In 1943, child psychiatrist Leo Kanner in the US gave the first account of Early Infantile Autism that encouraged psychiatrists to investigate what they called emotionally cold mothers, or refrigerator mothers. In 1949, Kanner published "Problems of Nosology and Psychodynamics of Early Infantile Autism." In that article, Kanner described autistic children as reared in emotional refrigerators. US child psychiatrists claimed that some psychological or behavioral conditions might have origins in emotional or mental stress, meaning that they might be psychogenic. Kanner described autism's cause in terms of emotional refrigeration from parents into the early 1960s, often attributing autism to the lack of parental warmth. In the 1960s, Bernard Rimland and Bruno Bettelheim, both in the US, disagreed on the role of psychogenesis in autism. Rimland suggested that autism's cause was rooted in neurological development, while Bettelheim continued to emphasize the role of nurturing during early childhood. Nevertheless, many mothers reported that they felt a deep sense of anguish and resentment toward child psychiatrists who often made them feel as if they were to blame for their children's autism.

Early Infantile Autism is a condition that occurs early in life, typically diagnosed before the age of two. Eugen Bleuler in Switzerland coined the term autism in 1911, referring to behavior associated with schizophrenia. Kanner used the term autism as a clinically unique category, rather than a symptom of schizophrenia. From the Greek *autos* meaning self, autism is characterized partly by a child's insistence on aloneness and a child's desire to maintain sameness in his or her environment. Since Kanner's 1943 article "Autistic Disturbances of Affective Contact," evolving diagnostic criteria have affected the rate at which autism is diagnosed. Nonetheless, the outward signs of autism can also be highly variable. Autistic children may express repetitive and restrictive behaviors, obsessively focus on objects, and they often throw tantrums when the sameness of their environment is disturbed.

Sigmund Freud, who studied abnormal behavior in Austria in the early twentieth century, influenced psychiatry, which then aimed to offer mental health patients a source of expertise and treatment that did not involve medicines. Freud's psychotherapy focused on systematically studying the underlying forces that contribute to human behavior, or psychodynamics. Central to psychotherapy was the presumption that an experienced clinician could help a patient elucidate the sources of conflict that underlie the patient's behavior.

By the early 1940s psychoanalysts practiced in the US. By 1938, the American Psychoanalytic Association in New York City, New York, required trainees to have completed at least one year of residency in psychiatry. By the early 1940s, some psychoanalytic institutes required two years of residency training in psychiatry. In the early 1950s the vast majority of the members of the American Psychiatric Association, which is headquartered in Arlington, Virginia, were also members of the American Psychoanalytic Association.
requiring their members to become professionally trained psychiatrists, psychotherapists legitimated psychoanalysis in the US.

Adolf Meyer, a psychiatrist trained in Switzerland in the late nineteenth century who then migrated to the US in 1892, was one of the early members of the American Psychoanalytic Association and director of the clinic where Kanner worked. Meyer's conception of psychiatry was based on understanding particular behaviors by investigating interactions of an organism in its environment, rather than using a dichotomy of whether nature or nurture shaped human behavior. He took life histories of patients in his care. In 1913 Meyer became director of the Henry Phipps Psychiatric Clinic at the Johns Hopkins Hospital in Baltimore, Maryland. Meyer tended to emphasize psychogenic factors in the clinic.

Leo Kanner was trained as a physician at the Friedrich-Wilhelm-University, which later became Humboldt University in Berlin, Germany. For his thesis in 1920, Kanner studied normal heart sounds and their representation in electrocardiograms. After working for some time at the Second Medical Clinic at Charité Hospital in Berlin, Germany, Kanner joined in 1928 the Henry Phipps Psychiatric Clinic at Johns Hopkins Hospital. In 1930, Meyer asked Kanner to head the first child psychiatry service in the United States at the Henry Phipps Psychiatric Clinic. By 1930, psychotherapy informed psychiatric practice, and with Meyer's influence, Kanner incorporated psychogenic explanations in his early descriptions of autism.

In 1938, Kanner began observing eleven child patients at his clinic. Each between the ages of two and eight, these children exhibited behavior that Kanner considered different from anything else reported in psychiatry. Donald, Frederick, Richard, Paul, Barbara, Virginia, Herbert, Alfred, Charles, John, and Elaine became the first eleven children described with Kanner Syndrome, a condition Kanner later called Early Infantile Autism. In 1943, Kanner published "Autistic Disturbances of Affective Contact" in which he recounted his study of those eleven children. The article described behaviors of those children and included descriptions about the background, social standing, and intellectual capabilities of their parents.

In the final sections of his 1943 article, Kanner elaborated the common features that he had noticed about peculiar behavior and family background of the eleven children. Kanner argued that those children's autistic withdrawals meant that they were overwhelmed with a desire to maintain sameness and aloneness with respect to their environment. As for the families, Kanner noted that the children came from intelligent families of either Jewish or Anglo-Saxon origin, and that the fathers and mothers were not warm to their children. Thus, Kanner emphasized emotionally cold parenting as a causal explanation for autism, and some called this theory the refrigerator mother theory.

