BEHAVIORAL METHODS FOR CHRONIC PAIN AND ILLNESS

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with 31 *illustrations*

THE C. V. MOSBY COMPANY

Saint Louis 1976

Printed in the United States of America

Distributed in Great Britain by Henry Kimpton, London

Library of Congress Cataloging in Publication Data

Fordyce, Wilbert Evans, 1923-
Behavioral methods for chronic pain and illness.

Bibliography: p.
Includes index.
1. Pain. 2. Behavior modification.
3. Chronically ill—Care and treatment. I. Title.
[DNLM: 1. Behavior therapy. 2. Pain—Therapy.
3. Chronic diseases—Therapy. WL700 F713b]
RB127.F67 616'.047 75-31782
ISBN 0-8016-1621-2

VH/VH/VH 9 8 7 6 5 4 3 2 1

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Preface

This book results in part from two different sets of observations or developments. One stems from the obvious shortcomings of traditional health care approaches for resolving adequately many problems of chronic pain. After traditional methods and perspectives have had their day, a significant number of people will still continue to display pain problems that bedevil them, their physicians, and insuring and compensation agencies. The second is the emergence of behavioral methods and concepts as important evaluation and treatment tools for a variety of human problems. The term *behavior modification* is the most frequently used label. This book brings together behavioral concepts and methods to combat one of the major continuing problems in health care: chronic pain.

The approach used in this book is to reanalyze chronic clinical pain from a behavioral perspective and to describe both evaluative and treatment methods that are indicated by this analysis.

This book has been written with two kinds of readers in mind. One is the health care professional: physician, nurse, physical therapist, or occupational therapist. The other is the behavioral scientist or other human services professional with developing interests in the use of behavioral technology to help people with chronic illness problems. This latter group may include psychologists, psychiatrists, social workers, or perhaps members of yet other professions.

Newly graduating students in these various professions are increasingly likely to have received at least some exposure to the concepts and methods of behavioral technology. In some instances the training will have been extensive. For them, this book may serve to relate their behavioral training to a new context and a new set of problems. Practitioners in the field from these various professions are much less likely to have had training in or to have had more than superficial exposure to behavioral concepts and methods. For them, this book has a dual objective. One is to describe another way of looking at chronic pain. The second is to equip them with enough relevant behavioral technology that they can begin to add new dimensions to their evaluation and treatment procedures.

The concepts and procedures on which this book is based represent the work of many people. The tactical steps for applying operant-based methods to the management of chronic pain evolved from the conjoint efforts of many. It would be impractical to list the names of all of those who have made significant contributions to the process. We must be content with acknowledging that the development and application of the procedures represent a team operation. Certain individuals have made special kinds of contributions for which specific mention can be made. The names that follow report some of those contributors. Many others also could have been named, were space limitations not a factor.

A major part of the initial impetus for the operant program came from Justus F. Lehmann, Chairman of the Department of Rehabilitation Medicine, University of Washington. His encouragement and support were indispensable to development and growth of the program. His conceptual and procedural contributions were and continue to be equally important. Roy S. Fowler, Jr., Associate Professor of Psychol-

ogy, in the same department, played a key role from the outset, as did several other psychologists, including Patricia Sand, Roberta Trieschmann, and Lynn Caldwell. Physician support and procedural contributions were also vitally important. Among the many who have played a role in program development, mention should be made particularly of Barbara DeLateur, Kendall Holmes, Thaworn Hongladarom, George Kraft, Phil Morrison, Clyde Nicholson, Walter Stolov, and Janet Whitmore. Nursing also played a key role, and special mention should be made of Rosemarian Berni, Michelle Kenney, Hannah Kuhn, Laura Heard, and their many ward service colleagues. In physical therapy, Ann Nourse, Maureen McGee, and their colleagues, and in occupational therapy, Marilyn Wittmeyer and her colleagues were instrumental in providing a suitable treatment environment for testing the methods. Social workers Jane Itzkow, Katherine Chambers, Grace Schertzer, and others, and the Prevocational Unit directed first by Janet Hart and later by Mike Clowers, all have made their contributions.

