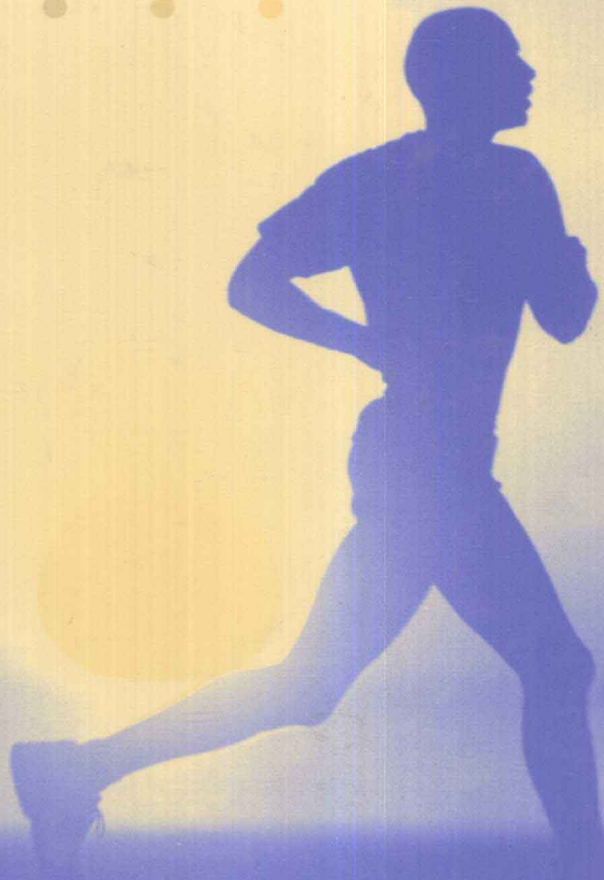


# MOTIVATION

BIOLOGICAL, PSYCHOLOGICAL,  
AND ENVIRONMENTAL



# **Motivation**

## **Biological, Psychological, and Environmental**

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**Allyn and Bacon**

Boston ■ London ■ Toronto ■ Sydney ■ Tokyo ■ Singapore

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A Pearson Education Company  
160 Gould Street  
Needham Heights, MA 02494

Internet: [www.abacon.com](http://www.abacon.com)

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### **Library of Congress Cataloging-in-Publication Data**

Deckers, Lambert.

Motivation: biological, psychological, and environmental / Lambert Deckers.  
p. cm.

Includes bibliographical references and index.

ISBN 0-205-27115-4 (hardcover)

1. Motivation (Psychology) I. Title.

BF503 .D44 2000

153.8—dc21

00-038116

Printed in the United States of America

10 9 8 7 6 5 4 3 2      05 04 03 02

**Photo Credits:** Boston Public Library: p. 47; Gerber Products Company: p. 63; The Stock Market Agency/William Taufic: p. 212; Ebsin/Anderson/Omni-Photo Communications: p. 349 (happiness); Photo Disc: pp. 349 (surprise), p. 350 (sadness); Dan McCoy: p. 350 (fear); Carroll Izard: p. 350 (anger); Ron Chapple/FPG International: p. 350 (disgust).

*To Lisa, Erik, and Cindy*

# PREFACE

## To Instructors

Several reasons contributed to the writing of *Motivation: Biological, Psychological, and Environmental*. First, during my 20-plus years of teaching motivation and emotion, I have used a variety of textbooks and wished I could integrate parts of each into one source. Second, my purpose was to organize the vast array of topics around the definition of motivation: “to be moved into action” or, for a more cognitive orientation, “to be moved into cognition, feeling, and action.” This definition guided the selection of the eclectic topics that are covered in this text. Third, an intrinsic interest in defining what motivation means to me sustained my writing and organizing of the material.

If motivation refers to the inducement of action, feelings, and thought, then what is the source of this inducement? As conveyed by the title, this book provides answers by describing different sources that are both internal and external to an individual. In Part One, Chapter 1 supplies an introduction to motivation and emotion. Chapter 2, “The History of Motivation and Emotion,” surveys ideas of philosophers and psychologists over the centuries in order to gain an appreciation of current concepts. Following Part One, the book is divided into four major sections: biological sources, internal and psychological sources, external and cognitive sources, and the emotions.

Part Two on biological sources begins with the idea that humans are predisposed to be motivated by some sources and not others. This point of view is developed in Chapter 3, “Evolution of Universal Motives,” which maintains that the predisposition for certain sources of motivation may be found in our evolutionary past. Knowing what motivated humans and humanlike creatures across the preceding million years may provide insights into our motives of today. A related consideration is that motives and emotions resulted from evolutionary changes that occurred in the brain. Chapter 4, “Drug Use, Brain Stimulation, and Exercise,” examines how the brain can be considered a source of motivation. The chapter contains descriptions of how these activities and procedures affect the action of certain brain chemicals (neurotransmitters) and the action of neurons located in certain areas within the brain. The body and its maintenance are another biological source of motivation, which is examined in Chapter 5, “Homeostasis: Temperature, Thirst, Hunger, and Eating.” This chapter concentrates on hunger but also covers the effects on eating of food palatability, a person’s tastes, and body image.

