Historical Perspectives on Autism: Its Past Record of Discovery and Its Present State of Solipsism, Skepticism, and Sorrowful Suspicion

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- Media effects

The boundary between biology and behavior is arbitrary and changing. It has been imposed not by the natural contours of disciplines but by lack of knowledge. —Kandel, 1991

Hominoids have had a perplexing time for millennia dealing with disability, disease, and death in their societies.\textsuperscript{2} Placed in an often unforgiving world, hominoids have often turned to mantics, magic, religion, mysticism, and haruspex to explain or justify imperfection in fellow \textit{Homo sapiens}. Sometimes the reaction has been positive and sometimes negative. There is evidence from 60,000 years ago that Neanderthals carefully buried their dead, even those with disabilities such as from rickets, which was very common in this group of hominoids.\textsuperscript{3}

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However, prejudice and avoidance were common for countless thousands of years in many cultures toward those with defects such as mental retardation and epilepsy (the sacred disease of Hippocrates), both of which were traditionally blamed on demon possession in Western cultures.\(^4\) One scholar in ancient China notes that mentally retarded children during the Zhou Dynasty (841 BC–221 BC) were identified as being “…stupid, a child born stupid and fearful.”\(^5\)

Babies deemed defective after careful inspection in ancient Sparta (700 BC–300 BC) were thrown into a chiasm at a cliff on the famous Mount Taygetus, which is located in Peloponnese, Greece. The ancient Athenians also allowed those with disabilities to be killed if they could not care for themselves.\(^6\) Plato (424 BC–347 BC) concluded that disabilities interfered with a world of perfection and wrote, “The offspring of the inferior, or of the better when they chance to be deformed, will be put away in some mysterious, unknown place, as they should.”\(^6\)

The Old Testament did not allow those with blindness or lameness to “enter the house of believers,” whereas the New Testament taught that those with mental illnesses were possessed by demons, a fate as noted in those with epilepsy.\(^6\) A long-held belief in some religions was that birth defects and disabilities were the result of God’s punishment due to the sins of the parents.\(^6\)

William Shakespeare (AD 1564–1616) called those with mental retardation court fools. They could say what they wanted to the royal court because they (those with mental subnormality) were considered to have no intelligence.\(^7\) Those with mental retardation from any cause were called village idiots in nineteenth century Western Europe and lived as beggars, church dependents, or court jesters. Because humans with mental retardation were viewed as having the same brain pathology as others who were called insane, individuals with mental retardation were often confined to asylums. Perhaps the most famous asylum in Europe was the Bethlehem Hospital in London, which came to be known as Bedlam.

Although autism was not formally recognized until the twentieth century, examples of probable autism are found earlier. For example, Martin Luther (1483–1546), through his note taker Mathesius, has a story about a 12-year-old boy with features of severe autism.\(^8\) Perhaps the first well-documented case of autism was that of Hugh Blair of Borgue, Scotland, in a 1747 court case that involved the brother of this person seeking to gain Hugh Blair’s inheritance.\(^9\) A medical student (Jean Itard) treated a wild child with autistic features who was called by history the Wild Boy of Aveyron and was a feral child caught in 1798.\(^10\)

The British Mental Deficiency Act was passed into law in 1913 in England and ruled in a Plato-like decision that those with mental retardation from any cause must be taken from general society and placed into custodial care.\(^11\) The United States Supreme Court supported the sterilization of a young woman with mental retardation in 1927 during the era of twentieth century Nazi Germany, where those with mental retardation were euthanized.\(^12\) Permitting handicapped children to be killed has been noted in twentieth century China.\(^5\)

The birth of a girl with mental retardation who was a sister of President John F. Kennedy (1917–1963) led the United States into a new era with regard to dealing with handicapped humans. Instead of isolation, punishment, or death, science has attempted to understand the cause of various conditions with the idea of improving their lives. The US government developed disability councils starting in 1963, and US laws were passed in the 1970s at both the federal and state levels seeking to guarantee the civil rights of institutionalized individuals.\(^13\)

In 1975, Public Law 94-142 was passed as the Education for All Handicapped Act, mandating financial support for all children with developmental disability who should
receive comprehensive education no matter how severe the disability. These children were to be placed in the least-restrictive environment that was possible. The Individuals with Disabilities Education Act developed a public special education system in the United States with the extension of services down to birth while formalizing early developmental intervention systems across the nation.\textsuperscript{13}

The Americans with Disabilities Act was passed in 1990 to further expand civil rights protection for all Americans with disabilities, including developmental disabilities. In 1997, Public Law 94-142 was updated to allow parents of those with developmental and other disabilities the right to be equal partners with school personnel in establishing an individualized education plan for this individual.\textsuperscript{13} However, concern about the cause of disability remains intense, as now seen with autism. To understand the current milieu of thinking in this regard, historical perspectives and personalities in the arena of autism are presented.