To all these people and to their colleagues, who are far too numerous to mention, goes a special note of thanks for their help, their ideas, and their support.

The list would be incomplete without mentioning that any number of patients braved what often appeared to them to be the unknown and the unlikely-to-succeed. But they did it, and they let all of this evolve.

Wilbert E. Fordyce

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Contents

Introduction

This book concerns chronic clinical pain. It analyzes from a behavioral perspective the complex set of problems involved in chronic pain and considers diagnostic and treatment methods suggested by the behavioral approach.

The question as to what behavioral concepts have to do with pain is to be expected. Pain is ordinarily viewed in neurophysiological terms. It is considered to be a medical problem with so-called organic or physical characteristics. If, in a given case, diagnostic evidence suggests that the reports of pain do not have the expected basis of physical findings, the problem may be shunted into another conceptual pathway where the problem is viewed as nonorganic, that is, psychogenic, psychiatric, or emotionally based. It will be argued in this book that these distinctions have limited utility. Furthermore, whatever their merits, they leave untouched a number of other important issues about pain that involve behavior and factors that guide or change such behavior.

Before proceeding further, since the concept of behavior is being considered, a beginning definition of the term is needed. The concept will receive more detailed treatment in Chapter 4. Briefly, the term *behavior* refers to observable and potentially measurable actions of the organism; in this context, it includes patients, family members, and health care professionals. Behavior is, therefore, movement; it is observable movement. The definition is not intended to imply that there are not other organism activities, such as neural impulses, glandular secretions, mental images, or covert arithmetical calculations. The definition means that it is only the observable, countable behaviors that will be dealt with here. This constraint provides a number of important logistic and pragmatic advantages to both the professional and the patient.

The expression or display of pain is itself behavior. A moan or grimace or verbalized complaint is behavior. As such, it is vulnerable to influence by factors that influence all behaviors. This matter is the major—although not the sole—focus of this book. There are many other behaviors or actions of the person with a pain problem that are associated with the pain. They may influence its course or the interpersonal and social consequences of the pain problem. There is, for example, the effect of activity or inactivity stemming from the pain on the pain itself and on other body processes. Is there excessive disuse producing unnecessary atrophy? Would more action or movement create distraction and thereby decrease pain? Would systematic stimulation better activate inhibitory mechanisms that might dampen the pain experience? Is pain being produced or aggravated by other body processes such as muscle tension or deficient peripheral circulation? Each of these phenomena often can be influenced by behavior change methods.

In addition to the more immediate pain and pain-related behavior relationships, there are many complex social and interpersonal effects relating to a pain problem. The chronic pain patient, for example, often develops a dogged and persistent set of strategies for seeking additional help from the health care system. The pain patient who develops multiple sources of analgesics or narcotics is one prime example. The whole set of behaviors making up

health care use, excessive or otherwise, provides further examples.

There are yet more interconnections between behavioral concepts and what happens to people with problems of chronic pain. Restricted activity leads to unemployment and to altered social and recreational patterns. It may also lead to activation of wage replacement systems. This brings in the complex issue of compensation and its effects on illness. There is the question of how effectively a patient who is moderately impaired by a pain problem finds vocational or avocational outlets by which to maintain productivity. If he or she does not, the pain problem or its side effects often will worsen. Finally, a pain problem or the effects of the treatments used to deal with it may leave the person unemployable or in major ways restricted in social or avocational activities. What actions or behaviors can the person engage in that would make life more enjoyable?

Pain happens to people. People have behavior. The two, pain and behavior, are inextricably related.

The ideas, the methods, and the results on which this book is based reflect the efforts of a number of people working together since 1966. Results were positive, providing immediate impetus to proceed with further trials.

