divided into four major sections which may serve as signposts for the reader. This has necessitated some rearrangement of chapters, although not a great deal. Fourth, there are now summaries at the end of each chapter as an aid to the reader. Last, but not least, there is an updating of much material to take account of changing emphases in theories and research. Unfortunately, it is not possible to do justice within these covers to all the fine research which has appeared in the last five years. Hopefully, instructors will be able to fill in the preceived gaps.

A number of people are to be credited for their assistance. First, the reviews and criticisms provided by David F. Berger, State University of New York at Cortland; Irene Hanson Frieze, University of Pittsburgh; William Gordon, University of New Mexico; and Richard M. Wielkiewicz, former assistant professor at Moorhead State University, Minnesota; were important guides to the revision. Not all their suggestions could be followed, but all influenced my thinking. The comments and criticisms (overt or implied) of my own students, did not go unnoticed, either. Mike Mahoney and Nadine Matteson checked references and performed a variety of other tasks necessary to completion of a book. Barbara Kelly Kittle of Prentice-Hall, with her usual calm assurance, kept things moving more or less on schedule. I must also express appreciation to all the instructors who found the first edition of sufficient value to them that a second edition was possible. Finally, I mourn the loss of Professor P. T. Young, who so faithfully advanced hedonic theory, through bad times and good.

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INTRODUCTION

On August 1, 1966, Charles Whitman, twenty-five years of age, climbed to the observation deck of the Tower Building at the University of Texas. In two hours, he killed fourteen people and wounded twenty-four others before he himself was slain by the police. The question raised for all psychology, and especially for motivation theory, is *why*? By any common meaning of the term, Whitman was not rational, even though his actions seemed carefully planned. There were numerous interesting little twists in the accounts that followed.¹ Many people thought him a fine young man. He liked children, worked hard, and had been an Eagle Scout at the age of twelve. He had a good sense of humor and most of his friends and acquaintances seemed to regard him highly.

There are many possible explanations for Whitman's two-hour spree. He had a need for achievement, particularly to surpass his father, but was frustrated by not doing as well as he hoped in school. He was continually stressed by overwork; he carried heavy academic loads and part-time jobs. His family had an abiding interest in guns, which reporters saw in every room of his parents' house after the incident. And there was possibly a specific biological disorder: He was reported (upon autopsy) to have a brain tumor in an area known to be related to aggressive behaviors. Any of these factors as well as others not considered here, might have led to the final tragic outcome. We cannot really know the answer to this particular drama, because the central character is gone. This much we do know: The answer is not simple. But it is the kind of mystery psychologists are supposed to help unravel. Its very irrationality is what seems to demand a "motivational" account.

We cannot, of course, sustain the macabre drama of a Charles Whitman story for a whole textbook. We must go into the more prosaic world of scientific theory and research to explore and analyze motivational concepts. Motivational concepts are supposed to help explain the fact that *under virtually identical external circumstances there are great variations in individual behavior*. Someone else in Charles Whitman's situation might have behaved quite differently than he did.

Sometimes, a *single* motivational concept seems to provide adequate explanation, such as I eat when I am "hungry" but do not eat otherwise. Many motivational concepts might be needed to explain a situation as complex as Charles Whitman's, however, and we might find ourselves discussing instincts, needs, drives, goals, incentives, conflict, needs for achievement or power, frustration, and aggression. We shall look at many such ideas *critically*, becoming wary of the "easy answer," but gaining insight into motivation theory and concepts.

Some psychologists have argued that motivational concepts are too vague to be useful. But many real-life problems seem to demand motivational ex-

¹ I am indebted to Dr. James Steintrager, who was on the Texas campus that day, for a detailed description of the unfolding events and for local newspaper accounts.

planations, at least in part. Why do some children steal? Why do some people take drugs? Why do some kids do well in school when equally talented ones fail? How can we get people to work harder? Why do we have wars and killings? Why do people create? The individual variations in these activities highlight the need for motivational explanations and the possibility of producing change for the better.

