

one *chapter one*

An Overview of the Book

OBJECTIVES

In this chapter, we

1. Overview the entire course.
2. Define autism in terms of its behavioral characteristics.
3. Discuss the centrality of autism to communication and developmental disorders.
4. Review several cases in some detail with the aim of getting at causes.
5. Discuss the paradigm shift from piecemeal health sciences to holistic care.
6. Review the distinctive elements of this course and its unfolding story line.

In this book, we embark on a journey that is more like a crime story than like the typical ho-hum university course. It is an excursion in investigative journalism guided by **forensic** science. The story that follows is grounded in the best and most up-to-date scientific research available. It is also based on sound theoretical advances with direct relevance to the real life and death issues of the world we live in today. It is a course about politics, big money, ethics, medicine, and law. It is about a pervasive and growing class of communication disorders that are affecting more and more children and families around the globe. It is about autism and, more specifically, the undeniable autism epidemic. The purpose of this book is to address the autism epidemic and its causation at an introductory level but without skimping on the research. We also do not shy away from complex theoretical considerations, though we aim to make them easy to understand. As you will see, the autism epidemic spills over into other disorders and disease conditions reaching out to affect the whole population of the world. It is surprising, threatening, and intriguing in many ways.

CONTENT AND PURPOSE

We begin with a discussion of what autism is and with evidence that there is a growing epidemic under way. The primary questions, then, become, What can be done to stop this epidemic and what can be done to recover those who are affected by it?

What Is Autism?

Since the first cases of autism were diagnosed by Leo Kanner in 1943, certain symptoms have been singled out as characteristic of the class of disorders called by that name. They are commonly referred to as “behavioral” and in different combinations are now also being used to define a growing class of problems also known as **pervasive developmental disorders (PDDs)**. It is interesting that all of these PDDs are commonly equated with what are also called **autism spectrum disorders (ASDs)** (“Autism Spectrum Disorders,” 2009 🌐). As we will see in this course, autism is not only at the center of the PDDs, but, in its most common form, it also affects development severely and dramatically across the board—it is a truly pervasive disorder. Traditionally, it has been supposed that its origins are genetic. However, as we will see, this explanation is incomplete to the point of being misleading. Although the subcategories of ASDs (alias, PDDs) and all of their boundaries may be disputed, the fact that autism is central to the PDDs has never been in doubt.

In its most common form, which happens to be toward the severe end of the scale, autism is characterized by withdrawal from social relations, loss of verbal skills or failure to develop them, and exhibition of repetitive stereotypical behaviors such as hand-flapping, spinning, rocking, toe-walking, and head-banging. The previously unexplained behavioral symptoms of autism—especially the tendency toward self-stimulation up to and including self-injury, for instance—have generally been regarded as completely mysterious. Why would a child with autism engage in self-injurious head-banging to the point of rendering himself unconscious? Autism has been described as a strange and puzzling disorder with mysterious unknown causes. When asked for explanations by understandably desperate parents, the doctors have often resorted to the unsatisfying words, “We just don’t know. It’s a mystery.”

Dr. David Feinberg, Medical Director of the Neuropsychiatric Hospital at the University of California at Los Angeles (UCLA), writes:

Even the best minds in the field are unable to agree on answers. . . . The increasing rate is also an enigma, with many different opinions. (Feinberg, 2007, p. xii)

As reasonable as such remarks may seem, it is not difficult to see why parents find them inadequate. To researchers seeking answers, such responses are repeated calls to action. We cannot be satisfied with the implied conclusion that autism must remain a mystery.

As we look more closely into the cases of children with autism to be considered in this course, and the common symptoms they exhibit, we discover some additional common symptoms that were noted by Leo Kanner in 1943, but that were passed over as if irrelevant to the diagnosis. In the first publication on autism (Kanner, 1943), as noted by Dr. Bryan Jepson in 2007, Kanner himself found that at least 7 out of the original 11 cases that he diagnosed also had serious feeding and digestive problems—chronic vomiting, diarrhea, and more frequent infections and trips to the doctor than typically developing children (see Jepson & Johnson, 2007, pp. 14–16). If we add two other cases of children showing symptoms commonly associated with **acid reflux** and **chronic vomiting**, then as many as 9 of Kanner’s original 11 cases seem to have had serious digestive tract symptoms.

In the next section, we sum up Kanner’s (1943) evidence of **gastrointestinal** symptoms in his first 11 cases. We follow the work of Jepson and Johnson (2007, especially pp. 14–16) and also that of Andrew Wakefield and colleagues (see the Thoughtful House, 2009 🌐). The symptoms that

Kanner recorded suggested problems of the gut that were clearly associated with well over half of the initial 11 cases that he diagnosed. Yet, in his quest to seek out the etiology of the mysterious “condition” or “syndrome” (Kanner, 1949, pp. 416–419) with “fascinating peculiarities” (Kanner, 1943, p. 216), those digestive tract symptoms were set aside and would barely be mentioned in future discussions of the definition of autism for years to come. Rutter (1978) would later describe Kanner’s “careful and systematic observations on 11 children with a previously unrecognized syndrome” (p. 139), but until Wakefield and colleagues would come along, especially Jepson and Johnson (2007), neither Kanner nor any of the other authors of the manuals and books to be written would take seriously the symptoms of gut disease that Kanner observed and wrote about.

Evident Symptoms of Gut Disease

Case 1, according to Kanner, showed symptoms of abnormal gut problems. His father wrote: “Eating has always been a problem with him. He has never known a normal appetite. Seeing children eating candy and ice cream has never been a temptation to him” (Kanner, 1943, p. 216). At a later stage, the child still showed some abnormal symptoms with respect to food consumption. He was described as “chewing on paper and putting food in his hair” (p. 235). In September 1939, near his sixth birthday, his mother wrote: “He continues to eat wash and dress himself only at my insistence” (p. 221). Seven months later, in March 1940, she commented that “he feeds himself some better” (p. 221), suggesting that his eating habits were still not normal.

Case 2, when diagnosed at age 6, was “described as having large and ragged tonsils” (p. 224), which can be an indication of frequent acid reflux (see Stapleton & Brodsky, 2008).

Case 3 evidently had problems with elimination because his mother reported that “at the age of 3 weeks” she began to “train him by giving him a suppository every morning—so his bowels would move by the clock” (p. 224). It is reported that “following smallpox vaccination at 12 months . . . had an attack of fever and diarrhea . . .” (p. 224) and that he had “large tonsils and adenoids, which were removed on February 8, 1941,” at the age of 3 years and 4 months (p. 225).

Case 4 is said to have “vomited a great deal during his first year, and feeding formulas were changed frequently with little success” (pp. 226–227). His tonsils were “removed when he was 3 years old” (p. 227).

Case 5 is said to have “nursed very poorly and was put on bottle after about a week. She quit taking any kind of nourishment at 3 months. She was tube-fed five times daily up to 1 year of age. She began to eat then, though much difficulty with feeding persisted until she was about 18 months old” (p. 228). At camp, she “slid into **avitaminosis** and malnutrition” (p. 228).

For case 6, Virginia, no outstanding gut problems were reported.

Case 7 “vomited all food from birth through the third month. Vomiting then ceased almost abruptly and, except for occasional regurgitation, feeding proceeded satisfactorily” (p. 231).

Case 8 had problems during the first two months of life: “Feeding formula caused considerable concern” (p. 233), but he ate well after that. Even so, “when his infantile thumb sucking was prevented by use of mechanical devices, he gave up this behavior and instead put various other things in his mouth. On several occasions, pebbles were found in his stools. Shortly before his second birthday, he swallowed cotton from an Easter rabbit, aspirating some of the cotton so that a **tracheotomy** became necessary. A few months later, he swallowed some kerosene with no ill effects” (p. 233).

Case 9, was described by his mother as having “developed an obsession about feces and would hide it anywhere (for instance, in drawers): [He] would tease me if I walked into the room: ‘You soiled your pants, now you can’t have your crayons!’ . . . Still not toilet trained. He never soils himself in the nursery school, always does it when he comes home. The same is true of wetting. He is proud of wetting, jumps up and down with ecstasy, says, ‘Look at the big puddle *he* [Kanner’s italics] made’” (p. 236).