John Kenneth Galbraith (1958) once commented, "Events and the ideas used to explain them often have a way of pursuing an independent course." Such a comment undoubtedly can be applied to the methods described here. There is, as yet, limited empirical data from which to assess closely the effectiveness of individual segments of the behavioral approach to chronic pain. There is sufficient evidence to indicate that the methods, in their collective effect, are capable of producing significant positive results with many patients. Sometimes the results are dramatic (Fordyce and associates, 1973). In every case thus far treated, the patient had previously undergone multiple treatment programs for his or her pain problems without finding a solution. Each of those patients who displayed and maintained progress when treated by behavioral methods did so after failure to be helped by other approaches.

Chronic pain viewed in behavioral terms leads one to recognize that many chronic pain patients, to use a phrase gained from a colleague, Dr. Roy S. Fowler, Jr., suffer more than they need to. Pain patients pay a terrible price. It is not only that they suffer pain. Their ways of living are disrupted and perhaps virtually shattered. There may be enormous economic losses. But perhaps most of all, life is passing them by. As the years pass and treatment programs repeatedly fail to yield durable results, the sufferers must sit on the sidelines and watch their only chance at life slip past.

The burden is often made heavier by the very sources of help to which the patient turns. As will be shown in detail later in this book, the actions families take to help are often not only ineffective but actually serve to make things worse. The health care system also may add to the problem rather than help it. Multiple surgeries that fail to solve the pain problem and that produce additional functional impairments are a case in point. There are more subtle but often just as burdensome actions by the health care system. Methods of handling pain medications, activity, and rest, for example, sometimes worsen the problem or at least maintain it beyond what otherwise would have been a point of positive resolution.

The health care system, as well as family and friends, sometimes adds to the burden in another way. If the source of pain cannot be seen and the problem has not responded well to treatment based on the system's understanding of what the pain problem is, it is all too often the case that the patient's pain comes to be labelled as imaginary, psychogenic, or all in the head. Now the patient is trapped. The pain and its associated functional impairments persist. The only source of help, the health care system, has failed to solve the problem. More than that, the system may have begun to question the authenticity of the

problem. Family members or work associates may pick up the chorus and allude one way or another to doubts about the reality of the pain. Where is the patient to turn?

Experience with operant conditioning–based approaches to selected problems of chronic pain suggests that the difficulties just described often stem from insufficient awareness of the importance of learning or conditioning on the course of chronic pain.

The major concern here is pain, the chronic pain encountered in clinical settings. But chronic pain may also be seen as a ubiquitous member of a larger set of problems: chronic illness. The relationships between chronic pain and chronic illness, taken generally, become even more evident when viewed in behavioral terms.

More than is often recognized, illness is made up largely of behavior. It is a patient doing or not doing something or changing the way of doing something. Behavioral patterns and problems associated with acute or short-term illness are only temporary. The illness events might then be said to be under control of the pathogenic factor, and what follows is treatment aimed at removing that factor. So long as treatment is successful, the process is straightforward. The task facing the patient and his or her family is also simple: follow the treatment plan to minimize the interruption in life-style from the illness.

Adding the dimension of chronicity changes the picture radically. Chronicity ensures the need for behavior change by both patient and family. The health care system will therefore need skills for changing behavior, just as it needs skills for diagnosis and treatment. If essential patient and family behavior changes do not occur, treatment effectiveness will be diminished and sometimes eradicated altogether.

Chronicity of illness adds another dimension. The patient comes time and again to interact with the physician or other therapist. These interactions, in addition to whatever other characteristics they may have, are learning trials. Learning will occur. The question arises, however, as to whether the learning inevitably occurring is always to the benefit of the patient.

