Programmed Therapy
FOR STUTTERING
in Children and Adults

Second Edition

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By

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PREFACE

Some 26 years later, I am still a clinician interested in treating the problem of stuttering. However, now I call myself a clinician-researcher. My major motivation to study stuttering has been my memory as a child who stuttered. Fortunately, I received subtle, but helpful speech therapy when I was eight. Consequently, I never did think of myself as person who stuttered, but only somebody with great fear of public speaking which I eventually overcame. The focus of this revised version of the book is still on therapy or treatment (the new word) for people who stutter.

I started in 1964 by trying to develop a therapy program for children and adults based on operant conditioning (Ryan, 1964–1965, 1970, 1971, 1974; Skinner, 1953). Then, thanks to Barbara Van Kirk Ryan, I was involved in the Bridgeport Project (Ryan & Van Kirk, 1974a) for children and adults featuring DAF-Prolongation. Next, I compared four establishment programs with school-age children in the Public School Project (Ryan & Ryan, 1983, 1995b; Ryan & Van Kirk, 1974b). Then I worked on dissemination culminating in the Great Britain Project (Rustin, Ryan, & Ryan, 1981, 1987; Ryan 1985). Finally, in the last 18 years, I have researched the development of stuttering in preschool children in the Preschool Project (Genesis of Stuttering Project) (Ryan, 1992, 1998a, 1999b, 2000) and developed operant treatment programs for them in single-subject design (Wood & Ryan, 2000.

I resolved the problem of reviewing the large body of literature generated in the last 26 years by focussing mostly on my own work and citing data from other sources only when those data were highly related to mine. I wanted to present a coordinated, integrated clinical-research presentation on evaluation and management of stuttering from preschool to old age and the dissemination of that information that will be useful to students, clinicians, clinician-researchers, support groups, people who stutter, and researchers.

I still view stuttering as learned behavior, but I now believe there is a physiological basis to stuttering (Boberg, 1993; Ferrans & Bloom, 1997; R. Ingham, 1998; R. Ingham, Fox, J. Ingham, Zamarripa, Martin, Jerabek, & Cotton, 1996; Moore, 1984; Moore, & Boberg, 1987; Perkins, Kent & Curlee, 1991). The data from many different sources are very persuasive on that point, including my recent research with preschool children (Ryan, 1992, 1998a). However, that new thinking has not changed the treatment much since we do not know exactly how this physiology operates nor how to change it except through behavioral technology (R. Ingham, 1998). The

knowledge of a possible physiological substrate helps one to understand the treatment's relative effectiveness and gives one more patience knowing that one is dealing with a possibly physiologically-generated problem (e.g., Moore, 1984). The physical element of the problem is one that is, fortunately, reversible even at a late age (Van Kirk, 1970).

My approach to treatment has been known alternately as behavior modification or contingency management or operant conditioning or programmed instruction (Bandura, 1969, 1977b, 1986; Catanio & Harnad, 1988; Davey & Cullen, 1988; Dews, 1970; Holland & Skinner, 1961; Honig, 1966, 1977; Kazdin, 1980; Keller, 1974; Modgil & Modgil, 1987; Mowrer, 1988; Skinner 1938, 1950, 1953, 1966, 1969, 1972, 1988, 1989).

Some view the technology and information of operant conditioning as a phase through which they and the profession have passed (e.g., Conture, 1990; Kuhr, 1994; Perkins, 1993; Rustin & Cook, 1995; Siegel, 1998). I find that very unfortunate. Operant conditioning is hardly passé (Ryan & Ryan, 1996). Science is never passé. The law of gravity is not passé. It still stands even after all the these years. The "laws" of operant conditioning are as true now as they were in 1938 and 1974. Replication is the highest level of science (Bordens & Abbot, 1996; Hegde, 1994). Replication, as demonstrated recently by the work of the Inghams and Onslow and their colleagues and others described in Brutten (1993b) stands as strong testimony to the current viability of operant conditioning. Their research is an outstanding replication of the operant principles I first espoused 30 years ago (Ryan, 1970). The tenets and principals are still alive and well and available to students, clinicians, clinician-researchers, and researchers to help them advance the knowledge about the treatment of stuttering.

The main purpose of this book is to call the profession's attention, again, to a systematic, scientific approach to studying and treating stuttering via the strategies of operant conditioning, learning principles, and single-subject research design. This system's major laudable characteristics are measurement, clear description, and organization of treatment steps (programming through establishment, transfer, and maintenance with follow-up), and attention to the importance of providing consequences to determine behavior. Some authorities may still view the installation of fluent speech as only one of the many goals for people who stutter, or it may be the single goal, as I believe. I still find little disagreement among experts that fluent speech for stutterers should be at least one of the goals of therapy (e.g., R. Ingham & Cordes, 1999), if not the main goal. People who stutter themselves have unanimously requested fluent speech (R. Ingham, 1972), although they have not all demonstrated the willingness and continued, hard work required to achieve that goal.

Another purpose of this book is to present the data that we have collected and/or published over the past 30 years in one place for evaluation and comparison. This book may serve as a companion to the clinical program book, *Programmed Conditioning for Fluency* (Ryan & Van Kirk, 1971), or the *Monterey Fluency Program* (Ryan & Van Kirk, 1978), as it has come to be called, and to the book on the development of stuttering (Ryan, 1999b).