4 ■ CHAPTER 1 AN OVERVIEW OF THE BOOK


Case 10 was described by his father, who said: “The main thing that worries me is the difficulty in feeding. That is the essential thing. . . . During the first days of his life he did not take the breast satisfactorily. After fifteen days he was changed from breast to bottle by did not take the bottle satisfactorily. There is a long story of trying to get food down. We have tried everything under the sun. . . . He sucks his thumb and grinds his teeth quite frequently” (p. 237). At one of his visits to Kanner, “mild obsessive trends were reported, such as pushing aside the first spoonful of every dish” (p. 238).

Case 11, Elaine, at the age of 2 years went to nursery school where she “drank the water and ate the plant when the children were being taught to handle flowers” (p. 239). There were no other bizarre symptoms of any eating or digestive disorder.

Reviewing the evidence from Kanner’s first 11 cases, only Cases 6 and 11 (both girls) seem to have had no outstanding (no reported) symptoms of any kind of eating disorder, bowel disease, or digestive problems. However, the other 9 cases range from clear-cut to marginal symptoms that were reported and could be taken as indicative of gut problems. Cases 1, 4, and 7 seem to have had chronic vomiting syndrome, at least during their early years. Cases 2, 3, and 4 showed symptoms that could well point to tissue damage and inflammation from chronic acid reflux (Stapleton & Brodsky, 2008). Cases 3, 8, 9, 10, and 11 were all described as having some kind of symptom suggesting bizarre habits of eating or elimination. Thus 9 of the 11 cases seem to have had some gut-related issue that either one or both parents, or Kanner, thought worth reporting, and 7 of the 9 cases with gut-related symptoms seem to have experienced severe problems.

Such symptoms suggest the reasonable inference that autism involves a great deal more than its traditionally recognized behavioral characteristics. However, the symptoms involving the digestive tract would be set aside for about half a century following the publication of Kanner’s seminal work in 1943. Parents with a child diagnosed with autism would typically be told that the digestive problems observed in their child have nothing to do with the autism diagnosis but have some other independent cause. One of our students, Heidi Kidder, who is the mother of a boy diagnosed with autism, was astonished to learn in our introductory course on communication disorders (see J. W. Oller, S. D. Oller, & Badon, 2010) that her son’s chronic vomiting syndrome is a common feature of autism. Neither the pediatrician who diagnosed her son’s autism nor the specialist in gastroenterology to whom she was sent because of his chronic vomiting and bloody diarrhea knew of any association between autism and gut disease. Both said the conditions were unrelated. However, the research shows that about 70% to 80% of individuals previously diagnosed with autism, when examined after the fact, are found to have disease symptoms associated with the gut (D’Souza, Fombonne, & Ward, 2006; Jepson & Johnson, 2007, p. 87; Valicenti-McDermott, McVicar, Rapin, Wershil, Cohen, & Shinnar, 2006; Wakefield, Stott, & Limb, 2006). Pediatricians should know of this association—but many evidently do not, as is pointed out in an eloquent and powerful article by Wakefield, Stott, and Krigsman (2008).


When Heidi mentioned to the doctors that according to her current reading on autism research, the seemingly interminable episodes of vomiting were almost certainly related to her son’s autism, the idea was summarily dismissed by the doctors. In fact, until the number of cases of persons diagnosed with autism began to reach epidemic proportions, mainstream doctors would continue to tell parents of children with autism that there was no connection whatever with the problems they were seeing in eating habits and digestion.

In fact, with specific reference to the ongoing discussion about the association of gut disease with autism, Brian Deer, an “investigative journalist,” wrote about symptoms such as persistent crying, fevers, rash, irritability, and even convulsions that “no competent doctor, acting professionally, could describe these as ‘behavioral symptoms’, much less hold them out as potential markers for the onset of regressive autism” (Deer, n.d., ). Deer himself characterizes these and related

symptoms as “benign” in four places in the surrounding context and he acknowledges that they are “common . . . consequences of vaccination” (Deer, n.d.). In fact, as we have already seen, Leo Kanner did describe the first 11 cases of the individuals he diagnosed with autism in behavioral terms, and he also found symptoms of gut abnormality in 9 of the 11.

Interestingly, subsequent researchers and practitioners alike would tend to ignore the gut symptoms until Wakefield called attention to them near the turn of the twenty-first century. Also, contrary to Deer’s claim, symptoms of abnormal digestion and other gut disease conditions are being seriously re-examined from many different angles by competent researchers and doctors at the present time. More telling against Deer’s position is the fact that no responsible parent is inclined to regard convulsions in any child, and certainly not in one of their own children, as “benign.”

Controversy and Emotion

It is unsurprising that parents are upset. Katie Wright (2007), the mother of a child diagnosed with autism and the daughter of the founders of Autism Speaks (2009 ) describes the current situation:

I do not want to speak to more parents who have ill, malnourished children, mentally and physically destroyed by autism. No parents should be mopping blood from their toddler’s backside for two years. Parents should not be told it is normal for their autistic child to stay awake all night every night. (Jepson & Johnson, 2007, p. xx)

Over the last several decades, the number of children being diagnosed with autism, as reported under federal law from schools across the United States receiving funding under the Individuals with Disabilities Act of 1990, has grown exponentially. In the growth curve shown in Figure 1-1, the black line shows how the rate of autism diagnosis has increased steadily from 1993 to 2006; the gray line shows that the growth rate for diagnosis of all other reported categories of disorders over the same period was negligible by comparison. Why are there so many new cases diagnosed as

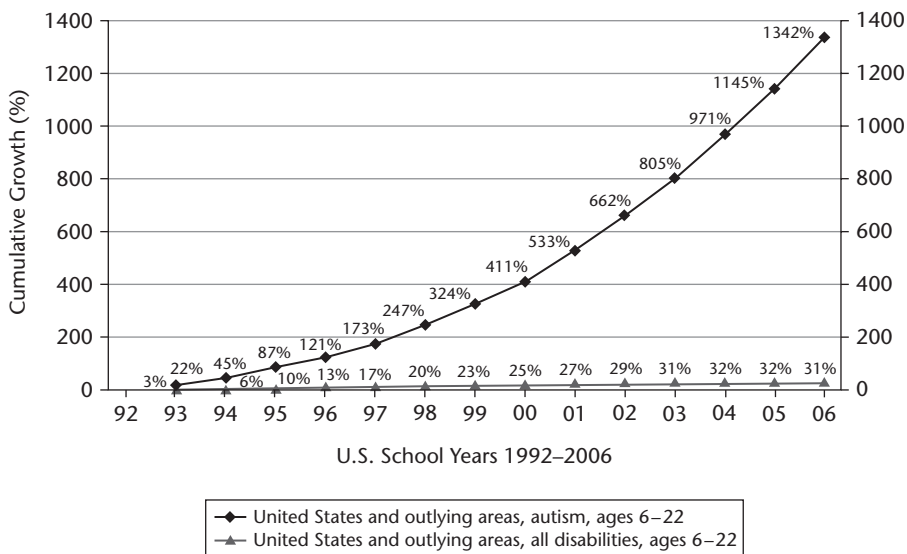




Figure 1-1 The accelerating diagnosis of autism (the black line) in the United States compared against all other reported disorders (the gray line).

Source: Retrieved April 12, 2008, from <http://www.fightingautism.org/idea/autism.php>. The original graph is licensed under a Creative Commons Attribution 1.0 Generic License, retrieved June 15, 2009, from <http://creativecommons.org/licenses/by/1.0/>. It is adapted and reprinted with the permission of Thoughtful House.

autism? According to the Autism Developmental Disabilities Monitoring Network (2007 ) , approximately 50% of the cases accounted for from 2000 and 2002 qualify as “intellectually disabled or mentally retarded.” Thus, many of the new diagnoses are indicative of severe communication problems. So where are all these new cases coming from? What is causing the upsurge depicted in Figure 1-1? What can be done to stop it? How can individuals affected by autism, or by related disorders, best be helped?

Central to Communication and Its Disorders

Central to the study of all communication disorders are those that are developmental, and central to all of the disorders of communication that are labeled “pervasive developmental disorders” is autism. While the designations autism spectrum disorders and pervasive developmental disorders seem to suggest increasingly broader categories, as we will see in this course, both are roughly equivalent to “autism.” In view of the frequency with which autism is said to be “a mystery”—see the comment by Katie Wright in her interview with David Kirby, where she says she heard that word used a thousand times (Foundation for Autism Information and Research, 2007b )—it is unsurprising that there is no end in sight to the debates about what to call it and just which disorders, diseases, and conditions should be included under the scope of autism. However, it is clear that the scope of autism is much wider than many practitioners and educators have commonly supposed.

