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In Memoriam

O. Ivar Lovaas (1927–2010)

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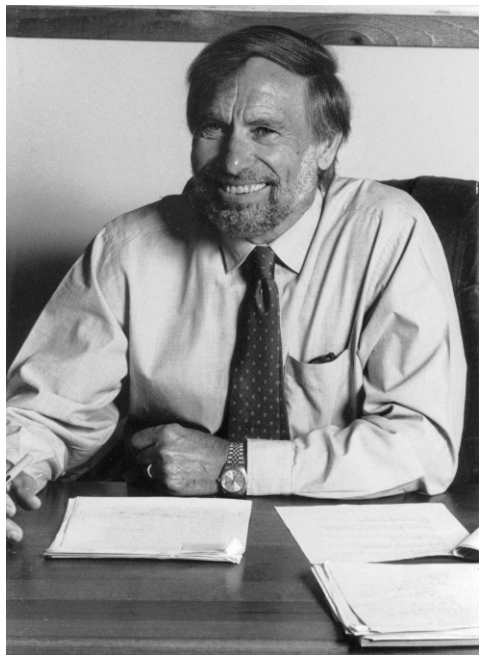

Ivar Lovaas (1927–2010) emerged in the zeitgeist of applied behavior analysis (ABA) in the 1960s and became one of its pioneers. His role in the development of ABA was shaped by his own behavioral preconditions and an environment established by his peers.

When asked about his motivation, he consistently returned to his experience growing up under the deprivations of Nazi occupation in Norway during World War II. In 1947, in the aftermath of the war, he passed his Examen Artium at the Drammen Latinskole. He then won a violin scholarship to Luther College in Decorah, Iowa, graduating with a BA in social studies in 1951. He received his MS in psychology in 1954 and his PhD in learning and clinical psychology from the University of Washington in 1958. His doctoral program emphasized both psychoanalytic psychology and Hullian learning theory. After graduation, he found a position as an acting assistant professor in the Child Development Institute at the University of Washington under Sidney Bijou, where he supervised graduate students in clinical assessment. There he met and worked with Don Baer, who introduced him to the principles of behavior analysis. Lovaas reported that "Sid and Don ignored all my wonderful psychodynamic insights into clinical problems. I endured a year-long extinction run" (Lovaas, 2003).

The process of his shaping into an applied behavior analyst can be seen in his first four papers, the last one of which he credits Baer's extensive editing (Lovaas, 1958, 1960, 1961a, 1961b). Lovaas also cites the early research of Lindsley (1956) and Ayllon (Ayllon & Michael, 1959) with adults with schizophrenia diagnoses, Goldiamond (1965) with stuttering, and Ferster (1961) with children with autism, as models of the direction he would take. His interest in psychodynamic approaches ended as he recognized the lasting impact that reliable data would have on the sustainability of a theoretical approach.

Lovaas was hired as an assistant professor in the Department of Psychology at UCLA in 1961 and was

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invited to conduct research with children with autism at the Neuropsychiatric Institute (NPI) on campus. There he initiated his series of studies on the development of language and social behavior with institutionalized children. His paper written with colleagues at NPI, titled "Acquisition of imitative speech by schizophrenic children" (Lovaas, Berberich, Perloff, & Schaeffer, 1966), was published in *Science* and became a Social Science Citation Classic.

A further shaping step came when he and Frank Hewitt, who ran a classroom at NPI, returned to Washington to visit the Rainier school and saw the ongoing work there by such fellow luminaries as Jay Birnbrauer, Sid Bijou, Mont Wolf, and Todd Risley (e.g., Birnbrauer, Bijou, Wolf, & Kidder, 1965; Wolf, Risley, & Mees, 1964). He recalls being impressed at the stimulus control that the therapists had over the children's behavior in the classroom, and also that on a Saturday the institutionalized children would go and stand outside of the locked classroom, crying to be let in.

Working in labs at NPI and at Camarillo State Hospital, Lovaas published a series of 20 papers on the use of imitation, discrimination training, and social reinforcement to establish spontaneous language skills in mute children.

