PRACTICAL GUIDE TO USING VIDEO IN THE BEHAVIORAL SCIENCES
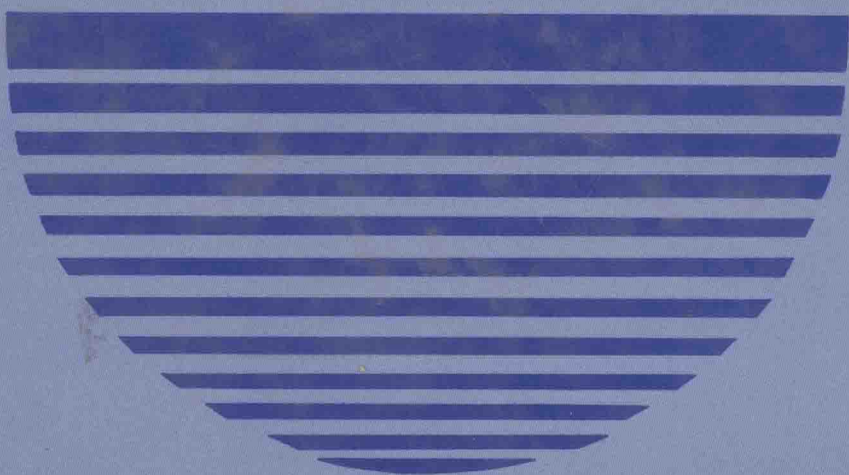
Peter W. Dowrick and Associates

Practical Guide to Using Video in the Behavioral Sciences

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and Associates

To:
Students at UAA who
participated (1981 through 1990) in a variety of video projects,
contributing their enthusiasm, energy, and insight.

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Preface

In 1986, Simon Biggs and I began some dialogue about following up on a book we had previously edited. After correspondence across the Atlantic and discussions with others, most notably Herb Reich of John Wiley & Sons in New York, the plan for this book emerged. Whereas it revises and expands on some parts of the earlier work, it is something of a companion volume, not a second edition. The purpose was to produce a professional text that is practical without being a cookbook and authoritative without being stodgy. It is also intended to be reasonably comprehensive; however, I confess my limitations and biases in this respect. Although I have tried to sample from many areas, I am a psychologist with a bent toward training and therapeutic issues, and the selected examples, even the conceptual summaries, are bound to reflect this background.

The organization of the book is possibly unique and, I hope, a worthwhile experiment. I have written Part I as a "book within a book," to set out the major uses of video in the behavioral sciences as they seem evident to me. Part II consists of invited contributions that are intended to illustrate applications in each of the purposes identified in Part I, nearly matching on a chapter-by-chapter basis. Thus, Chapter 1 (in Part I) on equipment is matched by the first chapter (Chapter 9) in Part II, which describes applications in interactive video, an area of advancing technology; Chapter 2 examines video for assessment and documentation; its companion chapter (Chapter 10) in Part II describes the analysis of facial expression and emotion; and so on. All chapters in Part II are contributed by scientists and practitioners who are experts in their fields. (At the beginning of Part II, the relationships between chapters and their special contributions are set out in a table.) A frequent disadvantage of edited books is the unevenness of style and the gaps or overlaps in content; I hope that this concern will become a nonissue by the arrangement of companion chapters, at the same time preserving the advantage of diversity and range of expertise that cannot be encompassed by a single author.