Careful examination of the situation in regard to almost any chronic illness, when viewed in behavioral terms, indicates that a significant part of what is involved focuses on the need for the patient and perhaps family members to:

1. Decrease, modify, or stop altogether some behaviors or actions they have been doing and which were enjoyed or had some value
2. Start to do some things not necessary before, not desired, and for which the negative consequences of failure to perform are remote and not previously experienced

The newly diagnosed diabetic must alter eating habits and must develop skill at checking blood sugar levels. He or she may also need to begin injecting insulin. These things must be done consistently and forever. The emphysema patient needs to stop smoking. The chronically obese person whose cardiac status is now compromised must stop eating so much. The paraplegic must relinquish life plans involving ambulation and start to go in new directions. He or she must also learn to check for skin breakdowns and to maintain a high level of fluid intake to protect bladder and kidney function. The post–myocardial infarction patient must learn to discriminate between too high and too low levels of exercise and must remain within that band of activity. The left hemiplegic patient must learn how to move about and how to scan to the left, when he or she cannot reliably judge distance, position, movement, and surface variations, all of which threaten to cause falls and hip fractures.

The examples are endless. The point is that chronic illness requires behavior change. Behavior change is not automatic. It most certainly is not automatically brought about simply by informing someone about what and why to change. Behavior change often requires the careful application of behavior change technology.

A secondary intent of this book is to stimulate the analysis of chronic illness in

behavioral terms. The problems and the methods described here will have pertinence to many forms of chronic illness for which pain is of little or no significance. The behavior change technology, as an operational tool, bears essentially the same relationship to chronic illness as it does to chronic pain. Stated another way, many patient management problems encountered in relation to chronic illness are likely to profit from the methods outlined in this book.

The objectives of the book can now be stated in behavioral terms. They are, first, to increase the extent to which physicians and other health care professionals analyze chronic illness, particularly chronic pain, in terms of the behavior of the people who have the pain and the people who interact with them. Behavioral analysis will of necessity also consider environmental cues and consequences that influence the pertinent behavior. The second objective is to describe use of these methods in the evaluation and treatment of chronic pain and in the prevention of some chronic pain and associated problems, with the hope they will be used more than at present.

The book is divided into three sections. The first section provides a conceptual context. It reviews the concepts of pain, psychogenic pain, and how learning or conditioning may play a role in the development and character of pain problems. The second section describes behavioral technology and considers how to apply it to treatment planning and patient evaluation. The third section details clinical methods for using behavior change technology in selected problems of chronic pain.

Since the ideas and the methods presented in this book represent somewhat of a departure from traditional perspectives in regard to chronic pain, some consideration should be given to the evolution of what might be called modern behaviorism.

Any choice of a starting point is arbitrary and ignores preceding developments. The earliest applications of behavioral concepts to illness began mainly in the context of mental illness and mental retardation. This is understandable, for, by the very nature of the problems encountered in those settings, there was bound to be an initial concern about what the patient or client did, his behavior. In the final analysis it was not that the people called mentally ill *were* mentally ill, but that they *behaved* in strange ways. It was what they did that got them into a kind of trouble: the trouble associated with being identified as having problems about which some kind of remedial or custodial action was necessary or with feeling distress severe enough to interfere with daily living and performance.

In the case of mental retardates, the emergence of behavior methods and supporting concepts had probably an even easier and more direct evolution. Clearly, the mental retardate could be seen as one who had deficient performance. The conern was with what he could not *do*. Moreover, working with mental retardates often did not have the same appeal as working with those identified as mentally ill or emotionally disturbed. There was less professional attention to the retardates and correspondingly less competition of ideas or establishment dogma. It was simply easier to find opportunities to try behavioral methods in programs for the mentally retarded.

Whatever the case, by the late 1950s and early in the 1960s, the professional literature began to be spotted with reports of behaviorally based work on various kinds of human problems. The work was based mainly on foundations laid by B. F. Skinner (1953) in relation to concepts of operant conditioning. Two early and often-cited publications certainly should be mentioned: Ayllon and Michael (1960) and Ullmann and Krasner (1965). Innumerable other significant pioneering efforts could be mentioned. It is not the intent, however, that this become a historical treatise. What is of some importance in providing a contextual perspective is to note that two kinds of changes were emerging from these and other early works. One was that a tool or technology was being developed. It began to be more possible and logistically and ethically more practical to help people

change; to solve or to ameliorate problems that previously had not lent themselves to cost-effective, or even simply effective, solutions. This is not to suggest that all problems of mental illness or emotional disturbance and of mental retardation were solved or significantly helped by behavioral methods. Nor does it imply that other methods were incapable of helping. But it can be asserted with confidence that a host of problems, some of which were not previously readily helped by existing methods, were and are being helped with these behavioral methods to the marked advantage of the patient or client and the funding sources, personal or organizational, for such services.