Part Three on internal and psychological sources describes aspects of motivation that are inherent characteristics of an individual. One idea in this section is that motivation affects the entire person, not just the behavior. Chapter 6, “Arousal, Behavior, and Affective Tone,” examines how motivation involves arousing and energizing an individual. Arousal, in turn, is associated with the proficiency of behavior. Just the right amount of arousal is necessary for best performance, whereas too much or too little arousal leads to declining performance. Pleasure is also associated with the level of arousal produced by various sources of stimulation, such as music or humor. What happens when a person is consistently overaroused? Answers to this question are proposed in Chapter 7, “Stress,

Coping, and Health,” which considers the possibility that a person can be overmotivated. Usually, we are concerned with undermotivation, yet there are times when we can be moved too intensely and in too many directions at once. These effects are stressful and detrimental to behavior and health. The individual is motivated to reduce stress to manageable levels: not too low and not too high.

Internal and psychological sources of motivation involve drives, psychological needs, and personality traits. Chapter 8, “Drives, Needs, and Awareness,” examines how drives are created and how needs are measured and organized. The chapter is primarily devoted to the psychological needs of achievement, affiliation, power, and cognition. These needs demand satisfaction, and a person is motivated to seek incentives and activities that will do that. Is it necessary for people to be aware of their psychological needs in order to be motivated by them? Chapter 8 examines research investigating the possibility that humans may neither be aware of their motives nor aware that their behavior is an attempt to satisfy them. Chapter 9, “Personality and Self in Motivation,” examines enduring internal sources of motivation: personality and self-concept. Personality traits such as extraversion and sensation seeking motivate people toward some situations and away from others. In addition, traits bias people to manipulate a situation to their liking. Finally, a person’s self-image of what she would like to be in the future serves as a source of motivation by inspiring her to change her current self to accord with a more positive vision of a future self.

In the bow-and-arrow analogy of motivation, the archer releases the arrow, provided an appropriate target is available. In Part Four on external and cognitive sources, motivation is considered in terms of how a target is selected and pursued. In addition, this section examines how the amount of effort necessary to reach a target constrains behavior. Chapter 10, “Extrinsic and Intrinsic Motivation,” examines motivation based on the value of an incentive. The chapter also considers why some motivation occurs independent of extrinsic incentives—that is, occurs intrinsically. In this case, the source of motivation seems to be inherent in the behavior, not in the external incentive. Chapter 11, “Goal Motivation,” describes the cognitive deliberation and planning that go into determining what incentives are selected to become goals. How a goal is framed, specified, and evaluated as attainable determine goal selection and goal achievement. Chapter 12, “Least Effort and the Economics of Motivation,” considers motivation as a resource like money. In other words, how much time, effort, and behavior does it cost to satisfy a motive or achieve a goal? The chapter surveys the relationship between the psychological costs, on one side, and the likelihood of satisfying motives and achieving goals, on the other.

Part Five covers a unique source of motivation: the emotions. Emotions motivate a person along a variety of channels: psychological, physiological, cognitive, expressive, and behavioral. Chapter 13, “The Subjective and Physiological Nature of Emotions,” examines the qualia, or subjective quality, of each basic emotion and how individuals learn to label that quality. This chapter also analyzes the differences between moods and emotions and explores the function of physiological arousal, which is an intimate component of emotion. Chapter 14, “The Unfolding and Function of Emotions,” traces emotion from the instigating stimulus and the appraisal of that stimulus to the various manifestations of emotion. The function of emotion is examined in terms of an impulse to action, as a link with facial expression, and as a way to influence thought.

## To Students

Motivation refers to the “why” of behavior, not the “how.” Why do we engage in certain behaviors and have certain feelings and thoughts but not others? Are we not motivated? Are we motivated by or for something else? I hope that reading this book will provide answers and contribute to your self-discovery as well as help you understand what motivates some of your behaviors and not others. By applying the principles of motivation, a person can institute self-change. Are there ways you wish to behave, or do you act in ways that you wish you didn’t? In the process of change, do people change the environment or alter something about themselves in order to make these changes happen? Perhaps you will find insights and answers in the following pages. I wish you stimulating reading.