ALFRED RUSSEL WALLACE

About 181 years after the English physician, Dr Edward Jenner, inoculated 8-year-old James Phipps with cowpox vaccine in 1796, smallpox vaccination has eliminated one of the greatest scourges of humankind, smallpox.\textsuperscript{14} Instead of universal praise for the development of a way to prevent smallpox, controversy entered by way of a strong antivaccination movement, with such leaders as Alfred Russel Wallace (1823–1913) in England. The antivaccine movement was launched by the 1853 Vaccination Act in England, which mandated smallpox vaccination for the public in England.\textsuperscript{15}

Wallace was a codiscoverer of natural selection and was a famous explorer, biologist, anthropologist, geographer, and naturalist. He published his own theory of evolution, which stimulated Charles Darwin to publish his own now famous theory regarding evolution. In the 1880s, Wallace was one of the leaders of a strong antivaccination movement based on claims that the smallpox vaccine was not safe and was dangerous and the idea that compulsory vaccination was unethical.\textsuperscript{16} His first objection was that one should not be forced to take a vaccine, but then eventually he became concerned with the safety of smallpox vaccine itself. Wallace was also adamant that the vaccine would upset what he perceived was the balance of nature with potentially disastrous results for human beings. He took on the medical establishment and encouraged some to avoid the smallpox vaccination. He was joined by other prominent scientists of the Victorian age who dismantled the compulsory vaccination act and lent considerable discredit to vaccination in general. Wallace’s disagreement with the well-known journal, \textit{The Lancet}, portended controversies to come in the next century.

PAUL EUGEN BLEULER

Paul Eugen Bleuler, MD (1857–1939), a Swiss psychiatrist, introduced the term schizophrenia based on his belief that psychosis contained psychological roots and would improve with psychoanalytic therapy. His book \textit{Lehrbuch der Psychiatrie (Textbook of Psychiatry)} was published in 1916 and became a standard book in this field for many years. This pioneer, heavily influenced by the work of Sigmund Freud (1856–1939), also coined the term autism based on the Greek (autos, \textit{autos}) or Latin (autismus) for self, which he felt was one of the symptoms of schizophrenia. Bleuler first used this term in 1912 in an article in the \textit{American Journal of Insanity} to describe patients who seemed to lose contact with reality, live in their own world of fantasy, and were incapable of normal communication with others.\textsuperscript{17,18}
LEO KANNER

Leo Kanner, MD (1894–1981), was a Jewish American psychiatrist whose pioneering studies led to the basis of child and adolescent psychiatry in the United States and beyond. Kanner began his studies at the University of Berlin in 1913; however, his studies were interrupted by World War I when he served with the Austrian army. He was the first physician to be called a child psychiatrist as child psychiatry began to evolve from adult psychiatry. Leo Kanner founded the first academic child psychiatry department at Johns Hopkins University, and his classic 1935 textbook, *Child Psychiatry*, was the first such book in the English language.

Kanner’s classic article on autism (early infantile autism), *Autistic Disturbances of Affective Contact*, was published in 1943 based on his observations of 11 children (8 boys and 3 girls) with an “...inability to relate themselves in the ordinary way to people and situations from the beginning of life.” The first case that was reported was that of Donald T, first seen in October, 1938, at age 5 years and 1 month, who arrived to see Dr Kanner with a 33-page typewritten report prepared by his father detailing his son’s social dysfunctions. Before Donald T was 2 years old, he had an “unusual memory for faces and names, and knew the names of a great number of houses in his home town.”

Dr Kanner concluded: “We must, then, assume that these children have come into the world with innate inability to form the usual, biologically provided affective contact with people, just as other children come into the world with innate physical or intellectual handicaps. If this assumption is correct, a further study of our children may help to furnish concrete criteria regarding the still diffuse notions about the constitutional components of emotional reactivity. For here we seem to have pure-culture examples of inborn autistic disturbances of affective contact.”

