

insurance that engineers and design specialists are working hard to ensure future cohorts of adults will face a smooth transition into old age. The chapter by Spiegle and Moulton, titled "Design Challenges Associated With Longevity: The View From Industry," provides perhaps the most encouraging message along these lines. The authors adopt a pragmatic, forward-looking focus in this highly readable chapter, suggesting that a fundamental paradigm shift will be required to accommodate the technological needs of older adults. They point out that businesses and designers will have to think outside the box when engaged in product development in the future, and consider the needs of all possible end users (including elderly people), a process referred to as "universal design." Without a doubt, this chapter should be required reading for every designer, engineer, and human factors specialist in training.

Communication, Technology, and Aging displays very few weaknesses in contrast to its many strengths. As stated above, one of the chief purposes of the book is to represent both theoretical and practical viewpoints regarding issues related to communication, technology, and aging. Again, it accomplishes this objective exceedingly well. A second purpose is to examine how those perspectives differ cross-culturally, and toward that end, the chapters are divided evenly among American and German contributors. Unfortunately, the book falls short in terms of meeting this second objective. The book does not explore the cross-cultural dimension in any systematic fashion, and on completing the book, the reader is left wondering whether there are, in fact, meaningful differences in the views of American and German scientists. To the editors' credit, the cross-cultural focus may have been poorly defined because the core issues have become universal in technologically advanced countries. However, some acknowledgement of this point would have been well received. A second apparent shortcoming in the volume involves the omission of

a concluding chapter. Such a chapter could have been used not only to synthesize main themes, but also to provide the reader with a sense of where the field is headed. Perhaps the editors purposely omitted this chapter to remind us that this area of research is far too dynamic for neat and tidy conclusions. One cannot help but feel that the lack of a conclusion represents an opportunity lost, given the richness of ideas that are offered to the reader over the course of the 11 chapters.

Different sections of the book will certainly appeal to communication specialists, sociologists, psychologists, human factors engineers, linguists, and gerontologists. Moreover, the important lessons contained in the book stand to be as relevant to graduate students as they do to sea-

soned professionals. The issues raised in *Communication, Technology, and Aging* will immediately strike a chord with anyone who owns a VCR that perpetually flashes 12 o'clock, for those who have suffered the frustration of a poorly designed corporate voice mail system, or wondered why we actually need more than one remote control to operate our television. On a much deeper level, however, this book reminds us just how technologically complex our lives have become, and that many of our daily communication frustrations can be eliminated by design. Finally, the book suggests, in an evenhanded but persuasive manner, a quality of life each of us envisions for ourselves in old age; one free from the hassles of poor communication with others, be they man or machine. □

Four Decades and Counting

Obedience to Authority: Current Perspectives on the Milgram Paradigm

by Thomas Blass (Ed.)

Mahwah, NJ: Erlbaum, 2000. 251 pp. ISBN 0-8058-2737-4. \$59.95

Review by Jerry M. Burger

Between the summer of 1961 and May 1962, a young assistant professor at Yale University conducted a series of studies intended as a first step to explain some of the psychological processes at work during the Holocaust. Four decades later, Stanley Milgram's obedience studies remain among the most well-known and widely discussed programs of research in psychology. Virtually every introductory psychology textbook covers the research in depth, and an undergraduate social psychology course that does not include the obedience studies is almost unthinkable. The shelf life of this research is all the more remarkable given that Stanley Milgram passed away in December 1984 at the tragically young age of 51.

Thomas Blass, a Hungarian-born Holocaust survivor and professor of psychology at the University of Maryland, Baltimore County, probably has done more than anyone to keep Milgram's research a part of contemporary social psychology. In addition to more than a dozen articles and chapters on the obedience studies, Blass maintains an active Web page devoted to Milgram and his work (<http://www.stanleymilgram.com>). *Obedience to Authority: Current Perspectives on the Milgram Paradigm*,

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edited by Blass, is the most recent piece of this scholarship.

The Basic Procedure

In fact, the obedience "studies" were not really studies (or experiments) in the sense that participants were randomly assigned to experimental and control conditions. Rather, Milgram provided a series of demonstrations of an amazing phenomenon, altering the procedures slightly each time and

comparing the findings to those from earlier demonstrations. The basic procedure involved an experimenter, a participant, and a confederate posing as a participant (Milgram, 1963). Under the guise of a study on learning, participants were instructed to punish the confederate's wrong answers on a memory task. The method of punishment was progressively more painful electric shocks, up to 450 volts, supposedly delivered to the confederate strapped into the receiving end of the shock-generating apparatus in the next room. Several pieces of information, including verbal cues from the confederate, indicated the shocks were dangerous, if not potentially fatal. The question was whether the participant would continue to press the shock levers or refuse to follow the experimenter's orders to proceed with the experiment. Surprisingly, two out of three participants followed the orders to press the levers all the way to the end (a total of 33 responses). The dramatic and unanticipated findings amaze and bewilder each new generation of psychology students. The implications for potential abuses of power are frightening.

Among the legacies of Milgram's work is the debate these studies generated about the ethical treatment of

human participants in psychology research. Many people asked if the intense anxiety experienced by Milgram's participants could be justified by the value of the findings. Ensuing discussions led to standards that essentially prevented additional research with Milgram's procedures. Indeed, Blass's extensive efforts to find studies utilizing similar methods uncovered but a handful of investigations, many conducted in other countries. The last-known study using participants from the United States was published in 1976. Thus, one consequence of Milgram's success was the elimination of additional research on many of the questions his findings raised.