Obviously, it makes little sense to try to be extremely explicit about what “is and what is not” autism in view of the insistence by experts that we are dealing with a mystery, a puzzle, and a great deal of uncertainty. With that caveat in mind, we cannot go far wrong by applying the term “autism” to the whole of the PDD/ASD spectrum—a loose and vague classification, to say the least. Clearly, there is plenty of evidence—and widespread agreement—that the conditions loosely known as “autism” involve dramatic disruption of social connections, especially the ability to acquire and use language. It is also true that autism affects emotional balance, along with vital aspects of physical well-being and overall health such as the ability to digest and make use of common nutrients. There is also ample research evidence and concurrence among a substantial and growing number of independent researchers, doctors, parents, and clinicians, as we will see in subsequent chapters, that autism also involves pervasive metabolic imbalances, immune system disruptions, chronic inflammation of the brain and gut, as well as electro-chemical imbalances leading to seizures in varying degrees of severity.

Autism is accompanied by full-blown, epileptic-type seizures in approximately 30% of the cases and by brain activity characteristic of seizure-like events in more than 50% of persons with autism (Kim, Donnelly, Tournay, Book, & Filipek, 2006; see also Baird, Robinson, Boyd, & Charman, 2006). As noted, 70% to 80% of individuals already diagnosed with autism have significant bowel disease (D’Souza, Fombonne, & Ward, 2006; Horvath & Perman, 2002; Jepson & Johnson, 2007, p. 87). Indeed, this finding is consistent with the initial report by Kanner in 1943. When extreme disease conditions are commonly associated with the diagnosis of autism, it becomes clear that parental concern is not only justified, but also that treatment of the disease conditions may also help to alleviate the diagnosed disorder. Strong evidence suggests that partial or complete recovery from autism is possible, perhaps, in a large percentage of cases (Bock & Stauth, 2007; Deth, Muratore, Benzecry, Power-Charnitsky, & Waly, 2008; Herbert et al., 2006; Jepson & Johnson, 2007; J. W. Oller et al., 2010; Pangborn & S. M. Baker, 2005, 2007).



As we will see in Chapter 2, the autism epidemic is real and cannot be explained away. It is a growing health problem of great importance and is associated with political, economic, and legal concerns of vast proportions. Autism is a major and growing quality of life issue; in fact, in cases of severe autism, it is no exaggeration to say that it is a life-threatening condition. Given that seizures or seizure-like brain abnormalities and chronic digestive problems are involved in a majority of cases,

autism is clearly more than just a behavioral condition. The search for the causes of self-injurious behaviors becomes more tractable when a holistic, systems-based perspective is taken. It has been noted from the earliest diagnosed cases that autism tends to be expressed in violent mood swings that result in bizarre and often self-injurious behaviors such as head-banging and potentially harmful practices such as feces smearing by individuals well beyond the toddler stage. One mother reported that if her son's name was mentioned at the University Medical Center, everyone over there would remember him: "He was 10 years old when he smeared feces all over that place. They know who he is." While such bizarre behaviors might remain unexplained if the digestive issues and disease conditions were ignored, once they are brought into play, explanations over and above genetic factors seem to be required.

More Than a Behavioral Disorder

In the past, the bizarre behaviors associated with autism were regarded merely as genetically determined behavioral characteristics of the disorder. We now know that they are indicative of deeper and highly significant physiological imbalances. Nevertheless, at the time of this writing, autism is still diagnosed exclusively by behavioral characteristics—specifically, disruption of interpersonal relations, language loss (especially regression) or delay in acquisition, and by repetitive behaviors such as hand-flapping or even self-injurious behaviors such as head-banging. However, as we will see throughout this course, but especially in Chapters 3–5 of this book, we now have incontrovertible positive and validated research evidence from multiple sources showing that autism involves high levels of **toxicity**, **oxidative-stress**, and in a very high percentage of cases, serious problems in digestion and elimination of wastes. In about three quarters of all reported cases, gut disease of a significant and detectable level is involved (see Jepson & Johnson, 2007; Wakefield, Stott, & Krigsman, 2008).

The Primary Aim of This Book

The primary aim of this book is to apply sound logical theory to the findings of validated empirical research concerning the autism epidemic. The goal is to discover its causes in order to figure out how best to deal with it. In doing so, we must often rely on the fact-finding methods used by forensic scientists as well as by journalists and investigative reporters. As we will see, the work carries us into areas of intense controversy in politics and policy making. The story leads to secret meetings and confidential memos exchanged by high-placed officials whose stated purpose in many instances was to conceal information from the public. In some cases, individuals evidently acted on the basis of expected (and hoped-for) outcomes rather than on the basis of the unwanted evidence they came upon. They did not want to see what they found, and some, evidently, did not believe the facts even when they were staring them in the face. Others, some in positions of high responsibility, took a more active role in denying what they wished—and said in memos that have since become public—was not true. After certain expectations proved false, some officials in high places, evidently tried to shape the data to fit their preconceived notions in order to cover up problems that they wished would "go away" (Putchildrenfirst.org, 2009 ). We will find evidence that many well-meaning pediatricians, physicians, and researchers have been trying to support their prior beliefs about vaccines and about common medical practice rather than believing the facts they actually found. It is not so much, perhaps, as Dr. Mark Hyman observes, that doctors are trying to deceive themselves and others, as that they often cannot believe what they see when the facts contrast markedly with what they expect to see. He says, "They see what they believe, rather than believe what they see" (Hyman, 2009 .

In the background, for individuals and families coping with the autism epidemic, as we will see especially in Chapter 2, a great deal is at stake. The story involves huge international corporations,

government agencies, and public media, as well as private citizens. In this book, we rely on many research tools and resources including the Internet. Today, more than ever before, it is difficult for anyone or any group to keep secrets, even ones that were concealed behind closed doors and that were intended to be kept confidential and hidden from public view.

It is not our intention to go hunting for conspiracies or to cast blame on particular individuals. However, as independent researchers who are bound only by honor and the pursuit of truth, insofar as we are able to discern it, we are determined to follow the story and the research findings wherever they may lead. We report the facts and the research findings as we see them and we draw reasonable inferences from sound theory. Where public agencies are involved, including their officials and public employees, we do not shy away from naming names. However, when it comes to private families and individuals impacted by autism, we use names only with written permission in the shared purpose of finding the causes, putting a stop to the epidemic, and recovering persons affected by autism as much as it is possible to do so.

Disclosure: Why We Wrote the Book

We did the research and wrote this book in search of the causes of the autism epidemic. We now know what many of the offending elements are. To absolve ourselves of any profit motive, we have devoted whatever royalties may be earned by this project to a fund for the treatment of autism and related disorders as disclosed in Dr. Wakefield's Foreword to this book. We will not take a cent of profit from this book. In the course that is laid out in the pages that follow, and also in the accompanying materials contained on or hyperlinked to the DVD, users of this material will discover that the principal causes of autism are toxins, disease agents, and combinations of them. For the most part, those factors are being placed directly into the bloodstreams of younger and younger infants by physicians.

We will trace the research on such experimental uses of disease agents, toxins, and animal proteins back to a Nobel Prize awarded to Dr. Charles Richet in 1913. Richet had shown in his research with dogs, rodents, guinea pigs, and other animals that microscopic foreign particles—especially foreign biological proteins or pieces of them—introduced into the bloodstream are particularly prone to produce acute allergic reactions, especially if they happen to be injected repeatedly. The kind of hypersensitivity that he demonstrated would come to be known by the now-common term **anaphylaxis**, which Richet introduced into the forensic medical literature. For reasons to be explored in some detail in this book, toxins and foreign proteins, in addition to a great many weakened or partially destroyed disease agents, have increasingly been introduced into human populations through vaccines. The injuries caused by such injections are subtle, complex, and long-lasting, and they may or may not be expressed immediately after the injection.