Outline of this chapter. This chapter lays the groundwork for all that follows, putting forth a number of ideas which are fundamental to the understanding of scientific explanation in general and motivation theory in particular. First, we consider two extremely important *philosophical* questions uniquely important to psychology: the nature of the *relationship between mind and body*, and whether our behavior is *free or determined*. Second, we look at the *language of science*, which has both similarities and differences in comparison with everyday language. Third, we explore the nature of *scientific theory*, because motivational concepts cannot really be understood except in the context of theory and in relation to other concepts. Fourth, we examine the meaning of such commonly used terms as *objectivity*, *explanation*, and *causation*. Finally, in light of the foregoing, we face the problem of *defining motivation objectively*, including some of the issues that go into our choice of a definition.

In subsequent chapters we explore the relation of *emotion* to motivation (chapter two), *biological* analyses of motivation (chapters two to six), *behavior theory* analyses (chapters seven to eleven) and *social-cognitive* analyses (chapters twelve to sixteen). In reading these chapters, it is good to keep in mind the main points of chapter one, which represent the guiding orientation for the book as a whole.

MIND AND BODY: ONE OR TWO?

For the “person on the street” the relationship of mind to body is probably clear. The “official doctrine” (Ryle, 1949) is that “body” is physical, material, limited in space, time, and size, and objectively observable. “Mind,” on the other hand, is the opposite of all these qualities. It is subjective, directly known only to the individual possessing it, unlimited in physical dimensions, and is, perhaps, everlasting. This distinction is essentially the same doctrine generally accepted in Western theology to maintain the separation of “body” and “soul.” It goes back to the Greek philosopher Plato, but in its more modern philosophical form it is generally attributed to the French philosopher Rene Descartes.

As a person on the street might view it, then, we are aware of our circumstances, feelings, and ideas. Faced with several possible actions, we consciously and freely *will* ourselves to take this or do that action. This brief statement assumes, however, that Descartes’ view of mind and body is correct, and that we really are free to make any choice we wish. Since psychologists generally

look at both the mind-body and the freedom-determinism issues in a manner different from the person on the street, we need to examine these assumptions more closely.

There are two general classes of opinion regarding mind and body. The *dualisms* assume that mind and body are qualitatively different. The *monisms* assume that the mind and body really are qualitatively the same.

Dualisms

Interactionistic dualism. This is the view held by Descartes, commonly called *Cartesian dualism*. Mind and body are considered qualitatively different categories, immaterial and material, and what the body does depends on the mind. That is, there is a causal relation. Where and how do the two interact, however? Descartes ([1650] 1892) suggested the pineal gland in the brain as the point of interaction and developed a physical model based on reflected light rays to include this idea. He proposed that light energy comes into the eyes and activates “spirits” that are reflected one way or another by the pineal gland, which he saw as something like a pivoting mirror. Depending on where the spirits were reflected, different movements of the body occurred. The term *reflex*, referring to an automatic movement following a particular stimulus (such as a knee jerk when the patellar tendon is struck), comes from Descartes’ description of the “reflection of spirits.” We would now call these “spirits” *neural impulses*. Animal behavior consisted entirely of reflexes; humans were said to have reflexes, but the human mind could *will* various behaviors as well.

The logical problems with such a theory are very difficult. If our minds and bodies really are so unlike each other, how could they interact? Factually, we now know that the pineal gland serves no such function as Descartes speculated.

Parallelistic dualism. Suppose we set two atomic clocks to exactly the same time, then leave them to run out their separate existences. Whenever we look at one clock we will be able to tell what the other says. The German philosopher Gottfried Wilhelm Leibnitz (Duncan, 1890) proposed such a view of mind and body. Just as one clock does not cause the other to tell a particular time, so the mind does not cause the body to do a particular thing. There is a high *correlation* between the two events in question, however. This view recognizes the obvious existence of mental life, as well as the body, and the correlation between experience and behavior, but does not raise the problem of how they could interact.

Parallelism may indeed sidestep the whole question of the ultimate natures of mind and body and simply make a *practical* distinction between them. Many people believe that the *methods* for studying mental activity (such as recording what people *say* about their experiences) are sufficiently different from the methods of studying bodily action (such as physical recordings) that the mind-body distinction is worth maintaining for this reason alone.

Monisms

Mentalistic monism. How do we *know* about the existence of a world outside our own minds? It seems obvious that we know about it through our consciousness of it, through our minds. But, what *proof* could we offer that things exist outside our minds? Our dreams in all their terror or sensuousness *seem* real at the time, but we know they are not “real.” Neither are hallucinations. Mentalistic monism then, is the view that we do not *have* to assume any external world if our only knowledge of it is from our experience. This was proposed by the British philosopher Bishop George Berkeley ([1710] 1939). That is, our experience may be *all* there is.

