

Cognitive Critique



SYMPTOMS OF AUTISM IN THE VIEWS OF KANNER AND ASPERGER

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ABSTRACT

In human history, a great number of significant discoveries in medical science began with case studies. These include John Martin Harlow's description of Phineas Gage in his letter to the editor of the *Boston Medical and Surgical Journal*, Alois Alzheimer's report on his patient Auguste Deter, and the initial six children reported by Landau and Kleffner in 1957. Similarly, modern research on autism is founded on cases reported by two physicians: Leo Kanner at Johns Hopkins and Hans Asperger at the University of Vienna.

The word *autism* is derived from the Greek word *autós* (self) and was originally used by Swiss psychiatrist Eugen Bleuler to describe patients with schizophrenia (Frith 1991). Subsequently, the term was used by two physicians (Leo Kanner in the United States, and Hans Asperger in Austria) to describe children who they believed to suffer from a unique syndrome. In 1943, Leo Kanner published the paper *Autistic Disturbances of Affective Contact* describing eleven cases. A year later Hans Asperger published his paper entitled *The Autistic Psychopathy in Childhood* in which he described similar cases.

Exactly what symptoms exhibited by these children made the two physicians choose the same word to describe the pathology? Driven by this question, my paper will provide a description of autism by examining the original cases described by Kanner and Asperger. I will begin with an introduction to their works. I will then describe the core deficits of autism using cases described by the two physicians and end with a discussion of the impacts of their investigations on current research on autism.

WHO IS LEO KANNER?

Leo Kanner (1894-1981) was born in Klekotow, a small town in Austria, and received his M.D. from the University of Berlin in 1921. In 1924, Kanner immigrated to the United States as an assistant professor at the state hospital in Yankton, South Dakota. In this remote small town, he read extensively on pediatric psychiatry and taught himself to be a child psychiatrist. In 1928, he applied for Commonwealth Fellowships at the famous Henry Phipps Psychiatric Clinic and was interviewed by Professor Adolf Meyer at the American Psychological Association meeting in Minneapolis (Eisenberg 1994). Kanner joined the famous Phipps Clinic in the same year (newsletter from Johns Hopkins Department of Psychiatry and Behavioral Sciences 2005). At the end of his 3-year fellowship, he was invited by Dr. Adolf Meyer and Edwards Park, a professor of pediatrics, to establish the first pediatric psychiatry services center in the nation at Johns Hopkins (in the Harriet Lane Home).

In addition to his role as a clinician, Kanner was also a prominent researcher and advocate for children with autism and their families. He was the founder of the *Journal of Autism and Childhood Schizophrenia* in 1971 (renamed as the *Journal of Autism and Developmental Disabilities*), a leading peer-reviewed journal in the field of autism. He wrote the text book *Child Psychiatry* in 1935, which served as the first comprehensive reference work in the field of child psychiatry (Schopler et al. 1981). In 1972, Kanner testified in the North Carolina General Assembly. As a result, the first state wide program for children with autism was established (Schopler et al. 1981).

Dr. Leon Eisenberg, a close friend of Kanner, described him in the following words:

“With no formal training in pediatrics or child psychiatry, Kanner learned from his patients what he went on to teach generations of students...Leo Kanner typified the very best in medicine. He was a physician who placed patients’ welfare above all else, a diagnostician who exhibited an uncanny ability to discern patterns, a teacher whose scholarship was prodigious, and a citizen of the world who would not kowtow to authority” (Eisenberg 1994 p. 751)



Figure 1: Leo Kanner



Figure 2: Hans Asperger

WHO IS HANS ASPERGER?

Hans Asperger (1906-1980) was also trained in Austria and received his M.D. in 1931 at the University of Vienna. He practiced at the University Children’s Hospital in Vienna. After the Second World War, he became the chair of pediatrics at the University of Vienna and held this position for twenty years (Frith 1991). At the University’s Pediatrics clinic, children with autism were treated using a remedial pedagogy approach. Remedial pedagogy is

“...a seemingly intuitive synthesis of medical and educational practice applied by inspired doctors, nurses, teachers and therapists in a team effort.” (Frith 1991, p7)

Treatment plans including school lessons and speech sessions were designed based on psychological tests. The team also met regularly and discussed each child’s progress.

Asperger's paper, *Die 'Autistischen Psychopathen' im Kindesalter* (*The 'Autistic Psychopathy' in Childhood*), was the basis for Kanner's thesis. Although Asperger's paper was published in 1944, it was not well known in the U.S. until it was translated from German into English by Utah Frith in 1991.

CASES DESCRIBED BY LEO KANNER

Eleven patients (eight boys and three girls) were reported in the 1943 paper and they were between two and eight years old when they were first seen at the psychiatric clinic at the Johns Hopkins Hospital. According to Kanner, there were two characteristics shared by all these cases.