There is evidence that in some cases, injuries have been sustained before birth through medications and medicinal procedures that have directly impacted one or both parents and that later have indirectly affected the baby before or after its birth. Autism is a central kind of communication disorder, and the factors involved in producing it are, as the research shows, also involved in many other diseases and disorders. In the vast majority of cases, the disease conditions to be highlighted in this course were known to parents well before (often for two or more years before) the diagnosis of autism was made by a doctor. In a minority of cases, the disease conditions were discovered after the diagnosis was made.

As a result, the traditional "it's a mystery" response to questions about causation, however valid that claim may have seemed in the past or in some of the particular present-day cases, is never an acceptable end point for parents, clinicians, or researchers. It is essential to move on to discover causes. In some cases, the causes of autism are fatal before a diagnosis is possible and in other cases they can still be fatal long after the diagnosis. When they are not fatal, we have an ethical and moral

obligation nonetheless to provide the earliest possible diagnosis and to follow it with treatment that provides the best possible hope of improvement and recovery of the affected individual (see Chapters 3, 8, and 12).


CASES OF AUTISM

Although many parents did not make the connection until much later, most would wonder out loud if it was just a coincidence that the onset of autism—or something worse in the case of four-month-old Vance Walker (whom we will meet a little later in the story)—followed one or many vaccinations. That was the way it was for Dr. Jerry Kartzinel, a board-certified pediatrician. His fourth boy slipped into the world of autism after receiving his mumps, measles, and rubella (MMR) vaccine (Kartzinel, 2007, p. xv).

Kartzinel gave his son the vaccines—and for that reason he was challenged by none other than the boy's mother, who said, "You broke him; now you fix him!" The effects of autism were later described by Kartzinel in this way: "Autism, as I see it, steals the soul from a child; then, if allowed, relentlessly sucks life's marrow out of the family members, one by one. It relegates every other normal thing to utter insignificance" (p. xvi). When Jenny McCarthy asked Dr. Kartzinel what caused her own son's weakening until he had the **immune system** of a person dying from acquired immune deficiency syndrome (AIDS), Kartzinel answered in one word: "Vaccines" (McCarthy, 2007a, p. 148). Kartzinel also discussed this issue with television host Larry King, Jenny McCarthy, and others on *Larry King Live* (2007 ). As Kartzinel pointed out at that time, the role of vaccines—specifically, their disease agents, toxins, and the foreign biological proteins that they contain—is an issue that keeps coming up in discussions of autism. Parents think vaccines are an issue, and we agree with Kartzinel and others that we must listen to them. For updates on the ongoing discussion, see *Larry King Live* (2008b, 2009 ). The parents are the ones who are with the child before and after the relatively few minutes spent by the doctors or nurses who give the shots.

True Narratives: Real People

Getting a picture of the autism epidemic is a little like filming a war that engulfs the whole world. It is difficult to know where to point the camera. With respect to the autism epidemic, the question is how to shape this book and its accompanying DVD and the materials contained, cross-referenced, and hyperlinked there so that it will be maximally comprehensible and useful. Fictional writers dealing with such sagas commonly resort to one or more viewpoint characters that live through the events to be narrated. This story is not so different, except that the viewpoint characters here consist of a multitude of real persons—and, to one degree or another, all of us are among them.

We are in the story and it is truly unfolding as we write these words. There is nothing fictional about it. In telling the story we aim to follow some of the final advice of Dr. Randy Pausch in his famous Last Lecture at Carnegie Mellon after he was diagnosed with terminal pancreatic cancer that had spread to his liver (2009 ). Among other things he said, "Tell the truth." We intend to do that. To that end, and for other reasons that we will spell out as we go along, we rely extensively on true narratives of real individuals. We tell about lived experience in sufficient detail to guide the forensic inferences to be drawn in discovering the causal factors emerging from the details.

Some of the stories have been previously published; others, with the permission of the persons involved, are told publicly here for the first time. If there are any errors in the telling, they are our own and are entirely unintentional. By presenting the facts of actual cases, by reporting the findings of current research, and by making reasonable inferences, our aim is to seek out the causes of the autism epidemic. Beyond that the greater goal is to halt the growth of the autism epidemic and to recover, as much as possible, the persons already affected by it. To make significant progress toward

that goal, we believe it is essential to share some of the actual experiences of the people who are dealing with the autism epidemic all the time. As they say in the media, it is necessary to meet the players “up close and personal.”

After introducing Hannah Poling, who was in the news a great deal beginning in March 2008, we review several other cases. We concentrate on typical rather than atypical cases, and rely on descriptions by firsthand observers. In most cases, the witnesses are the parents of the children in question. For some cases, we provide references to video links where live footage of the affected individuals can be viewed intensively by students and other users of this book.



Connecting the Qualitative and Quantitative Ends

In this course, in addition to dealing with some of the qualitative details of individual cases, we also refer throughout to the most up-to-date quantitative research studies involving substantial numbers of individuals and/or multiple measures. Of course, it is sometimes important even for measurement experts, researchers, and theoreticians to be reminded that the data points in every valid research study depend in the final analysis on real individuals who are known by or who are themselves competent observers (Borsboom, Mellenbergh, & van Heerden, 2004; Uebersax, 1988). Everything in the end depends on true narrative reports.

It is common for some epidemiologists to dismiss individual reports of particular individuals as mere anecdotes, as if that classification automatically disqualifies those reports from serious discussions. The epidemiologists holding that view need to be reminded that every valid measurement in the sciences, as has been proved in various logicomathematical ways (J. W. Oller, 1993, 1996a-b; J. W. Oller & L. Chen, 2007; Peirce, 1897; Tarski, 1949, 1956), depends on true qualitative judgments about particular individuals. There are no exceptions. The proofs cover all valid judgments and measurements in the sciences without exception. For that reason, students and instructors can confidently consider the cases presented throughout this book as reports from reliable witnesses that logically must be taken into consideration. In the final analysis, the persons affected by autism, directly and indirectly, are absolutely the most important subjects of the course. No valid research of any kind can be done without reference to actual cases. Without such cases, all so-called research and all theories are merely empty, ungrounded speculations. Self-proclaimed “experts” prone to rely on such ungrounded opinions should be regarded with profound skepticism. Every evaluator of research must keep in mind that even large-scale, data-intensive studies, at their heart, are based on unique individual reports.

To get to the bottom of the autism epidemic we require examination of actual cases and the facts pertaining to them. True narratives pertaining to such cases are absolutely indispensable. Throughout this book, as in our other book dealing with the full scope of communication disorders (see *Cases*, by J. W. Oller et al., 2010), we refer to “cases” in the sense of the actual histories of individuals with the autism diagnosis, as well as “cases” in the legal and clinical senses. Actual cases are essential to the story of the autism epidemic. Whatever **validity** it may have rests exclusively in those actual instances.

Hannah Poling

On March 7, 2008, a beautiful little red-headed nine-year-old girl with autism was introduced to the world on *Larry King Live* (“The Autism Vaccine Debate,” 2008a ). Hannah Poling was in the news because her parents had sued the government and had ostensibly won the first major concession, or so it was incorrectly reported, in regard to a causal link between the neurotoxin thimerosal and autism. It has since been discovered that 12 cases similar to the one involving Poling had already been conceded by medical experts appointed by the Vaccine Injury Court prior to the concession in the Poling case (Kirby, 2008b .

Although it is not well known, the so-called Vaccine Injury Court has an interesting history, dating back to just prior to the American Civil War. We will discuss that history and the peculiar court formerly known as the People's Court and officially called the United States Court of Federal Claims in Chapter 8. In the meantime, in connection with the case of Hannah Poling, it is useful to note that of the 2542 cases decided in favor of vaccine-injured citizens, 1254 (almost half) involved the DTP shots containing thimerosal (discussed in further detail in Chapter 3). Awards for injuries attributed to the thimerosal-containing DTP shots amounted to almost \$500 million between 1988 and 2007 (Edlich, Son, et al., 2007). By July 2006, 5030 cases had been filed alleging a link between thimerosal-containing vaccines and autism. In the instance of Hannah Poling, her mother, Terry Poling, a licensed nurse and practicing lawyer, was convinced that Hannah's autism was caused in part by vaccines. Hannah became ill immediately after receiving nine vaccines in one day at a **well-baby visit** when she was 19 months of age.

A Well-Baby Visit?