Another British philosopher, David Hume ([1748] 1939) proposed an even more extreme view, called *solipsism*. Hume’s logical extension of Berkeley is the *possibility* that there is but a *single mind* and that any other apparent minds are only the experience of this mind, just as apparent objects are the experience of this mind. There are no physical objects, no bodies, no other minds. The logic is undeniable. Now someone may cry, “Why do thorns pain me unless thorns exist?” The answer for this is that the existence of thorns has first to be *assumed*. The assumption was *built into* the question. The solipsistic argument assumes the opposite, that such things do *not* exist. The burden of proof falls on “you” to show that they *do* exist as separate entities. If the experience of pain accompanies the experience of thorns, that is just the way experiences are. “But,” may come the reply, “surely a mind would not produce pain for itself.” This is irrelevant. We do not pick and choose experiences, they just *happen*. Indeed, even the objections to my argument do not exist outside my own mind because there is no separate “you” outside my own mind. The mind-body problem disappears since there is only the mind. Right or wrong, this argument has a practical implication about how we look at the causes of events, an issue to which we turn later.

Materialistic monism. This view holds that the single underlying reality is material. The mind represents the functioning of the brain. Let us use the analogy of a dump truck. The truck moves about, picks up and drops things, generally acting as a dump truck should. We do not, however, talk about these *functions* of the truck as *causing* the truck to behave in its ordained manner, or as existing separately from the truck. From this point of view, the body, especially the nervous system, is so constructed that one of its functions is consciousness. This function does not in itself cause behaviors to occur, however; it is the nervous system which does this.

The *neural identity theory* says that the material brain can be viewed in two different ways, just as we view two sides of a coin differently. As Pepper (1959, p.52) puts it, the physiologist’s description of the brain and a person’s report of his or her own experience are both *symbolic* statements about the same thing. Both describe the activity of the brain, but from different points of view and with different languages. For example, the person talks about seeing

the color red, whereas the physiologist talks about certain neurons firing under certain stimulus conditions.

✱ For every conscious mental event, there is a corresponding brain event. The converse is not necessarily true, however; we are not necessarily aware of everything that goes on in our nervous systems. We are not aware of the neural activities that control breathing, for example. Nor are we aware at a given time of most of the things we remember. Many neural processes involved in motivation, emotion, and memory may influence our behavior without our being aware of them at the moment. Neural activities of which we *are* aware *may* be especially important for such activities as learning, but this is to be determined by research rather than speculation. (Considerable research shows, for example, that we do not learn while sleeping.)

The close identity of conscious experience and brain function is increasingly shown in neurophysiological research. For example:

1. Some individual neurons in the visual part of the brain are responsive only to lines with vertical orientations, others to horizontal, and some to both orientations. Other neurons are responsive only to moving stimuli, not stationary ones. Such relationships have been found in frogs, cats, and monkeys, and it is reasonable to assume they also exist in humans.
2. If the two hemispheres of the brain are surgically separated, there are two independent "minds" where before there was one. Each half of the brain is now an independent unit and things learned in one half are unknown to the other half (e.g., Gazzaniga, 1967). Reason or logic would have never predicted that splitting the brain into two hemispheres would have produced two minds.
3. Various drugs have mind-altering effects, such as producing hallucinations or reducing anxiety, and so on.

There are many other lines of evidence which indicate the close relationship of mind and body: studies based on accidental injury to the nervous system, disease, or alcoholism; the extensive study of drugs affecting the mind; and electrical stimulation and recording from the brain. Historically, the arguments about a brain-mind distinction have severely underestimated the complexity of the brain, which we are only beginning to appreciate.

One final point on the mind-body problem. By nature and definition, science deals with observable events. For psychology, these observable events are *behaviors*, body activities ranging from filling out attitude survey questionnaires to throwing baseballs to describing drug experiences. The question here is whether we need to infer something behind those behaviors that is uniquely different from what the nervous system can reasonably be expected to do. The answer would seem to be no. This is not to say that all experience is, or can be, expressed in behavior, or that behavior tells us everything about a person. It simply says that, from a scientific point of view, the minds of *other* people are inferred from their behavior, including the things they say. We do not really question the existence of consciousness, but the immediate experience of consciousness is not usable data, open to other observers.