“The outstanding pathognomonic characteristics were viewed as (1) the children's inability from the beginning of life to relate themselves to people and situations in the ordinary way, and (b) an anxiously obsessive desire for the preservation of sameness” (Kanner 1971, p 140).

I will now describe the characteristics of cases that led Kanner to draw the conclusions mentioned above.

SOCIAL IMPAIRMENTS IN CASES REPORTED BY KANNER

Self-satisfied or *self-sufficient* is frequently used to describe these children. The innate social disposition in normal children is absent in these eleven children. It appears that these children prefer to be left alone rather than playing with their peers and that other children are an interference rather than potential playmates or friends. In fact, they prefer objects (e.g. spinning blocks) more than people. One example mentioned by Donald's father illustrates this point well.

“He (Donald) seems to be self-satisfied. He has no apparent affection when petted. He does not notice when anyone comes or goes. He seems to draw into his shell and live within himself. He seldom comes when called but has to be picked up and carried or led wherever he has to go” (Kanner 1971, p 120). Donald's father reported that Donald even “...failed to pay the slightest attention to Santa Claus in full regalia” (Kanner 1943, p. 218) but developed a mania for spinning round objects such as cooking pans.

In another case, Frederick Creighton, a parent reported:

“The child has always been self-sufficient. I could leave him alone and he’d entertain himself very happily, walking around, singing. I have never known him to cry in demanding attention. He was never interested in hide-and-seek...when we had guests, he just wouldn’t pay any attention. He looked curiously at small children and then would go off all alone. He acted as if people weren’t there at all, even with his grandparents” (Kanner 1943, p 222).

One symptom reported by parents is that children with autism often use a person as a tool to get what they want without paying the slightest attention to the person as a person. This symptom is also noticed by Kanner. In the case of Charles N, he wrote,

“The most impressive thing is his detachment and his inaccessibility. He lives in a world of his own where he cannot be reached. No sense of relationship to persons... when the *Reader’s Digest* was put on the floor and a foot placed over it, he tried to remove the foot as if it were a detached and interfering object, with no concern for the person to whom the foot belonged” (Kanner 1971, p 135).

Because of the extreme self-sufficiency in play, several parents came to the clinic out of concern that their child might be deaf. In one case, the child (Richard M) would obey simple commands such as *sit down* without looking at the physicians.

Kanner also observed that these children were extremely preoccupied with objects. According to his report, some parents complained that their child was so attached to the objects that he failed to develop social awareness (Kanner 1943). A common characteristic mentioned in Kanner’s report is a child’s lack of response to his or her name while playing with an object.

“There was a marked contrast between his relations to people and to objects. Upon entering the room, he (Paul G) instantly went after objects and used them correctly. He was not destructive and treated the objects with care and even affection...He got hold of a pair of scissors and patiently and skilfully cut a sheet of paper into small bits, singing the phrase *cutting paper* many times” (Kanner 1943, p 227).

RIGIDITY AND PRESERVATION OF SAMENESS

Obsession with sameness is another feature characterizing these children. It appears that they were fond of sameness in objects and enjoyed being able to control them. In Kanner's words, *when with them, he has a gratifying sense of undisputed power and control* (Kanner 1943, p 246). Kanner observed that every one of the eleven children would immediately go toward objects (e.g. light switches) without paying the slightest attention to the persons present. This serves as one potential explanation why these children's relation to people is so different from their manipulation with objects. To illustrate, consider the case of Donald T,

"Most of his actions were repetitions carried out in exactly the same way in which they had been performed originally. If he spun a block, he must always start with the same face uppermost. When he threaded buttons, he arranged them in a certain sequence that had no pattern to it but happened to be the order used by the father when he first had shown them to Donald" (Kanner 1943, p 219).

In another case, Kanner described the rigid behavior exhibited by Frederick W,

"To a certain extent, he likes to stick to the same thing. On one of the bookshelves we had three pieces in a certain arrangement. Whenever this was changed, he always rearranged it in the old pattern. He won't try new things, apparently" (p 223).

FOLLOW-UP OF CASES REPORTED BY KANNER

In a follow-up study twenty-eight years later, Kanner reported that many of the eleven children received education at the Devereux school, a school located in Pennsylvania providing services for individuals with disabilities and currently operating a national network (www.devereux.org).

Three residents (Richard M, Barbara K, Virginia S, and Charles N) spent most of their lives in the state institution. Regarding their lives, Kanner wrote:

“They yielded readily to the uninterrupted self-isolation and soon settled down in a life not too remote from a nirvana-like existence. If at all responsive to psychological testing, their IQ’s dropped down to figures usually referred to as low-grade moron or imbecile” (Kanner 1971, p 143).