The main purpose of “well-baby visits” is to perform vaccinations. In an article titled “Receipt of Well-Baby Care,” the Centers for Disease Control and Prevention (CDC) explained the meaning of “well-baby” visits to the pediatrician:

Routine well-baby care (i.e., non-illness-related visits to a health care professional during infancy) provides important opportunities to promote health in infants through timely receipt of recommended vaccinations. . . . (1994, p. 105)

Interestingly, the article goes on to say that such “non-illness-related visits” are also helpful in the “detection and treatment of diseases, and identification of potential developmental or psychosocial disorders” (p. 105). In the survey reported in this article, CDC researchers asked mothers, “How many times has your baby been to a doctor or nurse for baby shots or routine well-baby care?” Clearly, the focus is on the shots. It is vaccinations, including staying on the CDC's recommended schedule, that provide the primary motivation for “well-baby” visits. The main underlying question in the CDC study was whether infants of **low birth weight** (i.e., those weighing less than 5 pounds, 8 ounces at birth) were getting all their recommended shots. That is, did they participate in as many visits as other children? The main purpose of well-baby visits—for all babies—is to administer vaccines.

Hannah Gets Sick

In the case of Hannah Poling, within two days of her well-baby visit at the age of 19 months, she had a high fever and started a downhill slide into autism. Her mother described her from that time forward as

. . . having a decreased level of consciousness, . . . when I would say something to her, she was very lethargic and she would not respond to me. Uh, she was very anorexic. (*Larry King Live*, March 7, 2008)

Hannah's case has been discussed in the media a great deal, and there is excellent online documentation so that we can see Hannah in her early months before autism. Thus we can observe firsthand the behavioral symptoms that characterized her autism after she received the nine vaccines.

During the interview with Larry King, Hannah is seated between her mother and father and is occupied for much of the time with a hand-held electronic device and its ear piece. She puts the ear piece in her mouth, moves it from mouth to ear, and back to her mouth. She licks it repeatedly

through much of the 9.5-minute segment. At one point, she tries to remove the cord from her neck, gets assistance from her mother, and is soothed by her mother stroking her arm. When King asks, “How is she now?” her mother replies, “Autistic still.”

Is Hannah Atypical?

In an article that appeared on March 7, 2008, Dr. Julie Gerberding, Director of the CDC, was quoted as saying in reference to the Poling case, “This does not represent anything other than a very special situation” (“Vaccine Settlement Complex, May Not Be First,” 2008 🌐). The very next day, after Hannah’s case was discussed on *Larry King Live*, Gerberding appeared on *House Call with Dr. Sanjay Gupta* on CNN. While admitting she had not reviewed the details of the Poling case, she insisted, “What we can say absolutely for sure is that we don’t really understand the causes of autism. . . . there really is no association between vaccines and autism.” 🌐 However, as we review the research on regressive autism following multiple vaccinations, we will see that Hannah’s case of autism is actually typical in all respects relevant to the diagnosis.

Behavioral Criteria as an Impediment

It is essential to keep in mind that autism has been diagnosed behaviorally from 1943 until the present day; it has never been diagnosed by any medical tests or based on any genetic characteristics. As Stott, Blaxill, and Wakefield (2004) have noted, the “mysterious” and “unexplainable” behavioral criteria for diagnosis have, if anything, stood as “an impediment when considering mechanisms of causation” (p. 70). They refer to the classification systems used by the American Psychiatric Association in the latest edition of its *Diagnostic and Statistical Manual* (2000–2008) and by the World Health Organization in its most up-to-date *International Classification of Diseases* (1996–2009). We return to the problem of diagnosis, and more particularly to methods of determining degrees of severity in autism, in Chapter 11. For now, we should keep in mind that piecemeal diagnostic procedures are part of the problem. The behavioral criteria do not take account of the whole person, nor do they consider the multiple interacting systems of the body in the affected individual. Stott and colleagues, for that reason, suggest that the diagnostic procedures currently being applied are actually misleading. They are part of the problem, contributing to perpetuation of the “mystery,” rather than to its solution.

By the age of nine years, according to Terry Poling, Hannah had already received

. . . hundreds and hundreds of hours of applied behavioral therapy, speech therapy, **occupational therapy**, **physical therapy**. We had people in our home 45 hours a week for three years. She was not speaking. She had lost motor tone. She could not put food in her hand and put it up to her mouth. She did not know what her mouth was. (*Larry King Live*, 2008a)

Hannah’s father, Dr. Jon Poling, a practicing neurologist, agreed that vaccines were involved in precipitating Hannah’s condition.

Dov Shestack

As Jonathan Shestack and Portia Iversen found out in the case of their infant son, Dov (rhymes with “stove”), the diagnosis of autism came a long time after its onset. They knew something was wrong, but they could not find a doctor who could tell them what it was. Dov’s case, just like that the Kartzinel child, involved a regression after a period of normal development. Shestack, a well-known Hollywood producer of movies such as *Father of the Bride*, *Dan in Real Life*, and *Ghosts of Girlfriends Past* (“Film Scouts,” 1998–2009), told the story of Dov’s disappearance into autism at the Autism Summit in 2003 🌐; he also founded an organization devoted to finding a cure for autism.

Jon describes Dov as “adorable” and “cute.” Approximately 15 months after what began as a normal childhood, however, Dov suddenly “stopped answering to his name.” Jon says that Dov “had a couple of dozen words. He lost them. He stopped running to greet us when we came in the door. And it really looked like he’d disappeared in front of our eyes in the space of a couple of months.” When Dov was 11 years old, “we were still trying get him back.”

At first, Jon and Portia could not get a straight answer from anyone. Some experts whom they consulted denied that Dov had any kind of problem at all. So he learned and lost a few words? It was nothing to worry about. He was just a boy, and boys develop more slowly. Dov’s parents got tired of hearing that “Einstein didn’t speak until he was 4 years old.” Finally, they talked to an individual who said the word “autism.” Jon and his wife did not know what it meant. They asked, “What can you do about *that*?” The doctor replied, “There is really nothing you can do about that. You just hold on to each other and cry and get on with your own lives.” Jon described the next four days of that Memorial Day weekend as the longest days of his life. He and Portia watched videotapes of their little boy over and over, asking themselves how it was that they had lost him. At the time of this writing, Dov Shestack is 12 years old and his parents are still trying to get him back. See Jon Shestack (2008) in the MSNBC video “Search for a Cure” broadcast on the *Nightly News* (📺).

Evan McCarthy

More recently, people around the world have heard or read the story of Jenny McCarthy’s little boy, Evan. McCarthy’s book, *Louder Than Words: A Mother’s Journey in Healing Autism*, was published in 2007, and she has also made her story available online (McCarthy, 2007c 📺). You can hear her tell the story in person (hyperlinked on the DVD).

The journey into the black hole of autism for Jenny McCarthy began when Evan was two and a half. One day, Evan seemed to be sleeping later than usual. With a sinking feeling in the pit of her stomach, and already sensing that something was wrong, she went to check on him and found her son “struggling to breathe” (p. 2). He was having a full-blown convulsive seizure. From that day forward, Evan’s descent from what had been a fairly normal development into severe nonverbal infantile autism was precipitous. He went from one life-threatening seizure to another. Over the months that followed, while spending as much as \$4,000 a week on therapies, not to mention medications, hospitalizations, multiple courses of antibiotics, and countless medical procedures trying to determine what was wrong, Jenny McCarthy got the equivalent of a Google PhD in autism. Within a few months, when a neurologist tested Evan’s ability to undergo treatment in the form of **intravenous immunoglobulin (IVIG)**, the preliminary tests showed that his immune system could not sustain the additional load. When she asked Dr. Kartzinel how Evan’s immune system had become so damaged, he said it was because of vaccines.

We will return to the story of Evan’s road to recovery later in this book. For now, it is essential to realize that the seizures he experienced, the procedures he would live through, and the persistence of his mother in pursuing answers were accompanied and motivated by the realization that the story could have had a different outcome. For many other children, the prognosis of “No hope; no way out; it’s all caused by genetics; the mystery is unsolvable” would have been accepted as a sad but inevitable life sentence. From a parent’s perspective, even a life sentence without parole would usually be preferred over the only other alternative—but some parents do not get the choice.

