



Einer Boberg

Einer Boberg: His life Made a Difference

by

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Dr. Einer Boberg would have been so greatly honoured and proud of this edition of the *Journal of Speech-Language Pathology and Audiology*. A *festschrift* composed of articles by Canadians that, in various ways, reflect his influence on stuttering treatment and research is a very fitting tribute to a man who, almost above all else, was proud of his Canadian heritage. This edition of the journal also ably demonstrates that Einer was not only an outstanding Canadian, but in his far-too-short life he made an important difference to stuttering treatment and research as we all know it. Furthermore, some of the effects of his contributions are only now being realized. In the nearly three years since he passed away, numerous tributes have been paid to the contributions that he made, some also including useful summaries of his career (Kully, 1996; Martin, 1996). Of course, it is always difficult to anticipate history's judgement, but this edition of *JSLPA* offers an interesting emerging perspective on his career. The contributions that follow demonstrate very clearly that Einer really did make a major difference to the way we treat stuttering and our understanding of this disorder. I am honoured to be asked to offer this brief historical overview of his career.

In so many ways Einer embodied the very best features of our discipline. Our discipline has certainly been distinguished by the remarkable contributions of those, like Einer, who suf-

fered from stuttering. Indeed, its theories and practices have often been largely developed by those who endured and coped with their disability — and Einer is a shining example. Those who suffer from the disorder have every reason to approach stuttering research and treatment with a special sense of understanding and urgency. However, that affinity, as Einer often mentioned to this writer, may also render one vulnerable to the unquestioned acceptance of only those viewpoints that align with personal perceptions; and that was his constant concern. My enduring impression of his professional career is that he strenuously endeavoured to approach the disorder as a well-trained scientist whose views on its nature and treatment were always shaped by research. Equally impressively, he could also shed perceptions that conflicted with research data. And that is surely a wonderful model for students in our discipline.

Much of Einer's orientation to stuttering treatment and research is rather obviously related to the institutions where he completed his graduate training. After completing his schooling in Canada, Einer came to the University of Iowa where he completed his BA, MA, and much of his clinical training. In the early 1960s he went to the University of Minnesota where he completed his doctoral studies. This was a time when a totally different orientation to stuttering research was beginning to emerge from that institution — one that has had a profound effect on stuttering treatment. The effects of these



experiences are interesting to observe. At a clinical level, Einer obviously tried to straddle the two major therapy orientations that have come to dominate stuttering treatment: the "fluent stuttering" tradition with its roots embedded in methods developed by Van Riper and Johnson; and the "stutter-free speech" tradition that emerged from the application of the principles of operant conditioning to treatment. This is particularly evident in the early versions of the intensive treatment program that he developed. At the same time, there remained the unmistakable influence of a neurophysiological perspective on his views about the cause of stuttering a perspective largely oriented by the cerebral dominance concepts of Orton and Travis at the University of Iowa.

It is not too difficult to see the impact on Einer of the radically different orientation to stuttering that began to emerge from the University of Minnesota in the mid 1960s. Einer arrived at the University of Minnesota just as Richard Martin and Jerry Siegel were reporting a series of landmark studies (see Martin, 1968) that directly challenged some of the fundamental premises regarding the nature and treatment of stuttering — premises that had been largely fostered at the University of Iowa. Richard Martin became his doctoral adviser. Martin and Siegel's studies on the effect on stuttering of response contingent stimulation not only showed that stuttering could be directly modified by contingency management, but they challenged some guiding ideas on stuttering that constituted the "Iowa tradition" (see Ingham, 1984). Foremost among these was a challenge to the premises underlying treatments for children, which can now be seen to be the principal reason for a dramatic change in the approach to the treatment of stuttering in children in recent years. It was at this time that it became clear that the notion that stuttering could not be treated directly without exacerbating the condition had no empirical foundation. At the same time the studies emerging from the University of Minnesota were demonstrating that stuttering behaviour could be directly modified by environmental contingencies. These findings had profound and far reaching clinical implications: they not only laid the foundation for a variety of treatment methods (e.g., time-out), but they also laid the foundation for treatment strategies that relied on altering the nexus between environmental conditions and stuttering (see Ingham, 1984). Ultimately, these same principles led very directly to the derivation of self-management strategies (Einer's doctoral research was concerned with the effects of self-delivered time-out contingent on stuttering) and a variety of techniques designed to improve the maintenance of treatment benefits. They also led to the application of time-series research strategies for the evaluation of treatment and the fundamental linking of treatment and measurement. Together, these principles can be easily recognized within the treatment research that Einer fostered, and which continues with his colleagues at the University of Alberta.