Two children had the most success in later life: Donald T and Frederick W. Donald lived with a farmer couple. They used his interest in math and kept him occupied by digging a well, then asking him to calculate the depth of the well. At the same time, they helped him maintain contact with his family. Kanner reported that Donald became a bank teller. He participated in a variety of community activities. Frederick went to Devereux school. He lived with his parents in 1966. His mom reported,

“He was enrolled in a sheltered workshop and received vocational training, learning to run duplicating machines. He has now a regular job and is reported by his chief as *outstandingly dependable, reliable, thorough, and thoughtful toward fellow workers*” (p 144).

CHARACTERISTICS OF AUTISM IN CASES DESCRIBED BY HANS ASPERGER

Asperger thinks that social impairment is the core deficit for children with autism. He writes: *in many cases, the social problems are so profound that they overshadowed everything else* (Frith 1991 p 37). Describing the case of Fritz, he wrote,

“One could not help thinking that Fritz might never be able to love anyone and would never do something solely to please somebody else. He did not care if people were sad or upset about him.” (p 40).

The lack of eye contact is another common characteristic of autistic children. Asperger also noticed that Fritz lacked eye contact during conversation.

“Fritz.... darted short *peripheral* looks and glanced at both people and objects only fleetingly” (Frith 1991, p 42). In another case, that of (Ernst K.), Asperger described “the boy looked as if he had just *fallen from the sky*” (p 60).

Apparently all these children failed to develop relationships with other children and adults during their time at the University Padiatric Clinic. Harro L, Patient 1, an eight and one-half year-old boy, was described as follows:

“Through the length of his stay on the ward, he remained a stranger. One would never see him join in a game with others. Most of the time, he sat in a corner buried in a book, oblivious to the noise or movement around him.”
(p 56)

Despite the social difficulties, Harro L demonstrated great insights. For example, when he was asked to contrast envy/meanness during an intelligence test, he answered:

“The mean one has something and doesn’t want to give it away, and the envious one wants to have what the other one has.” (p 54)

Another patient Ernst K, seven and one-half years old, described the similarity between glass and wood as:

“Glass breaks more easily and wood doesn’t. Glass is a mass, wood is sappy and damp. It has marrow in the middle. Wood burns to ash, glass stretches apart and then melts.” (p 62)

Asperger believed examples like these gave evidence that children with autism show depth and originality in their thinking. He used the term *autistic intelligence* to describe these children and stated that autistic intelligence is demonstrated through the language these children used such as *I would not like to say I am unreligious, but I just don’t have a proof of God*. One would not usually expect a child younger than ten years old to express such a thought.

Unlike cases described by Kanner, most children described by Asperger were referred by their teachers for problems with aggression and noncompliance. For example, Fritz V, Patient 1, would throw a hammer at other children. Harro L, Patient 2, would leave his desk during lessons and crawl under it. As a consequence, these children were teased by other children. Thus, it is unclear whether cases reported by Asperger revealed social isolation of the children because of their innate inability to relate to other children or whether they intentionally avoided other children because of their unsuccessful experience interacting with their peers.

IMPLICATION OF PAPERS BY KANNER AND ASPERGER

Cases reported by Kanner and Asperger laid foundations for the contemporary study of autism. Their descriptions of clinical cases provided the initial definition of autism. On the basis of the detailed descriptions of the cases provided in their papers, scientists and clinicians are now able to recognize and study children with similar profiles. It should also be noted that the patterns recognized by Kanner and Asperger are consistent with the latest definition of autism in DSM-IV, i.e. impairment of both social interaction and communication, along with restricted, repetitive and stereotyped pattern of behaviors (American Psychiatric Association 1994).

On the basis of the foundational work of Kanner and Asperger, the field of autism has made enormous strides. The Center for Disease Control and Prevention (CDC) has established the Autism and Developmental Disabilities Monitoring (ADDM) Network providing data about ASD prevalence. Over the past 30 years, researchers have identified early signs of autism (Wetherby et al. 2004) and have developed a number of effective early intervention programs for treating children with autism (Lovaas 1987; Rogers 1996). Moreover, autism advocacy organizations led by parents such as Autism Speaks (www.autismspeaks.org) have made significant contributions to societal awareness of autism.

Despite these achievements, we should be aware of the challenges the field is facing. Individuals with autism represent a heterogeneous group not all of which respond to one type of intervention. Thus, we need to develop interventions that will work the best in different situations and for different groups of autistic children. Also, we must more precisely determine the etiology of the disorder.

In sum, Kanner and Asperger not only laid the groundwork for autism, they also demonstrated a combination of the roles of a caring clinician and an objective researcher. In a search for the historical documents about the two giants, one is amazed by their humility. For them, their discovery was not a result of their brilliance but of their luck. In Kanner's words,

“There is no greater appeal to humility and no greater incentive to helpfulness than the realization that *here, by the grace of God, go I.*” (Frith 1991, p 171)

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