Vance Walker

At the age of four months, just prior to his well-baby visit in September 2007, Vance Walker (Figure 1-2) was a healthy little boy who had met all his normal milestones. His parents were planning an excursion to Mexico. His mother, Shelly Walker, was told that Vance had the distinction of being the youngest child in the United States to be issued a passport in that year.




Figure 1-2 Vance Vernon Walker with his mom Shelly when he was four months old.
Source: Courtesy of *Idaho Observer* 2008.

In getting ready for his first excursion outside the United States, Vance’s mother thought of the potential disease exposures south of the border. On the advice of a trusted pediatrician at Lakeside Pediatric and Adolescent Medicine in Coeur d’Alene, Idaho, on September 12, 2007, Shelly took Vance for vaccinations. She had “an uneasy feeling” about giving him so many jolts in one day, but the pediatrician said the multiple shots would do no harm. Reluctantly, she complied. It was a decision she would greatly regret.

Multiple Toxins and Disease Agents

Vance was given two injections, each of which contained multiple disease agents and various toxins. His injected vaccines consisted of **Pediarix** (developed by GlaxoSmithKline) and **Pprevnar** (produced by Wyeth); he also received the oral vaccine **RotaTeq** (manufactured by Merck).

The first of the shots in the potpourri given to Vance Walker that day was Pediarix. It aims to immunize the child against diphtheria, tetanus, pertussis, hepatitis B, and three strains of the polio virus. The “prescribing information” offered by its manufacturer, GlaxoSmithKline (2008a ) reports the results of multiple clinical trials. It showed that the seven disease agents in the new combination shot were about twice as likely to produce a medically attended fever than when the same disease agents were administered separately but under similar conditions in all other respects. In other words, the clinical trial showed that the mixture of the vaccines brings about some interaction that is more potent than the same agents administered separately.


The Pprevnar shot that Vance received contained the seven most common **pneumococcal viruses** (associated with spinal meningitis and other diseases) along with a diphtheria protein (CRM197), which closely resembles the toxin that causes diphtheria. That protein is allegedly an **antigen** that can produce immunity to diphtheria but that does not cause the disease. In the “prescribing information” for Pprevnar, it is reported that in clinical trials a fever greater than 100°F (38°C) was about twice as common with both the first and second doses of Pprevnar than with the usual regimen of shots without Pprevnar. Thus, adding Pprevnar to Pediarix increases the likelihood that the child will develop a fever higher than normal along with whatever else the interacting disease agents and other elements in the vaccines might cause.

Finally, Vance was given RotaTeq. This oral vaccine contains five distinct viruses that are supposed to inoculate a child against viral infections that are associated with vomiting and diarrhea.

The most common adverse effects reported from clinical trials of this vaccine are, in fact, diarrhea and vomiting. Block et al. (2007) also found that this combination of orally administered disease agents, like Pediarix and Prevnar, is associated with a significant increase in fevers of 100.5°F or higher.

Too Many at a Time?

In the original article that told Vance Walker's story, Ingri Cassel (2008) counted a total of 19 disease agents. In fact, 20 disease agents were administered to Vance Walker on September 12, 2007. There were seven in the Pediarix vaccine, eight in Prevnar, and five in RotaTeq. This, of course, does not count the additional toxins and foreign animal proteins found in the vaccines along with these 20 disease agents.


The disease agents are included in the vaccines on the theory that they are potential antigens—that is, biological factors that will (theoretically, at least) produce additional immunity in the child provided that the body can handle them and defeat or eliminate them (for the history of this theory and its applications in the creation of vaccines, see Chapter 7). However, the contaminants in the vaccines that are not counted can also interact with the disease agents, and with each other, in many different and largely unexplored ways (see Hoffman, 2008 ). Moreover, the interactions can vary depending on exceedingly complex factors of genetics, the child's current state of health, and other aspects unique to the individual. When vaccines contain multiple disease agents, they are referred to as **multivalent vaccines**. Some are also **conjugate vaccines**, in which an animal protein is used as a carrier to which one or more supposed antigens are attached.

All of the vaccines received by Vance Walker were multivalent products and, according to their prescribing information, contained additional contaminants. Vance's single dose of Pediarix also contained as much as 0.85 milligrams of aluminum, plus formaldehyde, other contaminants, and as much as 0.5% of yeast protein in addition to its seven intended disease agents. According to the CDC Web site for Pediarix (2007b), the vaccine also contains trace amounts of thimerosal ethyl mercury (see Chapter 5), which is used in manufacturing the vaccine. Assuming that it was handled correctly and shaken before administration, Vance's dose of Prevnar contained as much as 0.125 micrograms of aluminum in addition to its eight disease agents. RotaTeq contains whatever impurities were left from the cattle in which the five disease agents were cultured. It is known that the chemical reaction of aluminum and thimerosal together can produce severe tissue damage by burning (A. G. Nash, 1973). Also, if the materials are not correctly handled, settling can produce very different results across individual children because of toxins that end up in much higher concentration at the bottom of an unshaken vial.

The one critical element that is not given much attention in the prescribing information for any of the vaccines in question is their potential for participating in a multitude of possible interactions. Clinical trials confirm that combinations of disease agents are more apt to produce adverse effects such as fever, diarrhea, and vomiting (Redhead et al., 1994), but there are no trials examining all the possible interactions of the various disease agents and contaminants taken separately. The reason for this at its basis is purely mathematical. As soon as the number of potential interacting elements becomes greater than three, the cost and difficulty of doing the necessary comparisons to assess all of the possible interactions become enormous.

Thinking Through the Interactions

Of course, the cost of doing clinical trials is not the only consideration when it comes to studies of interacting chemicals inside a living body. The potential for harm, while hoping for help, can become life threatening. Setting aside the political, economical, and other considerations for a few moments, let's reflect on the biochemistry involved. All of us consume a small amount of ordinary table salt,

which consists (except for contaminants!) of the chemicals sodium and chloride (“Sodium Chloride,” 2009 ). The combinations of these chemicals, which are present at a ratio of approximately 40% sodium to approximately 60% chlorine, as we know from ordinary biochemistry, are generally useful to living organisms. However, if we combine even a small quantity of the element sodium by itself with water, it explodes. A small quantity placed in the mouth would blow your head off. Likewise, chlorine gas is potentially lethal in small concentrations. Chlorine is also the main ingredient of Clorox, which, according to the label, kills 99.9% of all bacteria with which it comes in contact. Clorox, with chlorine as its main antialgal and antifungal agent, is the product of choice used to keep many swimming pools clean. It is obvious from such simple illustrations that with chemicals, the interactions are essential.

When it comes to the complex chemical and biological agents in vaccines, drugs, foods, and the like, the reactive potentials inside a living body are vastly more complex. To say that they are astronomically complex is an oversimplification. With 20 disease agents plus an assortment of known toxins and other biological contaminants that may interact, it is a mathematical certainty that the potential interactions have never been tested adequately.

Why? With two agents—say, A and B administered simultaneously—there is just one potential interaction. If one agent is administered before the other, there are, with only two agents at least three interactions: the sort we might get with a simultaneous administration; the kind that might occur if A were administered first and then B later; and, the reverse. Setting the sequence issues aside, because they only complicate matters making the mathematical problems far greater for the drug/vaccine manufacturers, suppose we consider what is required just to test the simplest of biochemical interactions when the agents are introduced into living persons. Suppose we consider only the interaction of agents administered simultaneously (or nearly so).

Clinical trials could be arranged to assess the impact of agent A by comparing a group who received that agent with a matched group who did not receive it. To assess the impact of agent B without A, a second trial with another matched group who did not receive agent B would be required. To test the interaction of A with B, another group suitably matched against the former ones would be needed, in which group members received both A and B simultaneously. Subsequently, the results for the group receiving both A and B would have to be compared against the matched groups getting just A, just B, and neither A nor B. Assuming that all the problems of finding enough people to participate in the clinical trials could be solved, to assess the impact of just two agents (A and B) would require multiple comparisons between a minimum of four distinct matched groups. Although it is certainly possible to assess such an interaction, it should be clear that such controlled experiments are still very difficult to perform well and, therefore, are exceedingly rare.