My personal association with Einer began during a visit he made to Australia in 1977 in order to acquaint himself with the intensive stuttering treatment program that Gavin Andrews and I had earlier developed for adults and adolescents (Ingham & Andrews, 1971). Along with two or three other centres we were grappling with the problem of converting Goldiamond's (1965) groundbreaking prolonged speech treatment research into a clinically viable and reliable therapy program. Einer had developed a similar program (see Boberg, 1980), but quickly recognized that a core problem in this type of treatment was the maintenance of therapy benefits. And so began some of his major contributions to stuttering treatment. The first was the development of an intensive stuttering treatment program that attempted to incorporate some of the traditional Van Riper methods in a contingency management framework (Boberg, 1976). At the same time he began an exploration of maintenance procedures for stuttering therapy (Boberg, Howie, & Woods, 1979) that led directly to the now-famous Banff Conference on the maintenance of fluency emerging from stuttering treatment (Boberg, 1981) and the exploration of maintenance strategies (Boberg, 1983). Ultimately, Einer's intensive treatment program brought together the plethora of findings from similar programs, which he synthesized with Deborah Kully, to form the Comprehensive Stuttering Program (Boberg & Kully, 1985), a program largely based on the use of prolonged speech in a contingency management format. That program, of course, led directly to the establishment of the Institute for Stuttering Treatment and Research (ISTAR) at the University of Alberta. It must be added that shortly after the founding of the treatment program, Deborah Kully joined Einer and along with Marilyn Langevin they were responsible for developing ISTAR into one of the most reputable and effective stuttering treatment programs for adults and adolescents who stutter.

Forced to choose the most telling contributions that Einer made, I would select three areas. First, there was the development of the ISTAR program of stuttering treatment. This treatment program was built on the application of experimental methodology to treatment; that is, that treatment should be developed on a research base and should be constantly evaluated for the efficacy of its procedures. That program has provided some of the most impressive, clinically meaningful findings on the effects of the prolonged speech-based treatments for adults and adolescents (Boberg & Kully, 1992; Langevin & Boberg, 1993), and to a somewhat lesser extent for children (Kully & Boberg, 1991). It has also been applied to populations of retarded individuals who stutter (Boberg & Fong, 1980) and also to clutterers (Langevin & Boberg, 1996). An examination of the data resulting from the ISTAR treatment program shows the powerful and clinically important benefits that are possible from stuttering treatment for adults



and adolescents. What is interesting about the findings from this program is that they provide a direct challenge to those who claim that such treatments merely reduce observer-judged stuttering and that they do not reflect the client's reaction to treatment or whether treatment has served to reduce the tyranny of stuttering. The data from these studies provide a rich, clinically meaningful account of the extensive benefits of this treatment program.