And therein lies the biggest problem facing those who wish to keep the obedience studies in a prominent place in contemporary social psychology. With the ability to replicate and extend Milgram's findings gone, psychologists often rely on the less-than-satisfying option of interpreting and reinterpreting the records left by Milgram. How long can discussions about the research be sustained without additional data? What insights can we expect that have not been made before? This is the challenge Blass encountered when putting together 11 chapters worth of *current perspectives* on the obedience studies.

The Man, the Studies, and Applications

Blass's solution to the problem appears to be threefold. First, a good deal of book space is devoted to the man rather than the studies. The first three chapters, written by Milgram's wife, Alexandra, and two of Milgram's former students, Harold Takoo-shian and Judith Waters, provide a number of insights into Milgram's life and, in particular, his interactions with graduate students. Additional anecdotes about Milgram are scattered throughout the book. Second, some chapters—although not nearly enough—address questions about or questions generated by the obedience studies. Finally, the majority of chapters are devoted to real-life applications of phenomena Milgram

studied or to programs of research loosely related to Milgram's work.

In terms of addressing questions about Milgram's research, the best chapter in the book was written by Blass himself. For example, Blass asks whether the high rates of obedience in Milgram's participants would be found today. Although ethical concerns have made a definitive answer to the question impossible, Blass uses the limited data available to argue that obedience rates most likely would be just about the same if the studies were replicated today. Blass also addresses the question of gender differences. With the exception of one study, Milgram limited his participants to men. Again relying on sparse evidence, Blass makes a reasonable case that men and women do not differ in their rate of obedience to the experimenter's commands.

Finally, there is the issue of foreseeability. Social psychologists frequently point to Milgram's work as a dramatic demonstration of one of the tenets of their field—that the situation often has a greater impact on behavior than most of us recognize. Prior to data collection, Milgram asked three groups of individuals—college students, middle-class adults, and psychiatrists—to predict the results (Milgram, 1974). All agreed that virtually every participant would quit early in the process. That these guesses were so wrong is typically attributed to the predictors' failure to consider that the demands of the situation would overpower whatever reluctance the participant's conscience generated. However, Blass points to later studies that suggest people are much better at estimating the outcome of the obedience studies when information about the procedure and the wording of the questions are varied. In short, although the obedience studies still demonstrate the "fundamental" attribution error, the effect is not as dramatic as originally thought.

My biggest disappointment with the book is the limited discussion on how to interpret the findings from the obedience studies. Blass appears to be an adherent of Milgram's interpre-

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tation, which focuses on the legitimacy of the authority figure and the lever presser's relationship to that figure. Yet, the longevity of Milgram's impact on the field comes in part from the numerous discussions the studies have spawned over the years about why so many participants went all the way to the end of the shock generator. Every social psychologist has an opinion on the question, and Blass missed an opportunity to provide an interesting forum for these varied opinions in this volume.

Instead, the last half of the book is made up of an assortment of chapter topics often tied only indirectly to Milgram's work. This is not to say these chapters are uninteresting. For example, a chapter by Francois Rochat and Andre Modigliani examines the actions of a Swiss chief of police who saved the lives of Jewish refugees by resisting obedience to Nazi orders. Of particular note is a chapter by Eugen Tarnow describing research on obedience to the captain's orders during commercial airline flights. A study by the National Transportation Safety Board suggests that as many as 25 percent of all plane crashes may be attributed to "destructive obedience" in which crew members failed to challenge a captain's erroneous judgment.

In contrast, the book's final chapter, by Philip Zimbardo, Christina Maslach, and Craig Haney, provides little new information as the authors discuss the 30-year-old Stanford Prison Experiment. In that experiment (also, in fact, a demonstration) Zimbardo and his students asked participants to role-play prisoners and guards for several days in a make-believe prison in the basement of the psychology building at Stanford University. Although some parallels with the obedience studies can be drawn, the value of the prison experiment seems particularly pale when juxtaposed with Milgram's work. I was left with the feeling that perhaps it is time to put the prison experiment to rest.

Milgram's obedience studies were sparked by a desire to understand the behavior of German soldiers who

obeyed the genocidal commands of the Nazis. Since publication of the last American study using Milgram's obedience procedure, the world has seen more than a million Cambodians murdered at the hands of the Khmer Rouge, hundreds of thousands of Rwandan citizens slaughtered in a matter of weeks, and calls for "ethnic cleansing" in the Balkans in Europe. Why are we still talking about the obedience studies after all these years? Maybe because Milgram's

work still provides the best insight into one of the most important questions social psychologists have ever asked. □

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Why Do Stressors Impair Performance?

Human Performance Cognition, Stress, and Individual Differences

by Gerald Matthews, D. Roy Davies, Stephen J. Westerman, and Rob B. Stammers

Philadelphia: Psychology Press, 2000. 398 pp. ISBN 0-415-04407-3. \$34.95 paperback

Review by Michael W. Eysenck

Back in the 1950s and 1960s, the British psychologist Donald Broadbent provided compelling evidence that it was possible to utilize theoretical insights coming from laboratory studies of human cognition to illuminate a wide range of practical concerns in the real world. As the authors acknowledge in the Prologue of this book, they have been inspired by Broadbent's pioneering efforts. More specifically, they have followed Broadbent in arguing (convincingly, in my opinion) that it is important to consider the ways in which performance is influenced by various stressors and by individual differences in personality and in ability. The authors use the term *human performance psychology* to describe this area of psychology, which is the primary focus of their book.

Human performance psychology is clearly related in various ways to cognitive psychology. What are the key similarities and differences between these two areas of research?

Human performance psychology resembles cognitive psychology in that information-processing models are at the heart of both approaches. However, it is of central importance in human performance psychology to understand the processes underlying the impairment of cognitive performance in difficult circumstances (e.g., stress, noise, fatigue). In contrast, most researchers in cognitive psychology study cognitive performance under more or less optimal conditions, and they have little or no inter-

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