The task of being comprehensive is somewhat formidable. I examined some 6,000 references as a significant sample of those available, in addition to much personal networking, and took the precaution of making one 15-month computer search (among others) of every item containing any words beginning with *video*. This search on the PsychInfo database turned up nearly 3,000 articles and dissertations, which I classified into different uses. Even so, I can see now where the book could have been organized differently. For example, *documenting* is sufficiently important in its own right and differs enough from *analyzing* with videotapes so that it really

deserves a separate chapter, even though the amount written about the principles and effects of video documenting in the behavioral sciences is relatively limited. Chapter 5, on the use of video *vignettes,* could also benefit from a split into two chapters, separating research from therapeutic and educational issues. In addition, there are some areas of video application in which I see a significant potential, unfortunately not supported by a quantum mass in the available reports. In particular, I was most disappointed not to find more evidence of use for video at the community level. In 1983, Leonard Henny described fascinating video applications in the Netherlands and Austria that were pivotal in grass-roots community and political change. I had hoped to add new information from this area, but resort to referring interested readers to the original, which remains (to my knowledge) the definitive chapter in the area.

Many people contributed to the production of this book—not the least, the 18 authors of Part II and their supporters. For my own part, I acknowledge a particular debt to the students who have worked with me on video projects since I came to the University of Alaska 10 years ago. Our graduate students choose their own research topics, and I am very flattered that no less than nine of them have finished a thesis in self-modeling or a related area in that time span and others are underway. The work of these and other students is described, sometimes featured, within this book. They have assisted me in workshops (especially Shirley Perry), challenged and aided my conceptualizations, even helped me to write some of the book, for which I specially thank Darby Jesdale. I also thank those who helped in putting the book together, including Debra Lachinski (for her dedicated help with the references), Tedi Schilling (for her persistent pursuit of reprints and the interlibrary loan), and many others.

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The Use of Video for Behavior Description and Intervention

HEINER ELLGRING

Video provides fascinating perspectives for the behavioral sciences within research and application. The more video becomes accessible, the more one is puzzled, however, by a considerable gap that exists between the available technical potential and the reserved application of video in the behavioral field. Despite a first or even a second trial, very often video recordings are made and then put aside without any further application. This book aims to bridge this gap. Moreover, it guides the various professions interested in human behavior to make use of the video "tool" in a creative way to accomplish a variety of tasks in behavioral assessment, documentation, changing cognitions and emotions, and enhancing behavior.

Part I of this book outlines the basis for video application, including the technical equipment as well as the goals to be pursued, the psychological theories, and the procedures and techniques derived from these theories. Part II deals with various applications in behavioral analysis, instruction and teaching, and therapeutic interventions.

Behavioral sciences need more instruments for analyzing and documenting behavior as well as methods for inducing change in the individual. There are three levels on which human behavior and experience may be approached: (a) the subjective level, where cognitions and emotions are accessible via verbal reports; (b) the physiological/biochemical level, where the biological reactions are taken as signs or indicators for psychological processes; and (c) the behavioral level, where actions of the individual are the relevant clues. It is obvious that the behavioral level deserves as much attention as the others. Given the current state of the art, this approach can be best achieved by observation with the help of video. One of the fascinating aspects of this tool, however, is its potential for inducing change—a primary focus of this book.

TECHNICAL EQUIPMENT

Chapter 1 on equipment fundamentals is a must for those who are beginning to work with video in the behavioral field. There are specific requirements for a scientific use

of video that differ considerably from many of the fancy functions that consumer or even semiprofessional equipment provides. Reviewing this chapter will help to avoid the frustration that otherwise causes many video users to give up after a few trials.

GATHERING INFORMATION

For many video users, Chapter 2 on documenting and analyzing should also be read before starting a video enterprise. It is not the recording but the video software handling that makes video useful. Some well-known videotape graveyards result from attitudes reflecting the stage in our cultural development of hunters and gatherers. But since it is so easy to collect the prey, too little effort is generally put into cultivating the goods. As becomes quite obvious with video, the problem today is not collecting information but rather selecting and filtering it. The basic principles of these processes are dealt with in this chapter.

THEORY AND GOALS

Although an accepted, comprehensive theory for the psychological effects mediated by video is still lacking—an advantageous state for continuous development at this point—the concepts advanced in this book are of considerable appeal and fascination in their applied perspective. This holds especially true for the concept of feedforward and self-modeling as opposed to feedback and self-confrontation (Chapters 6 and 7).