The second area emerged out of Einer's concerns for accountability and treatment evaluation. This area is perfectly illustrated in a study by Kully and Boberg (1988) that has become famous for having highlighted one of the most important problems facing stuttering treatment and research: the remarkably poor levels of agreement among the stuttering frequency judgements made by clinicians in different treatment institutions. They showed that clinicians in different treatment research centres could display massive differences in the stuttering frequency counts they applied to recordings of persons who stutter. It was this finding that prompted a long-overdue program to develop more standardized methods for measuring stuttering behaviour and for improving the validity of stuttering measurement. Subsequent studies by Ham (1989) as well as Cordes and Ingham (1995) not only replicated the Kully and Boberg findings, but also highlighted the significance of the effects that they reported (see Cordes & Ingham, 1994). In many respects Kully and Boberg's very simple study was directly responsible for the current crisis in stuttering measurement, a crisis that has had far-reaching implications. These implications at this time appear to be both negative and positive. On the negative side is an emerging move towards the abandonment of behavioural measurement of stuttering and data-based stuttering treatment (see Ingham & Cordes, *in press*); on the positive side, though, is an almost equally vigorous move towards the development of more standardized procedures for training judges to measure stuttering behaviour reliably and accurately (Cordes & Ingham, *submitted*; Howell, Sackin, & Glenn, 1997; Packman & Onslow, 1998). It would not be difficult to imagine where Einer's sympathies would reside as this situation unfolds.

The third area in which Einer made an important contribution was the neurophysiology or neuropsychology of stuttering. In the 1980s it became very apparent that some of the dramatic developments taking place in the neurosciences could have extensive implications for stuttering research and perhaps its treatment. Recurring findings of unusual neurological signs among adult stutterers (e.g., Curry & Gregory, 1969; Moore & Haynes, 1980), even early brain imaging findings (Wood, Stump, McKeehan, Sheldon, & Proctor, 1980), gave more substance to the suspicion that stuttering was a result of aberrant neural processing of speech. Like many working in the area of stuttering treatment, this suspicion was aided by the seemingly

limited responsiveness of many adult stutterers to behaviourally based treatments (Perkins, 1989). Could it be that the strictures confronting behaviour change are neurologically based? Meanwhile, the brain imaging technologies were beginning to show how the neural systems associated with speech production could be identified and, potentially, directly related to abnormalities of speech production (see Liotti, Gay, & Fox, 1994; Posner & Raichle, 1994). In 1983 Einer and colleagues (Boberg, Yeudall, Schopflocher, & Bo-Lassen, 1983) reported an EEG study demonstrating that signs of unusual right hemisphere processing of speech by stutterers could be reduced as a result of behavioural treatments. This was an early and not entirely problem-free study, but the direction of findings has now proved to be consistent with evidence from studies using more recently developed technologies (Braun et al., 1997; De Nil, Kroll, Kapur, & Houle, December 1995; Fox et al., 1996). More importantly, it suggested that abnormal neural processing of speech in stutterers might also be modified by behaviour change, a phenomenon that has been found with other disorders featuring abnormal neural systems (e.g., Baxter et al., 1993). The history of this neuroscience movement in stuttering research will certainly recognize Einer's collaboration with Lorne Yeudall and an important Banff conference on the topic that Einer organized (Boberg, 1993).

For those of us fortunate to have known Einer, in almost any capacity, there is an indelible memory of a very unique and special person. He was a delightfully genial individual who, in a deceptively quiet and steadfast way, was determined to make a difference to the lives of people who stutter. At the same time, he was one of the most compassionate and caring individuals I have ever known. In the midst of the cut and thrust of interactions in his academic and research domain, he was almost totally free of animosities. I count it a great privilege to have been his friend, and I know I share that privilege with many. In a field that is almost traditionally distinguished by intense disputation, he was almost uniquely capable of building structures that could help accommodate that disputation and help open new avenues of inquiry. The now famous Banff conferences (Boberg, 1981, 1985, 1993) were not only some of the most important conferences on stuttering, but their format actually became *the* model for stuttering conferences and a venue for stimulating inquiry in our field. That is a wonderful legacy. But I expect that his greatest legacy will prove to be that he showed that stuttering treatment and research can and should be inextricably fused if our discipline is to continue to make a difference to the lives of those who stutter. In the final analysis, the *raison d'être* of this discipline is the extent to which its members develop an area of science that makes a positive difference to the understanding and treatment of communication disorders. Einer definitely made such a contribution.



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