I purposely avoided a long introductory chapter on the principles of behavior modification or operant conditioning, because I felt that this information is well presented in many other sources, some of which will be named in the text and listed in

the references. I did not provide an extensive review of stuttering itself for the same reason. Bloodstein (1995), Brutten (1993b), Curlee (1993, 1999), Curlee and Siegel (1997), Guitar (1999), Ham (1990), R. Ingham (1984b), Mower (1988), Peters and Guitar (1991) and Shapiro (1999), among others, have provided extremely comprehensive, excellent recent reviews of those sets of literature.

This book is: (a) a positive statement about viewing stuttering as operant behavior; (b) a demonstration of the excellent, although not perfect, treatment results to be obtained using this system; and (c) a hope for future resolution of the problem of stuttering through widespread treatment based on operant conditioning. One part of this revision is that all of the forms from the *Monterey Fluency Program* (Ryan & Van Kirk, 1978), which heretofore have only been available through workshops, are here. They have replaced the prototypes found in Ryan (1974).

This revision starts with a very brief, simple introductory Chapter 1 on stuttering and basic principles of operant analysis. Chapter 2 covers the mechanics of charting, counting, and computing stuttering and speaking rates. Chapter 3 describes evaluation with both new data and forms. Chapter 4 is on programming. There are not many new references in this area, because the first ones (e.g., Pipe, 1966) were done so well and explained in other places (e.g., Costello, 1977, 1980, 1982, 1983, 1984; Mowrer, 1988). Chapter 5 highlights the two present major establishment programs, Delayed Auditory Feedback (DAF)-Prolongation and Gradual Increase in Length and Complexity of Utterance (GILCU). Chapter 6 discusses the Transfer and Maintenance Programs and Follow-up along with some related interview and topography data. Chapter 7 presents long-term individual client performances in several programs. Chapter 8 covers the preschool stuttering child. Chapter 9, Training, describes efforts at and results of dissemination through training. Chapter 10 is a summary and evaluation of our efficacy data published over the past years. Finally, Chapter 11 provides conclusions, discussion of problems, and suggests directions for future clinical research. Some may not like this final chapter, but I believe these issues must be faced and resolved, and if I may borrow from Martin Luther King, "If not here, where? If not now, when? If not me, who?" In several chapters I have tried to "set the record straight." I hope readers will not find these offensive or overly egocentric or distracting.

I have used the terms "I" and "we" interchangeably. Most of my research has been done with others such as my students, my colleagues such as Duane Craven, or my wife, Barbara Van Kirk Ryan; hence, the term "we" is appropriate. However, many ideas are exclusively mine and the word "I" better represents the ownership and the responsibility, if I am in error. All of us have strived for the past 36 years to achieve the best, most efficient, effective means of helping people who stutter to speak fluently, to disseminate those procedures through extensive workshops, and to refine the programs.

My thanks to all those who have helped make this book possible: my teachers, Charles Van Riper and George Shames; and my behavioral colleagues, the late Einer Boberg (a very special person who stuttered, a clinician-researcher par excellence, and a wonderful friend and colleague); Duane Craven (who previewed the entire book and suggested many important changes); the late Burl Gray (my colleague for seven years and my friend for life); Deborah Kully; Janis and Roger Ingham; Walter

H. Moore; Donald Mowrer (who also previewed the entire book and suggested many important changes); Mark Onslow; and Ann Packman, to name a few. Thanks to Lena Rustin for the Great Britain project (Rustin, Ryan, & Ryan, 1987) and Richard Shine for extensive follow through on his workshop training in the Monterey Fluency Program. A special thanks must go to my wife-colleague, Barbara Van Kirk Ryan, for the past 24 years and mother of my fourth child, Mathew. She has made many major contributions to this work which I trust I have made clear in the text. I wish also to thank Gail Horn and Jaime Bell who successfully treated client SP described in Chapter 7. I wish also to recognize the efforts of Mark Powers who has been training people in the past few years in the modern operant treatment programs. I also greatly appreciate the many figures done by graphic artist Mike Cap De Ville of the California State University, Long Beach Audio-Visual services. This book was made possible, in large part, by my computer technical advisor, Stan Maerwitz, who, until his untimely death in September, 1999, kept my Macintosh computer humming. Thanks also to those, David Bradley, Stafford Cox, and Walter Moore, who provided extensive consultation on statistical analysis.

I wish also to acknowledge B.F. Skinner's major contribution to my professional life (e.g., this book, my teaching style) and personal life in many ways (e.g., raising four children whose pictures appear on the cover of the book). Thank you again, Dr. Skinner. I quote from one of his last writings in a book on controversies about operant conditioning (Modgil & Modgil, 1987, p. 11),

> In what sense is my work controversial? When I am asked what I regard as my most important contribution, I always say, "the original experimental analysis of operant behavior and its subsequent extension to more and more complex cases." I see nothing controversial about that. Either my results have been confirmed or they have not. At times I have made mistakes and no doubt other flaws will be found in my work, but for the most part I think it stands.

At the risk of being presumptuous, I could not have better described my own efforts at the application of operant conditioning principles to the treatment of stuttering. This book is dedicated to people who stutter and their families, all my students and clinicians who helped collect these data, my operant colleagues in stuttering research, and to all those who continue to try to help people who stutter, hopefully using scientific, data-based strategies such as operant conditioning and single-subject design to improve their efficacy and efficiency.

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