Dr Kanner continued with his studies on what was then called early infantile autism or Kanner autism, which was defined as a severe behavioral or psychiatric disorder that was identified in early infancy. Leon Eisenberg, MD, his coauthor in a classic summary article in 1956, went on to replace Dr Kanner as chief of child psychiatry at Johns Hopkins Hospital. Leo Kanner became the editor of the *Journal of Autism and Developmental Disorders* (then called *Journal of Autism and Childhood Schizophrenia*) from 1971 to 1974.

HANS ASPERGER

Hans Asperger (1906–1980) was an Austrian pediatrician who became chair of pediatrics at the University of Vienna. During his career, he described 4 boys (out of more than 400 children) with autistic features but who were also called little professors because of their extraordinary ability to learn specific facts. He concluded: “We are convinced, then, that autistic people have their place in the social community. They fulfill their role well, perhaps better than anyone else could, and we are talking of people who as children had the greatest difficulties and caused untold worries to their care-givers.”

His classic article was published in German in 1944 and was not translated into English until 9 years after his death (1980); thus, it was mostly ignored in the English-speaking community until the 1990s. Asperger started a school for children with what he called autistic psychopathy; however, the school was destroyed near the end of World War II, and much of his early work was lost in this combat-induced annihilation. During the past 2 decades, Asperger syndrome has come to represent a higher functioning person with autism. One of Hans Asperger’s patients became a professor of astronomy and another became a Nobel laureate in literature.
The term Asperger syndrome was first used in 1981 by Lorna Wing, a British psychiatrist, who had a daughter with this diagnosis.25 Hans Asperger summarized his work in an article he wrote in German in 1977.26 Some scholars have speculated that Hans Asperger had Asperger syndrome himself.27 The term Asperger syndrome was used in the fourth edition of the American Psychiatric Association’s Diagnostic and Statistical Manual of Mental Disorders (DSM), which was published in 1994.28

BRUNO BETTELHEIM

Bruno Bettelheim, PhD (1903–1990), was an Austrian-born American with a doctoral degree in philosophy that included a dissertation on Immanuel Kant and art history.29 He became a professor of psychology and education at the University of Chicago from 1944 to 1973 and was director of the University of Chicago’s Sonia Shankman Orthogenic School, a home that treated children labeled as emotionally disturbed.29,30 Bruno Bettelheim was a survivor of the Dachau concentration camp and became known for his work seeking to interpret children’s fairy tales to better understand childhood development. In 1959, he published an article about 9-year-old Joey, the mechanical boy, in Scientific America, which helped to introduce autism to a wide audience.31 Bettelheim’s work on autism became controversial, particularly his opinion that autism was caused by mothers who did not communicate properly with their children and withheld needed affection from them.31,32 This refrigerator mother concept originated with Kanner and was popular in the 1960s and 1970s in the United States as experts and the lay public alike sought to understand the cause of autistic behavior. Unfortunately, Professor Bettelheim died from suicide in 1990.33 Opinion has moved away from this concept, leaving Dr Bettelheim in a controversial status in the early twenty-first century. This began with various individuals challenging the refrigerator mother theory, such as that of Clara Park who wrote about her own autistic child in 1967.34

BERNARD RIMLAND

Bernard Rimland, PhD (1928–2006), was an American psychologist who became well known for his research and views on autism, attention-deficit/hyperactivity disorder, mental retardation, and learning disorders. He was the founder of the Autism Society of America in 1965 and founder (1967) as well as director of the Autism Research Institute (San Diego, CA, USA). Rimland had a son with the diagnosis of autism who eventually became an artist.

Dr Rimland35 did not agree with Bruno Bettelheim and stressed that autism had a neurologic basis, publishing what became a well-known book in 1964 with this thesis. The foreword of this book was by Dr Leo Kanner who was labeled as the originator and early supporter of the refrigerator mother model as the cause of infantile autism. This foreword indicated that Dr Kanner was changing his views toward a neurologic basis for autism. A meeting was held in Teaneck, New Jersey, between parents of children with autism and Bernard Rimland, leading to the founding of the Autism Society of America. Parents were very pleased not to be implicated in the cause of their children’s autism.