As much as Lovaas's insightful research led to breakthroughs in the socialization of these children, he perhaps became better known, at least in the popular press, for studying the benefits of systematic punishment to reduce self-injurious behavior. This was largely due to a photographic essay published in *Life* magazine titled "Screams, Slaps, and Love" (Grant, 1965). Many leading autism advocates who were also parents of severely affected children supported Lovaas through the controversy, but others remember only the oversimplifications of his work. As Bernard Rimland wrote in 1978, "Like all behavior modification programs, his was 98% positive reinforcement, with only a trace of aversive control. Yet, true to the journalistic tradition, the *Life* article used only those few photographs showing aversive events, out of the hundreds they had taken" (p. 100). Lovaas himself would later remind audiences that the research had to meet the approval of the UCLA Human Subjects Committee as well as the NIMH who funded the research, including the work with aversives.

Another of Lovaas's seminal publications in the 1960s (Lovaas, Freitag, Gold, & Kassorla, 1965) may well be the first functional analysis paper, showing that the misapplication of social attention and music can increase self-injurious behavior. This work also solidified the contention that behavior could respond systematically to its environment throughout the child's day.

His work in institutions in the 1960s culminated in the systematic appraisal of the outcomes in a paper published in 1973 (Lovaas, Koegel, Simmons, & Long, 1973). In this paper, which analyzed the overall results of his work to date with 20 children, Lovaas concluded that three variables produced the most substantial treatment gains: intensive treatment, family involvement, and the age of the child. As a result, Lovaas determined to focus his efforts on early, intensive, home-based intervention.

By 1987, after working with another 40 children over a period of 15 years, Lovaas published his next groundbreaking study (Lovaas, 1987; McEachin, Smith, & Lovaas, 1993). Each of the children in this early intensive intervention project had received several hundred tailored treatment programs and made major and lasting gains in intellectual, social, emotional, and educational skills. Further, nine of the children showed no diagnosable autism at the end of treatment, and eight of those

maintained their typical functioning throughout elementary school. As were his findings in the 1960s, such results were unprecedented, and almost unbelievable. Leon Eisenberg, a child psychiatrist at Harvard Medical School, said, "If true, these results are absolutely extraordinary" (cited in Goleman, 1987, p. 1).

Publication of his 1987 study required 3 years of work because skeptical reviewers requested further controls. To address the reviewers' concerns, Lovaas secured comparison-group data from an unaffiliated research program at UCLA. The comparison of his results with matched children in the other study, and the obvious and dramatic differences in outcomes, were sufficient to allay the concerns of the majority of reviewers. Clearly one factor that contributed to Lovaas's results was his tenacious perseverance in pursuing the best possible outcomes for the children.

Lovaas then asked whether the findings could be replicated in other centers. He conducted a replication study over the next 10 years, during which time he retired to emeritus status at UCLA in 1994, and established the private Lovaas Institute for Early Intervention while continuing to teach at UCLA. When the replication results were finally realized (e.g., Cohen, Amerine-Dickens, & Smith, 2006; Eikeseth, Smith, Jahr, & Eldevik, 2007; Sallows & Graupner, 2005), Lovaas was finally able to relax and enjoy a true retirement with his close and energetic family.

Lovaas was a man of vigorous physical pursuits (including handball, skiing, and sailing) who entertained with ribald humor and booming laughter. His energy and charisma not only attracted the best and the brightest students to him but sustained a rich family life as well.

He received many honors for his work, including the Edgar Doll Award, a Distinguished Research Contribution Award from Division 33 of the American Psychological Association (APA), a Lifetime Research Achievement Award from Division 53 of the APA, a Fellow from Division 7 of the APA, the Award for Effective Presentation of Behavior Analysis in the Mass Media by the Association for Behavior Analysis International, the California Senate Award, an honorary doctorate, the Champion of Mental Health Award from *Psychology Today*, and a Guggenheim fellowship.

In Lovaas's last writings and presentations, he remained focused on what was yet to be accomplished rather than resting on his laurels. He was looking forward to more effective treatments with more children, more rapid dissemination models, and longer lasting treatment gains. His audacity was to take his results with children with autism and apply them to other social problems—to continue to do something to change the world for the better.

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