Next, consider the case of a combination of three disease agents, toxins, or contaminants. Because no one would propose actually studying the toxins or contaminants in clinical trials with human subjects, suppose we have a vaccine containing three disease agents. The number of possible interactions to be examined would require seven distinct experimental comparisons. There are three possible interactions involving distinct pairs: A with B, A with C, and B with C. Added to these are three interactions between a pair of agents and the third agent: A with BC, B with AC, and C with AB. Finally, there is one possible interaction involving the combination of all three agents ABC. Skipping the details of the mathematical logic, as soon as the number of disease agents in a given vaccine passes the number 3, the number of interactions expands rapidly, to the point that the needed clinical trials are much too expensive and too complex to perform in practice.


As a result, when a combination of multiple disease agents, toxins, and unknown contaminants includes more than three subcomponents, the few clinical trials and experimental studies that are actually funded and carried out will be increasingly inadequate to assess the likely impact of all possible interactions. The inevitable result is that the risks associated with combining drugs,

vaccines, toxins, and the like, in individual cases, remain untested and unknown. However, there is no doubt, based on the existing toxicology research and published clinical trials involving existing vaccines, that increasing the number of toxins and disease agents absolutely, with algebraic certainty, increases the possibility and likelihood of undesirable interactions.

What Happened to Vance?

On the morning of September 15, 2007, a little less than 56 hours from the time of his “well-baby” visit on September 12, Shelly Walker went to check on baby Vance. In our personal interview with her, she said she found Vance in his crib not breathing. Blood was crusted under his eyes, and dark foam was coming from his mouth onto the teddy bear blanket lying beside him. Shelly called 9-1-1, and Vance was taken to Kootenai Medical Center in Coeur D’Alene. He was pronounced dead on arrival. With her dead baby in her arms, Shelly asked, “Was this the vaccines?”



Shelly asked that an autopsy be performed. From day to day she kept asking for results so that she could find out if the vaccines were, as she suspected, the cause of her son’s death. After several calls, she asked why it was taking so long; she was told that because her son’s death did not involve murder or rape, it was not a priority case. Eight weeks later, Shelly finally got the results from the doctor who performed the autopsy. She was told “sometimes this happens.” The cause of death was listed as the mysterious **sudden infant death syndrome (SIDS)**.

Dr. John Iskander, speaking for the CDC, said, “The bottom line is still that we do not know what causes SIDS and the other bottom line from a number of studies is that vaccines are not the culprit” (World Now and KLXY, 2009 ). Although SIDS is by far the most common explanation for death following vaccinations (Braun & Ellenberg, 1997; Chock, 2008), according to the **Vaccine Adverse Events Reporting System (VAERS)** monitored by the CDC and the Food and Drug Administration (FDA), the standard interpretation is that the temporal association between vaccinations and infant deaths is coincidental. Nevertheless, according to careful studies, the SIDS explanation accounts for approximately half the deaths reported under VAERS (Silvers, Varricchio, Ellenberg, Krueger, Wise, & Salive, 2002).

Vaccines and SIDS

According to Braun and Ellenberg (1997), out of a total of 38,787 adverse events reported between 1991 and 1994 (estimated at less than 10% of more than 400,000 events that occurred within the time frame, according to Cave, 2001, p. xvi), here are some interesting statistics:

Of the deaths with known age, 72.4% were reported in the first year of life, and 63.7% of these were male. The peak age for death reports was 1 to 3 months, with a gradual decline through age 9 months, after which death was relatively rare. Adverse events with onset of symptoms the day of vaccination accounted for 45.5% of total reports; 20.4% had onset of symptoms the following day. Onset within 2 weeks after vaccination was noted for 92.5% of all reports. Simultaneous administration of multiple vaccines was noted in 75.7% of reports for immunizations at ages younger than 20 years.

The vaccines received by Vance Walker—Pediarix, Prevnar, and RotaTeq—accounted for approximately half of the SIDS deaths reported in the clinical studies. In the prescribing information for Pediarix, GlaxoSmithKline (2008b ) claims that the SIDS rate for the United States from 1990 to 1994 was 1.2 per 1000 live births. Clinical trials reveal that administration of multiple disease agents and toxins on a single occasion is more apt to do harm (GlaxoSmithKline, 2008a; CDC, 2008f ). However, the published documents put out by the CDC or by pharmaceutical companies in connection with clinical trials of vaccines generally argue that multivalent vaccines actually cut the

observed rate of SIDS by half (see Vennemann, Hoffgen, Bajanowski, Hense, & Mitchell, 2007). It appears that this result has been achieved in part by simply dividing the number of SIDS deaths into groups under the general heading of “sudden unexpected infant death” (pointed out to us by Melissa Fowlkes and Clint Andrus; also see CDC, 2008f).

The claim that infant deaths from SIDS are declining because of greater use of multivalent vaccines conflicts with studies of the VAERS data, which reveal that approximately 75% of the adverse events reported involve vaccines containing multiple disease agents (Wise et al., 2004). Based on this finding, if all else were kept equal, it would seem that the vaccines containing multiple disease agents—as required by logic with near algebraic certainty—are more likely to produce an adverse event than a vaccine containing only one disease agent. To claim that adding more disease agents and/or toxins to a vaccine does not increase its risk, or that it lowers the risk, is to propose an unlikely hypothesis. Yet this is what the CDC has asked the public to believe.

Lightning Struck Three Times in the Same Place?

By insisting on an autopsy for her child, Shelly Walker discovered that two other boys taken in for the “well-baby” visits within the same month at the same clinic in Coeur D’Alene, Idaho, also died within a week of their vaccinations. The other babies who died during the same time period in a sparsely populated community in Idaho were David Waddel and Paiyton Ames. All three reported for their fourth-month “well-baby” visit in the same clinic.

Is it just a coincidence that the median age of death for infants who typically die of SIDS happens to be around the four-month mark, at the time of the recommended well-baby visit to the doctor (Silvers, Ellenberg, Wise, Varricchio, Mootrey, & Salive, 2001)? Or could the stress produced by multivalent vaccines—with 20 disease agents in the case of Vance Walker—be causing the deaths? It has been proposed by Lonsdale (2001) that some form of stress combined with a genetic predisposition is the probable cause of SIDS. Could the vaccines be causing the stress?

A Link with Autism?

Interestingly, the current line of research suggests very strongly that autism, like SIDS, is caused mainly by combinations of toxins and disease agents coming especially from vaccinations and medical procedures. Autism, like SIDS, is most common in genetically vulnerable individuals who have difficulty in eliminating toxins or handling challenges to their immune systems (Dietert & Dietert, 2008). Among the known toxins that are involved is thimerosal; among the disease agents, there are viruses and combinations of other disease agents that act as triggers for the expression of autism.

Is it also just a coincidence that the rate of autism diagnosis has increased concurrently with the increasing number of toxins and disease agents being injected into the bodies and/or bloodstreams of younger and younger children? Although other sources of toxins can affect unborn babies and young children in detrimental ways, the main sources of high-density toxins affecting unborn babies, neonates, and children up to the age of six years are medications, with vaccines topping the list. It is, therefore, essential to examine vaccines critically.

ADDRESSING THE DENIAL

CDC experts have acknowledged that diagnoses of autism are increasing, but they deny that this trend represents evidence of an epidemic. In addressing this issue, the CDC (n.d.) published the following statement:

While it is clear that more children than ever before are diagnosed as having an ASD, it is unclear how much of this increase is due to changes in how we identify and diagnose ASDs, or whether this is due to a true increase in **prevalence**.

A real increase in prevalence would mean that there are actually more individuals per capita who are being affected by autism than there were in the past. The CDC has expressed doubt that there is a real increase in autism cases, falling back to genetics as the underlying causal basis for autism. It is not uncommon for medical research teams to simply acquiesce to the theory that autism is mainly, if not exclusively, a genetic disorder, as Steyaert and De la Marche (2008) do in their recent article:

ASD is a disorder with mainly genetic causes and recent insights show that a variety of genetic mechanisms may be involved, i.e. single gene disorders, copy number variations and polygenic mechanisms. (p. 1091)

In fact, if genetic factors were the whole explanation for the “autism epidemic,” then the CDC, FDA, the American Academy of Pediatrics (AAP), and the pharmaceutical companies would presumably be off the hook. After all, those organizations have no direct control over anyone’s genetic inheritance from their parents.