After Kanner introduced the theory in 1943, he and others questioned whether or not he had described a unique diagnostic category. Bleuler had described autistic withdrawal as a symptom of schizophrenia in 1911. Kanner described these issues at an annual meeting of psychiatrists in 1948. In his 1949 article "Problems of Nosology and Psychodynamics of Early Infantile Autism," Kanner attempted to justify Early Infantile Autism's place in psychiatric nosology. While distinguishing autism's dissimilarity to other psychiatric conditions, Kanner described parents of patients with autism as impassive, mechanical, and absent. Within his 1943 article, Kanner described parents as unabashedly robotic and scientific, as if their children were objects of experiments.

Between 1949 and 1954, Kanner's increasingly focused on genetic and congenital factors that
predisposed children to develop autism early in life. At the end of his 1954 article “To What Extent Is Early Infantile Autism Determined by Constitutional Inadequacies?”, Kanner discussed biological inheritance. By constitutional inadequacy, Kanner meant biological inheritance, prenatal organic damage, physical disruption during childbirth, and prevalence of boys to girls (a consistent 4 to 1 ratio) diagnosed with early infantile autism. Although Kanner began to consider new theories of autism’s etiology, he remained dedicated to parental nurturing as a primary cause of autism. Nonetheless, Kanner studied inheritance of traits from parents to offspring only when parents exemplified autistic behaviors themselves. Kanner wrote that parental influence in the first few years of life was highly pathogenic and that inheritance simply predisposes the child to suffer from emotional refrigeration early in life.

Starting in 1959, Kanner began corresponding with Bernard Rimland, an experimental psychologist based in San Diego, California, whose son Mark, born in 1956, was diagnosed with autism. Rimland began writing a review paper on autism. This review paper expanded into a book-length work, *Infantile Autism: The Syndrome and Its Implications for a Neural Theory of Behavior* (hereafter *Infantile Autism*), which Rimland submitted as a manuscript to the Appleton-Century-Crofts Company, which was headquartered in New York City, New York, in 1964 for its annual competition. Kanner wrote a complimentary forward for Rimland’s book, writing that Rimland was a trailblazer in psychology. Rimland’s book, set in three parts, addressed several controversies about Early Infantile Autism, and it attempted to explain the causes of autism.

Chapter three of Rimland’s *Infantile Autism*, titled “The Etiology of Infantile Autism: The Problem of Biological versus Psychological Causation,” refuted the assertion that psychogenic factors alone caused Early Infantile Autism. The author stated that psychologists uncritically adopted the psychogenic etiology of Early Infantile Autism. Rimland reconsidered autism’s etiology, emphasizing three main points. First, Rimland wrote that causal theories of autism have implications for the welfare of children with autism and their families, citing factors including shame, guilt, and marital discord, which accompany psychogenic etiology. Second, Rimland suggested that so long as biologically trained researchers were comfortable with the adequacy of psychogenic explanations, there would be no reason for them to look further. Finally, Rimland claimed that by understanding the etiology of autism, researchers could find that human behavior may be more closely linked to biology than previously thought.

Rimland’s *Infantile Autism* criticized psychogenic arguments for the etiology of autism. Addressing the personalities of parents, Rimland mentioned Leon Eisenberg and Kanner’s 1956 article, in which the authors asserted that the emotional environment at home plays a role in the genesis of autism. Rimland argued that Kanner and Eisenberg did not specify their conclusion, as they did not provide evidence. Rimland wrote that their conclusion was a *post hoc ergo propter hoc* fallacy, an error of reasoning whereby one infers a cause from a simple correlation of events, without providing evidence of a causal relation. Rimland suggested that alternative biological mechanisms could cause autism, citing evidence from studies of the reticular formation in the brain.

In 1967 Bruno Bettelheim published *The Empty Fortress: Infantile Autism and the Birth of the Self*. In his book, Bettelheim described his experiences as a Jewish man living in Austria from 1932 to 1938. He wrote that during that time, he had at times two autistic children living with him. Bettelheim wrote that his later experience as a Jewish captive during World War II gave him insight into the kind of introspection that autistic children experience. He further compared mothers of the autistic to Nazi prison guards, and he equated the environments they set in
their homes to concentration camps.

Bettelheim, also a student of Freud's psychoanalysis, reelaborated Kanner's theory of psychic causation. Bettelheim advocated for removing autistic children from the parent's care, a practice called parent-ectomies. Bettelheim argued that biological abnormalities in autistic children were effects, and not causes, of the disorder and emotionally cold parenting.

Between 1964 and 1967, Rimland advocated for parents, and he helped establish organizations like the National Society for Autistic Children (NSAC) in Teaneck, New Jersey, in 1965 to provide support and information for parents. In 1967, Rimland helped found the Institute for Child Behavioral Research in San Diego, California, to advance his goals of finding the cause and developing treatments for autism. In 1967, Rimland also co-produced a documentary titled *The Invisible Wall*, which described behaviors associated with autism and advanced his theory that autism likely stemmed from both genetic and environmental causes.

In 1969, at a Washington D.C. meeting for the National Society for Autistic Children, Kanner gave a speech where he stated that he acquitted the parents and insisted that the condition of autism was innate. Despite this reversal from Kanner, parents of autistic children continued to experience traces of psychoanalytic theory in psychiatry clinics across the country. Rimland's book *Infantile Autism* reoriented research in psychiatry and psychology toward biology. In 1979 Donald Katz, a journalist in the US, wrote an article highlighting the struggles of autistic children and their parents. In this article, Katz credited Rimland for rejecting refrigerator mother theory as a myth and for encouraging biological research into autism, particularly neurological development.

**Sources**

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