Infantile Autism: The Syndrome and Its Implications for a Neural Theory of Behavior (1964), by Bernard Rimland [1]

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Bernard Rimland published his book *Infantile Autism: The Syndrome and Its Implications for a Neural Theory of Behavior* (hereafter *Infantile Autism*) in 1964. The book proposed a theory to explain the causes of autism. The book also synthesized research into autism and used Rimland's neural theory, described in the book, as a theory to explain some aspects of behavior, intelligence, and abnormality. Moreover, *Infantile Autism* contributed to a debate between Rimland and child psychologist Bruno Bettelheim in the 1960s about whether autism was caused by how parents raised their children or by impaired brain development. Rimland's book convinced many autism researchers to study abnormal psychological development.

In 1956, two years after completing his doctorate in experimental psychology at Pennsylvania State University in State College, Pennsylvania, Rimland and his wife Gloria had their first child Mark. During this time, Rimland and his family lived in Point Loma, California, where Rimland worked in the measurement research department for the US Navy. Mark exhibited behavior that matched descriptions of autistic children. Those descriptions came from Leo Kanner, a psychiatrist at Johns Hopkins University [4] in Baltimore, Maryland who described autistic behavior in his 1943 article "Autistic Disturbances of Affective Contact." After reading Kanner's article, Rimland began to study what he perceived as a state of disarray in autism research, and he began compiling published research for a review paper. The review paper evolved into *Infantile Autism*, which advocated for the study of autism as a biological disorder rather than a psychogenic one, or one that originates from the mind. Psychoanalysts like Bruno Bettelheim argued that elements in children's environments caused autism, and those arguments dissuaded many from looking at abnormal developmental processes as potential causes of autism. *Infantile Autism* suggested alternate, biological origins for autism in children. Rimland submitted a manuscript of the book to the Appleton-Century-Crofts Company in New York City, New York, for its annual writing competition. *Infantile Autism* was the first to receive the company's Century Psychology Series Award in 1962 as part of the annual competition.

*Infantile Autism* has eleven chapters in three parts. The first part reviews controversies about autism. The second presents a theory of autism rooted in biology. Finally, the third part describes how a theory about biological causes for autism would affect theories of some kinds of behavior.

The book begins by addressing controversies surrounding the classification and causes of autism as a disease. The first chapter addresses whether or not the concept of autism represents a clearly defined and useful disease category. The second chapter evaluates the theory that autistic children are born almost exclusively to highly educated and intelligent parents. The third chapter addresses whether autism's origins are innate to the autistic child or caused by environmental influences such as upbringing Chapter four, the last in part one,
attempts to distinguish autism as separate and unique from childhood schizophrenia.

Chapter five describes the cognitive deficits suffered by the autistic. This part of the book asserts that an area of the brain stem associated with alertness and consciousness, called the reticular formation, is an ideal target for further autism research. Chapter six first divides into several subcategories impairments to perception that result from autism to direct future research. The subcategories are: responsiveness to external stimuli; preference for senses of taste, touch and smell; relative insensitivity to pain; overreaction to sensory stimulation; and the effects of sensory deprivation. The book advocates that scientists refine the diagnostic category of autism, obtain physical evidence of brain stem difference through autopsy and biochemical findings, and track the administration of medical oxygen immediately after birth. In the discussion at the end of chapter six, the book posits the reticular formation as a likely location in the brain in which researchers might find dysfunctions similar to those found in autistic children.

Chapter seven discusses the heritability of intelligence. Rimland stresses that some children have genetic vulnerabilities to autism due to their innate capacities for intelligence. The chapter built on an established correlation between prevalence of autism and the first-born males of highly educated and intelligent parents at the time. To end part two, chapter eight suggests areas of future research. These areas include improving the accuracy of diagnosis, etiological studies of brain function, and chemical and training therapy for autistic children. Rimland emphasizes the importance of autism research and claims that by understanding the abnormal function of an autistic brain, we can better understand normal brain function.

Part three, Rimland says, is the most speculative part of *Infantile Autism*. Chapter nine discusses the extent to which parents of autistic children may contribute to autism's cause. In this chapter Rimland hypothesizes that children who are vulnerable to early childhood autism are often children of people who are introverted and exhibit high intelligence. Chapter ten discusses several abilities sometimes found in autistic children and it attempts to explain those abilities by appealing to a specific affected brain center. The final chapter attempts to reconcile Rimland's hypothesis regarding the reticular formation's function with specific behaviors associated with autism.

*Infantile Autism* argued against the theory that lack of parental affection contributed to autism, or the refrigerator mother theory. From his 1943 article through the 1950s and 60s, Leo Kanner advocated the refrigerator mother theory. Kanner later provided the foreword for *Infantile Autism* in which he criticized those who advocated only theories such as the refrigerator mother theory. His foreword provided credibility to Rimland's work. Bruno Bettelheim defended the psychogenic theory in his 1967 book *The Empty Fortress: Infantile Autism and the Birth of the Self*.

*Infantile Autism* engendered a public debate between two opposing theories of autism's causation, one psychological, the other leaning toward biology and development. *Infantile Autism*'s focus on possible biological explanations encouraged further research into possible mechanisms for autism centered on development of the brain.

**Sources**

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