The second change was in how problems were characterized or identified. The sometimes startling results when behavioral methods were applied to problem behavior raised difficulties for some theorists and conceptualizers. The prevailing wisdom asserted that the actions of an emotionally disturbed (perhaps a ritualistic handwasher or a compulsive eater) person were controlled by underlying neurotic mechanisms evolved as a defense against some symbolic threat relating to earlier experiences, *and* that solution to the problem required somehow working through or retroactively reliving the earlier trauma. In contrast, behavior changers sometimes concerned themselves solely with helping the patient to establish a different behavior in place of handwashing or excessive eating. A positive result often followed and persisted, accompanied by more effective performance in other spheres. When only the symptom (for example, handwashing) and not the alleged cause was treated, the patient did not revert to his symptom behavior, nor did he display anxiety or other symptoms in its place. To the contrary, he often began to do better in many parameters of behavior.

It was an awkward task to explain this kind of outcome in prevailing conceptual modes. The least that could be drawn from, for example, the numerous case illustrations reported in Ullmann and Krasner (1965), to mention but one of many possible references, was that traditional conceptual models underlying professional methods should be reexamined. And, indeed, they were.

Behavioral technology and behaviorally based conceptual models, as now seems inevitable, began to be tested in yet other parameters besides those of mental illness and mental retardation. Chief among these other areas of application, pertinent to this book, are illness and health care. Perhaps the tool was the chicken and the problems to which it was to be applied or tested were the eggs. At any rate, the behavioral perspective, and the tools for change that relate to it, are now being used in many aspects of what heretofore has been considered physical illness.

The use of biofeedback technology as a means of trying to reverse or modify body processes that have been functioning to the disadvantage of the patient is but one set of examples. This work has been directed toward such targets as blood pressure, heart rate, brain wave activity, skin temperature, peripheral blood flow, and muscle tension. The procedures take direct aim at the process or phenomenon. To paraphrase, one way to help a person to relax painfully tense muscles (such as in tension headaches) is to teach him or her how to do that. Notably lacking in this approach is the assumption that one must always first understand and eliminate the alleged underlying causes for the tension.

The work with selected problems of chronic pain, which serves as the underpinning to this book, is another case in point. Essentially, as will be described in detail, the added element is to examine closely what the patient does—and does not do—and then to apply behavior change technology to help make desired and relevant changes in these behaviors. This kind of approach necessitates a frame of reference and a technology for doing something about the problem. This book will be concerned with the conceptual framework and the technology.

If the events of the past decade or so are understood at all correctly, it seems apparent that the next few years will see

many reexaminations of illness-related problems and the applications of methods derived from behavioral science to the health care system.

It is essential to recognize that awareness of the importance of learning or conditioning in chronic illness leads to major changes in how these phenomena are perceived. This seems particularly to be the case in regard to chronic pain. The evidence is all around us that traditional methods, although scoring many successes and helping untold thousands of patients, also result in many patients failing to find relief and solutions to their problems. The rapidly expanding number of pain clinics now appearing on the scene is one kind of evidence of the not infrequent failures of traditional treatment to resolve pain problems.

This book will examine chronic pain, as one form of chronic illness, from a different conceptual perspective. When illness becomes chronic, one of the inevitable consequences is the opportunity for learning or conditioning to occur. That is, it becomes possible for sequences of illness-related behaviors and their consequences to occur repeatedly. That is how learning occurs. It will be shown that many of the key elements making up a problem of chronic pain are organism responses that are subject to conditioning or learning effects. It follows that chronic pain, as is true of other chronic illness states, needs to be examined in terms of the learning or conditioning that is occurring, has occurred, or might occur. In short, in addition to its numerous other characteristics, chronic illness is learning opportunity. Not all of the learning is to the patient's advantage, nor does it contribute to the reduction of the illness.