The two main processes whereby influence on the individual is mediated by video are learning from the observations of others (Chapters 3 through 5) and self-information and personal change (Chapters 6 through 8). Both domains integrate psychological theory and practical goals achieved by using video. Within these domains, self-modeling and the theory of feedforward processes appears, in my opinion, to be the most fascinating and future-directed perspective for the creative use of video in therapy and training.

APPLICATIONS

Part II on selected applications covers a variety of topics, clearly showing that video has become an indispensable tool in the behavioral sciences.

The analysis of nonverbal behavior, especially facial expression (Chapter 10), would be impossible without the technical help of video. Providing information and instruction on an interactive basis has become feasible by video disc (Chapter 9); in medical settings, patients can be prepared better for painful, embarrassing medical procedures; they can be taught to comply with new measures and can be trained in social skills with the assistance of video (Chapter 11).

For those who want to produce videotapes for instruction or training, suggestions for the development of modeling films (Chapter 12) and trigger tapes (Chapter 13) will be especially useful. Both chapters give instructions for video dramaturgy, which must take into account not only the intricacies of the medium but also the psychological aspects of actor/model effects on a receiver, concepts of social interaction and communication, and so on.

Specific techniques are presented and evaluated that directly aim at changing cognitions, emotions, and behavior; these are interpersonal process recall (Chapter 14), video review for athletic skills (Chapter 15), self-modeling in childhood problems (Chapter 16), and developmental disabilities (Chapter 17). Here, one can keep in mind that further critical evaluations of the effects of video are still needed, particularly studies on the mechanisms that are essential for change.

After Milton Berger's (1978) *Videotape Techniques in Psychiatric Training and Treatment,* Peter Dowrick and Simon Biggs edited a comprehensive overview on research and applications in their 1983 book *Using Video: Psychological and Social Applications.* The technology has developed considerably since then, making most of the technical devices more available. (Video was quite expensive for clinical use at that time.) Fortunately, the psychological concepts have grown, too, as becomes apparent throughout this book. The emergence of practical procedures and the advice for applications and their integration into a framework of psychological theory are essential, given the current state of the art. Thus, the potential use of video in analyzing behavior and in training and therapy can be made fully available.

The Applicability of Video

CHAPTER 1

Equipment Fundamentals

OVERVIEW

Selecting equipment based on one's requirements, not on "state of the art" temptations, is advocated. This chapter offers some suggestions about what to look for in a video system, information about basic technology, and operating hints. Some specific recommendations are made regarding the configurations of a beginning system and for one level of extension (for better editing). More generic recommendations about how to make choices and what capabilities to seek are presented for enhanced systems, including a modest studio, field recording, and production and editing techniques (e.g., considerations of one-way screens, ambient sound, fades and wipes). Issues of standardization, format wars, and quality are discussed.

Simple explanations of common technology, such as helical scanning and indexing, are given in the context of the rapid developments of the last 20 years— primarily Beta, VHS, 8mm, and their hi-band extensions. The current capabilities of camcorders, consumer VCRs, and videodisc players are summarized, with brief reference to differences among international systems.

The last section of Chapter 1 covers guidelines for operating video equipment: dealing with cooperation or confidence problems behind and in front of the camera, basic production (recording) techniques, simple editing methods, and trouble-shooting irksome problems that do not need a technician but are not apparent in the manual. Some suggestions are offered for preserving and cataloging these precious video documents.

P. W. D.

The most frequently challenging undertaking for anyone who considers using video is the specter of selecting, operating, and otherwise tangling with the equipment. However, social scientists and human service practitioners with little technical expertise need not be daunted. A relatively simple set of guidelines can help identify basic systems to meet most needs. This chapter addresses the selection and operation of video equipment and the basics of using and protecting videotapes. Knowledge of fundamentals simplifies the ongoing task of keeping up with the latest twists and wrinkles of available technology and predicting its future trends.