## Acknowledgments

Along the way I received assistance from several individuals. First, I would like to thank former and current colleagues of Ball State University who read various chapters and provided me with feedback and encouragement. Their help was invaluable. They are Professors Paul Biner, Robert Fischer, Dale Hahn, Thomas Holtgraves, Rodger Humm, Frank Meeker, David Perkins, and Michael Wiederman. I sincerely thank Richard Rice of the English Department for help with polishing my prose. A heartfelt thanks also goes to Deniz Canel and Scott Novotney for checking the accuracy of the references. I would also like to thank all former students in my motivation and emotion course who read various versions of this book in manuscript form. To those individuals who reviewed various portions of the manuscript on behalf of Allyn and Bacon, I express my appreciation for their help in shaping this book. These reviewers are: Harvard L. Armus, University of Toledo; Donald W. Brown, Bridgewater State College; Christina M. Frederick, University of Central Florida; Eddie Harmon-Jones, University of Wisconsin–Madison; Harry L. Hom, Jr., Southwest Missouri State University; Norman E. Kinney, Southeast Missouri State University; Eric Klinger, University of Minnesota–Morris; William H. Moorcroft, Luther College; George F. Schreer, Manhattanville State College; Albert Silverstein, University of Rhode Island; Peter Urcuilo, Purdue University. I would also like to thank Dr. Fritz Dolak for answering all my copyright questions toward the end of this project. Finally, the staff at Allyn and Bacon deserve a “thank you” for turning manuscript pages into a textbook: Carolyn Merrill, for having faith in this project, and Lara M. Zeises, who kept up my spirits.

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## CHAPTER

# 1

# Introduction to Motivation and Emotion

*"There's no free will," says the philosopher; "to hang is most unjust."  
"There is no free will," assents the officer; "we hang because we must."*

—Ambrose Bierce, 1911

*All experiments are not worth making. 'Tis much better to be ignorant of a  
disease than to catch it. Who would wound himself for information about  
pain, or smell a stench for the sake of the discovery?*

—Jeremy Collier, 1698

- In order to prepare the groundwork regarding the concepts of motivation and emotion, consider these questions:
  1. What is the definition of motivation?
  2. What is the difference between motives and incentives?
  3. Does motivation determine behavior, or are humans free to choose their motives?
  4. Are there different sources of motivation?
  5. How is motivation reflected in behavior?
  6. What is emotion?
  7. How is research conducted in motivation and emotion?

## Meaning of Motivation

When their train engine broke down in the story *The Little Engine That Could*, the toy dolls asked various passing engines if they would pull their train the remaining distance over the mountain to the next town. Shiny New Engine came, and the dolls asked it to pull their train over the mountain. Shiny New Engine replied, "I pull the likes of you? Indeed not!" Later, Big Strong Engine came by, and the dolls asked it to pull their train over the mountain. Big Strong Engine very importantly said, "I won't pull the likes of you!"



Subsequently, Rusty Old Engine chugged by, and the dolls asked it for help. Rusty Old Engine complained of being tired and answered, “I cannot.” Soon Little Blue Engine passed along. Although not very strong, it was moved by the tearful pleading of the dolls and importance of getting the goods on the train to the town. While working hard going up the mountain, Little Blue Engine repeated the famous line “I think I can” over and over, and on achieving the goal, finished by saying “I thought I could” over and over (Piper, 1954/1961). The difference among the engines illustrates the differences between *could* (*can*) and *would* (*will*). Shiny New Engine and Big Strong Engine undoubtedly could but would not; they were not motivated to do the job. They were not moved by the pleading of the toy dolls or by the incentive of getting the goods over the mountain. Rusty Old Engine perhaps would but could not. It may have been motivated to do the job but lacked the capability to do so. Only Little Blue Engine both could and, more importantly, would. It was both capable and motivated to do so.

The purpose of this section is to consider issues surrounding the definition of motivation. Does motivation apply both to involuntary and voluntary behavior and their links to internal impulses and external incentives? Are nonmotivational ingredients like capability and knowledge also necessary for behavior?

## To Be Moved into Action

Consider the implication for motivation of the following statements:

Hunger drives a person to raid the refrigerator for food.

Music provides the impulse to dance.

The residence hall students enjoyed playing volleyball Sunday afternoon.

If you pay your credit card bill on time, then you will avoid an interest payment.

Students attend classes at the university in order to earn a bachelor’s degree.

The individuals in these examples who ate, danced, played volleyball, paid their bills on time, and attended classes were motivated to do so. Individuals who did not were not motivated to do so or were motivated to do something else. To be **motivated** is to be moved into action, according to the philosopher Arthur Schopenhauer (1841/1960), who was one of the first to speculate on the relationship between motivation and behavior. Action or behavior does not occur spontaneously but is induced by either internal motives or environmental incentives. According to Atkinson (1958/1983) and McClelland (1987), a **motive** is a person’s internal disposition to be concerned with and approach positive incentives and avoid negative incentives. An **incentive** is the anticipated reward or aversive event available in the environment. A motive is linked to an incentive, since attaining an incentive is the goal of a person’s motive (Atkinson, 1958/1983; McClelland, 1987). Hunger is a motive for eating. An interest charge is the incentive for timely bill paying, and a bachelor’s degree is the incentive for attending classes. Sometimes, however, the distinction between motives and incentives is not clearly maintained. For example, in a murder mystery, detectives may ask, “What was the perpetrator’s motive?” when they meant to say, “What was the incentive for committing the crime?” In other instances, it is difficult to specify the exact source that moves an individual into action: motive or incen-