The time dimension of chronicity, with its attendant learning opportunities, leads one to recognize that chronic pain is usually both the presence of something and the absence of something. Pain is commonly the presence of some ongoing body damage factor producing, among its effects, distress or the subjective experience of pain. There is something wrong, or there may be. At the same time, the fact of chronicity is likely to mean that the patient's way of life will have been altered in some degree through the course of the illness. He or she is not only sick (in pain) but also has gaps in well behavior. There are things he cannot do or has not done for perhaps many months, even years. There are absences of well behaviors. The protracted reduction in or abstinence from well behaviors also creates sequences of behavior-environmental consequences, which, when repeated, may become learned or conditioned. These gaps in well behavior (that is, things the patient does not do or has not been doing because of the pain problem) almost always involve others around the patient. Elaborate networks of learned behavior patterns involving patient and family emerge, are rehearsed, and are selectively and effectively conditioned. Modification or resolution of the pain or illness problem does not inevitably result in concomitant change of the learned behavior patterns associated with gaps in well behavior. To put it another way, chronic pain provides opportunity for the network of pain behaviors to be influenced by learning and conditioning. Chronicity also makes it possible for corresponding gaps in effective or well behavior performance to develop, to be conditioned, and to persist, even after the pain problem has been resolved. It follows that treatment of chronic pain must look at both the presence of pain problems and the absence of well behavior. Both sets of problems play crucial roles in treatment outcome.

One final preparatory comment seems in order. It is intended to help make the shift in perspective presented in this book an easier one. What does it mean to loosen one's hold on the traditional concepts of motivation and personality, of adjustment and defense mechanisms to which we have all been so long exposed and committed? It is easy for the issue to become an intellectualized conceptual battle of interest only to a few. It is perhaps even easier for it to become a tug-of-war between dogmas or to seem that crusaders are attacking the bastions. This book is not intended as a

doctrinaire treatise. It is aimed instead at a particularly vexing problem in health care. But the approach sets out from a different view of the way humans function. The differences between this behaviorally based view and the conventional wisdom from which it varies in some degree can be related to the concept of sensitivity. This matter will receive more formal treatment later in the book. Let me take a few lines to deal with it more informally and in a more introductory way now.

Each of us has a continuity. We are certain persons with certain names and fairly consistent physical and functional characteristics. Each of us tends in considerable degree to see these consistencies or continuities almost as constants. In regard to physical appearance and attributes, we are nearly always surprised at the amount of change when we see a snapshot taken as recently as 6 months or a year before. The consistencies of appearance and the like are not as consistent as we think. The same is true of our actions. We may think of ourselves as having certain styles of behavior or, if we use the technical term, certain traits or personality characteristics. We tend to see ourselves as displaying a consistent way of behaving to others. Indeed, there are consistencies. But change and variability are also ever present, more than we regognize, because we tend to be aware mainly of the consistencies.

The discrepancy between what we see as consistency in our actions and what instead is a greater degree of variability and ongoing change can be thought of in terms of sensitivity. We are more sensitive as functioning beings to our immediate environments than we often recognize. What we do, how we act, what we say, how we move, what decisions we make have a significant ongoing interaction with what is going on around us—and with what we anticipate will soon be going on. To put the point another way, our behavior tends to be more influenced by the immediate and the immediately anticipated environment than we often recognize. We make more use of cues and environmental feedback in our ongoing behavior than we think we do. We tend to overestimate the importance of our personalities and to underestimate the skill and sensitivity with which we perceive and use cues and guidelines from our surroundings.