Bernard Rimland also became known for his concern with what was perceived as an increase in autism cases and his conclusion that vaccinations might be the cause of this increase. He thought that thimerosal might be the causative agent behind this epidemic. Rimland’s grandfatherly status in the lay public’s perception of autism has lent credence in the eyes of many that vaccines indeed may be the missing link.
in seeking the cause of this condition. This assertion placed him in direct conflict with organized medicine in the United States and elsewhere. Research has carefully and meticulous looked but not found any link between vaccinations (such as the measles, mumps, and rubella [MMR] vaccine) and autism.\(^{36–38}\) This conflict, however, has continued to the present day partly as a result of the high status of this psychologist with the lay public and others.

**OLE IVAR LØVAAS**

Ole Ivar Løvaas, PhD (1927–2010), was a clinical psychologist and professor at the University of California (Los Angeles) who applied behavior analysis to those with autism, which became known as the Lovaas method or Applied Behavioral Analysis.\(^{39}\) Although some studies report benefit from this popular treatment method for autism, systemic reviews do not establish its superiority over other management methods for autism.\(^{40,41}\)

**ANDREW WAKEFIELD**

Andrew Wakefield, MD, is a surgeon and medical researcher from England who was born in 1957. He published a now discredited report in *The Lancet* in 1998 that claimed a causative connection between the MMR vaccine and what was termed autistic enterocolitis.\(^{42}\) Subsequent researchers did not confirm Wakefield’s research, and an investigation by the British General Medical Council revealed that Wakefield had “failed in his duties as a responsible consultant, did his work against the interests of his patients, and acted dishonestly and irresponsibly” in his published work.\(^{43,44}\) The journal that published his 1998 article, *The Lancet*, has retracted the Wakefield article, and his research has been discredited in the mainstream scientific literature.\(^{45,46}\) However, the controversy continues with some continuing to believe such a link despite many scientific articles demonstrating no causative underpinning.\(^{36–38,47}\)

**PAUL OFFIT**

Paul Offit, MD, has emerged as a scientific spokesperson for the view of mainstream medicine that vaccines do not cause autism.\(^{48,49}\) He is a professor of pediatrics and vaccinology at the University of Pennsylvania and chief of the Infectious Diseases Division as well as director of the Vaccine Education Center at the Children’s Hospital of Philadelphia. He is an immunologist and virologist who has written often and eloquently that epidemiologic and biological studies do not reveal any association between vaccines (MMR) and autism.

Dr Offit was publically outraged with the Wakefield study that was published in *The Lancet* in 1998. Dr Offit correctly predicted that the article, although not valid, would influence some to withhold the MMR vaccine from their children, leading to a resurgence of measles and even death.\(^{50}\) Dr Offit also traces the current American antivaccine movement to a 1-hour documentary on April 19, 1982, that appeared on a Washington, DC, television show called “DTP: Vaccine Roulette,” linking the pertussis vaccine with severe reactions in children.\(^{51}\) Several antivaccine groups have emerged since then in the spirit of Wallace and Wakefield. However, the intensity of this Galileo Galileian debate, even with clear scientific evidence revealing no connection, has led to much controversy for Dr Offit, negative mails, and even death threats.\(^{52}\)

**AUTISM IN THE INTERNET AGE**

The general public and parents of children with autism have much to say about autism advocacy. Much information is provided to the general public via the Internet and the
general media in the early part of the twenty-first century. The opinion of Kanner, Bettelheim, and others that negative parenting induced autism in their children angered and incensed parents from the beginning. This division between professionals and parents has persisted today and has even widened.\textsuperscript{53} The opinions of Rimland and Wakefield postulating a link between vaccines and autism has driven this controversy into the twenty-first century with considerable intensity and to an extent that Wallace of the nineteenth century would appreciate and applaud. Public education from the press, television, and the Internet feeds this flowing flame of misinformation.\textsuperscript{54,55}

Parents, including movie stars, who saw their children vanish into the depth of autism around the same time as receiving vaccines became convinced that the cause was vaccines, and are very influential spokespersons for this cause.\textsuperscript{51,54} Sometimes physicians, including media physicians or physicians caring for media stars’ children with autism, join the antivaccine movement, which seems to lend more credibility to those agreeing with this opinion. This occurs despite clear evidence from many studies noting no connection, including epidemiologic research that the epidemiology of childhood autism is the same as that found in adults.\textsuperscript{43,45–51,56} The concern that some physicians and pharmaceutical companies value money over patients only adds to this antivaccine flame, one that has been burning across 2 centuries. Opportunistic individuals only worsen this tragic and deplorable situation.\textsuperscript{54} Compounding this situation is the concern that some parents have that their physicians still have negative views of autism and autistic patients as well as their parents.\textsuperscript{57}