Personalized examples are risky affairs because they do not necessarily apply to the next person, but one will be ventured to illustrate the point. I recently had my first experience at driving in England and did so for a few weeks and several hundred miles. The conventional wisdom often voiced in this context is that driving on the right-hand side is a well-established habit and is therefore difficult to break. Habit, in this context, can be likened to a well-established trait or behavioral disposition; it is part of the driver's personality, so to speak. The truth of the matter is that about the only real hazard to the change of driving on the left is in the first few seconds of each driving period. It takes a moment or so to remember to watch for the cues. Thereafter, if one relaxes, it rapidly becomes apparent that there is an abundance of continuously presented environmental cues that guide driving. In England, these cues are to keep to the left. The cues are not simply signs saying, "Keep to the left," although a few of those are encountered. There are a host of other and continuously present cues that guide. Roadside advertising signs are placed differently. Each car on the road is a reminder. Road directional and curve indicator signs are placed differently. Instead of driving behavior being dominated by habit or personality, this experience suggests that it is a flexible process, sensitive to environmental cues and anticipated consequences.

As we learn to watch our own behavior, we can become aware of how sensitive we are. This is not a doctrinaire position or a bit of dogma. It is simply an observation. This book, just as is true of much of the work presently being done with behavioral methods, is simply being responsive to the flexibility and sensitivity of the human organism.

The importance of the environment and

our interactions with it on behavior will be referred to repeatedly in this book. It means, of course, that the diagnostic or evaluation process, as well as treatment, must take into account and deal with the patient's environment. To focus solely on the patient is to ignore a major set of highly influential factors.

There are many implications to the preceding point. One is that once a pain problem has become chronic, it also has become a family affair. Inevitably, patient-family interactions will be playing significant roles in the maintenance of pain behavior or the failure to reinforce or support well behavior or both. It follows that diagnosis and treatment almost certainly need to involve the family as well as the patient. We *are* sensitive to our environments. Our pain behaviors, as well as other behaviors, will reflect this.

The primary focus of this book is on the use of behavioral methods in the evaluation and management of certain types of chronic clinical pain. It is not intended to be an exhaustive analysis, or even an extensive set of the many facets of the subject of pain. There will be a not inconsiderable review and discussion of the broad context of pain to provide as many touch points as possible between the ideas and methods described here and what is known about pain. But it is well to remember that although this book presents some different perspectives and tactical treatment procedures regarding aspects of clinical pain, it does not purport to redefine pain nor to challenge theories about the nature of pain.

There are additional limits of coverage that should be set forth in these introductory comments. In the first place, this book focuses only on parts of the subject of pain, the parts that appear to have the greatest relevance to behavioral concepts and methods. Many pressing and important pain problems are not mentioned or referred to, much less dealt with. This is not a book about how to diagnose and treat pain. It is a book about how to add behavioral concepts and behavioral methods to one's diagnostic and treatment armamentarium. To do so will augment the professional's capability for dealing with some but not all pain problems.

There are further constraints to the information and methods that should be identified at the outset. I am a psychologist. I am not a physician or a pharmacologist or a physical therapist, to name but a few. The approach in this book, as it bears on specific diagnostic or treatment issues, is to describe behavioral aspects of what are broader processes. For example, consider the use of exercise in relation to various forms of back pain. This book does not specify when to use exercise nor which exercises to use for a given kind of pain problem. The reader will need to look elsewhere to sources competent to address themselves to such matters. What this book does is to describe how to program exercises in such a fashion as to better organize and control learning or conditioning factors. The exercises selected on the basis of competencies other than those of this book can then be delivered in a manner to maximize performance and to minimize functional impairment associated with the pain. A similar illustration pertains to the use of pain medications. I have limited knowledge about the pharmacological properties of analgesics, narcotics, and the like. There will be no suggestions here as to which medications to prescribe or to avoid. There will be attention to the manner of delivery of the medications selected. Prolonged medication regimens provide situations fraught with potential for learning, addiction, habituation, or whatever term one chooses. There are delivery strategies that draw on learning principles and that can have significant influence on the course of the pain and the medication problems.

Finally, at a philosophical level, the reader will not find here a comprehensive definition of pain—either what it is or what it is not. This is basically a methods book. It will leave to others the task of deciding precisely what the semantic and logical boundaries are to the concept.