Also contributing to the continuous state of confusion has been the frequent changes in terminology, starting with Bleuler’s term autism in reference to a symptom of schizophrenia to Kanner’s early infantile autism to Asperger’s autistic psychopathy. The first (1952) and second (1968) editions of the American Psychiatric Association’s \textit{DSM} used the term childhood schizophrenia. Autism was included as a separate condition in the third (1980) edition of the \textit{DSM}, whereas the fourth edition (1994) provided 5 types of the current nosology of autistic spectrum disorders or pervasive developmental disorder: autistic disorder, pervasive developmental disorder not otherwise specified, Rett syndrome, Asperger syndrome, and childhood disintegrative disorder.\textsuperscript{28} The 1992 \textit{International Classification of Diseases, Tenth Edition}, provides a similar list.\textsuperscript{58}

\textbf{SUMMARY}

The diagnosis of autism developed in the twentieth century after society struggled for millennia to deal with disability in children and adults. Parents were often blamed for having children with defects, and perhaps this began with the Genesis 3:6 account of the fall of Adam and Eve who represent the first \textit{Homo sapiens} parents. Concepts of various religious interpretations of disease and deformity have long centered on evil, sin, and demon possession. Children with defects were left to die in ancient Sparta and even Athens. Those with mental retardation from any cause were called village idiots in nineteenth century Western Europe and lived as beggars, church dependents, or court jesters.

The twentieth century began with high hopes for advances in science, a product of the Renaissance coming out of the Dark Ages in Europe. Eugene Bleuler coined the terms schizophrenia and autism in the early twentieth century. Leo Kanner used the term early infantile autism in 1943 based on 11 case reports but eventually identified unloving and uncaring mothers as the cause for this complex disorder. Hans Asperger reported in 1944 on a variant of autism but the report was published in German and did not receive attention in the English-speaking community until the 1990s.
Bruno Bettelheim continued the concept of the refrigerator mother through much of the late twentieth century. Parents and scholars objected to this concept, but the damage was done, with parents becoming disenfranchised from professionals dealing with their autistic children. Bernard Rimland was a well-known professor of psychology who helped to remove the cold mother concept as a cause of autism. However, in a tragic conclusion similar to that of Wallace in the nineteenth century, Rimland identified vaccines as a cause of what he perceived as a major increase in cases of autism in children.

Anxious parents, solipsistic movie stars, other entertainment-driven media persona, and additional exploitive experts joined in the view that vaccines (thimerosal, MMR vaccines) were behind the autism issue, despite clear scientific evidence that this is not the case. A major mistrust of physicians has arisen in a society fed impressions by nonprofessionals and a few professionals. The result is a decrease in vaccinations and an increase in antivaccinationists in the United States, Europe, and other areas, leading to an increase in vaccine-preventable diseases.

This antivaccination movement actually began in the nineteenth century in response to concern about the smallpox vaccination led by Alfred Russel Wallace in England. After millennia of ignorance about biological causes of disease, scientific progress in the past 2 centuries is being seriously attacked by a return to belief in mantics, magic, mysticism, and haruspex. The revenge of the refrigerator-labeled mothers has occurred because of refrigerator professionals.

A state of solipsism and suspicion by the general public has arisen, with the health of children at risk. There is also a rush to use the American justice system to correct the perceived damage alleged from vaccines even with scientific evidence to the contrary. There is also a threat to the vaccine industry, which remains vulnerable to a skeptical public that may shun vaccines, leading to increased damage to the public as well as potential severe financial impact to the companies that produce current vaccines and engage in research for future vaccines. As more and more research focuses on genetic concepts as the cause of autism, physicians face a Sisyphean task in not falling into ancient traps of blaming parents for their children’s imperfections.

If I had a world of my own, everything would be nonsense.
Nothing would be what it is because everything would be what it isn’t.
And contrary-wise; what it is it wouldn’t be,
And what it wouldn’t be, it would. You see?

—By Alice in Alice in Wonderland; Lewis Carroll
(Charles Lutwidge Dodgson), 1865

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