Although genetic factors must certainly be involved in the causation of autism, genes are also known to be impacted by certain toxins. Even if genetics is the best of all the theories for what is causing autism, we must go deeper: What has caused the abnormalities in the genetics? When that question is asked, it becomes clear that the genetic explanation is necessarily incomplete.

Autism as a Problem of Communication

The foundation of health—physiologically, socially, and logically—is successful communication at all levels, from the genes upward to bodily proteins, cells, tissues, organs, individual persons, and communities. Communication is as essential to genetics as it is to communities and nations. From beginning to end, and at all levels in between, every complex system depends on successful communication. When communication systems break down, disease, disorder, and all sorts of problems arise.

The focal problems of autism, as we have seen from its initial diagnosis by Kanner, have been about communication and interaction. In a minority of the cases currently being diagnosed, disorders are relatively mild. In most cases, however, the impact is severe. In the worst-case scenario, the person dies. Traditionally, such a death has been attributed to some unknown cause, such as SIDS, or to some other factor; even so, as we will see later in this book, there can be no reasonable doubt that the same injuries that cause the disease and disorder conditions associated with autism can cause death in severe instances. The fact that factors causing autism can also cause death will be plainly established later in this book by solid empirical evidence and by logic that cannot be refuted.

For Survivors, Autism Is an Adult Disorder

Children with autism who survive, unless they are recovered, become adults with autism. For that reason, autism is not just a childhood condition. It is also an adult disorder resulting in long-term social burdens as well as enormous economic costs over the long haul. As the number of diagnosed cases of autism grows, the cost to society also escalates. As a result, autism is a central problem for health professionals, policy makers, and all ordinary citizens.

Autism is of special interest and importance to speech-language pathologists and audiologists. The story to be told about autism is, we believe, inevitably pushing the medical community, pharmaceutical companies, government agencies, and private citizens to reconceptualize health care in general. It is becoming increasingly obvious that we must consider the health of the *whole body* in its behavioral, social, political, and economic contexts. Piecemeal approaches that look to isolated parts of the larger connected context are condemned to incompleteness. In the complex systems of communication at issue, the interactions are crucial.

To the extent that public policies of vast agencies, such as the U.S. Public Health Service with its subagencies including the CDC, the FDA, and the international WHO, are already deeply involved, a comprehensive, holistic, and global perspective is essential. We must also think in terms of the whole life span of individuals and of causes and effects that range across generations.

When the effects of a neurotoxin (such as thimerosal) or foreign animal proteins are at issue, the idea of looking for the final outcome within a few days after one or several injections is inadequate. With **genotoxic effects**, which can extend across generations, the idea of considering symptoms within days, weeks, or months defines too narrow a time range. The effects of foreign proteins and toxins can range across the life span. Thus, if **genotoxins** such as thimerosal are implicated in causation of autism, we must consider impacts that may also reach across generations.

The Ongoing Paradigm Shift

The complex nature of the autism epidemic, it seems, is causing a **paradigm shift** in the health sciences. The trend is toward a more consistent, simpler (in the sense of being more abstract), and more comprehensive (holistic) view of our bodies and our interactions with the world. The goal is to make sense of all the facts, including some that have been assembled from a great multitude of piecemeal, fragmented, disconnected, cross-disciplinary studies. The new paradigm stresses complex systems of internal and external communication systems. As the vast diversity of such systems and their interactions come into focus, they are forcing a reexamination of the fractionated view of health that has characterized the medical sciences, especially during the last couple of centuries and particularly within the last several decades. Just as the genetic system has to communicate with the body's proteins, and cells, tissues, and organ systems have to communicate with each other within the body, it is necessary for health science professionals to communicate across disciplines. Speech and language pathology make no sense without biochemistry, and nothing in the health sciences makes much sense without genetics and linguistics.


In this book we are concerned specifically with the autism epidemic. Nevertheless, for reasons that will become clear as we proceed, we must focus on the internal health of the body as a whole. We must examine its defenses against invading disease agents, its systems for dumping or quarantining harmful toxins, and the way such systems interact. We will discover that "health," in every reasonable sense of the word, is utterly dependent on communication systems beginning with genetics and extending through the entire systematic hierarchy from atoms to molecules, to cells, to organ systems, and to the body as a whole. When internal communications in the immune system and the body's biochemistry break down, the health of the body deteriorates. When external communications break down, especially the skilled movements and articulate gestures of speech and language, social relations are adversely affected.

When both internal and external communications are disrupted simultaneously, extreme social and behavioral problems become evident, just as they are in autism. Of course, just because behavioral symptoms appear in a disorder does not necessarily mean that those symptoms account for or explain the disorder. A more complete explanation must tell why the symptoms occur. Without such a deeper and more abstract account, all the observations in the world about symptoms will not lead to any solution to the underlying problems of which the symptoms are merely indicative. For all of the foregoing reasons, approaches to autism that focus exclusively on symptoms are certain to leave it a mystery forever. We must look to causes.

Does Tobacco Ring Any Bells?

Just as the tobacco companies were motivated to deny the association of smoking, chewing, or otherwise exposing human beings to the well-known **carcinogens** (cancer-producing agents) in tobacco, some government agencies and corporate entities in the pharmaceutical and healthcare industries


are highly motivated to protect themselves against the liabilities implicit in discovering the factors that are causing the autism epidemic.

The easiest way to dispose of all the potential liabilities associated with autism would be to show that the epidemic itself is unreal, imaginary, or something other than what it appears to be. If the epidemic did not exist, then it could not have been nor be caused by anything except imagination. Conversely, if a growing epidemic exists, then some combination of factors must be causing it. As we will see in subsequent chapters of this book, the CDC, pharmaceutical companies, and certain professional medical organizations have stood shoulder to shoulder in supporting the denial theme. In the meantime, vaccines, **dental amalgam**, and other toxins are implicated as potential causative agents, as we will see in Chapters 2–6. In Chapter 7, we examine the reasons for the faith placed in vaccines by their supporters; in Chapters 8 and 9, we will see how the repeated reassurances by vaccine promoters have only deepened public doubts. The evidence continues to implicate toxins and disease agents as the primary causal triggers of the autism epidemic. In Chapter 10, we consider the theory of the tipping point as argued by many current theoreticians, though none more cogently than Dr. Brian Jepson (see Jepson & Johnson, 2007). Jepson (2007a, 2007b ) has also made his case in person for the possibility of radically changing the course of autism.

Throughout this book, but especially in Chapters 11 and 12, we present a more holistic, systems-oriented view of the etiology, diagnosis, and treatment of autism. In the vast majority of cases, children who manifest symptoms of autism have reached and surpassed what Jepson calls the “toxic tipping point.”

We go on to consider the research and case histories that demonstrate why there is reasonable hope that the autism epidemic can be halted and that many individuals can be recovered. Unsurprisingly, the large and growing body of research already shows clearly that treatments are more effective when they address causal factors. There is also good news here for the pharmaceutical companies, the professional medical organizations, and healthcare practitioners in general. By pinpointing the key factors involved in producing autism, we will be much more capable of preventing, curing, or at least holding it at bay in many, if not all, cases. Discovering the causes, however, is crucial. Clearly, the upsurge in the number of diagnosed cases of autism is not imaginary and cannot be uncaused.

Toxins Remain at the Center


Confidence in the life-saving power of medicines in general and vaccines in particular has helped to sustain the argument that the benefits of vaccines vastly outweigh any potential for harm. However, the aura of beneficence should not color our judgment when examining the potential of vaccines, medicines, and medical procedures to do harm. Along that line we recommend the award-winning even-handed documentary book, *Evidence of Harm: Mercury in Vaccines and the Autism Epidemic: A Medical Controversy* (Kirby, 2005), and follow-up stories by the same author (Kirby, 2008a, 2008b, 2008c; and R. F. Kennedy & Kirby, 2009 )


As the controversy over vaccines plays out in the media and in the courts, independent toxicology research and sound reasoning continue to show that autism, a host of other neurological conditions (e.g., **scleroses**, **dystrophies**, **diabetes**, **epilepsy**, and **dementias** such as those associated with **Alzheimer’s disease** and **Parkinson’s disease**), and various forms of gut disease are unquestionably linked to toxins, disease agents, and foreign proteins, many of which are being deliberately injected into the bloodstreams of millions of infants, toddlers, children, and adults. Also, tons of neurotoxic mercury in dental amalgam are being placed in the mouths of dental patients worldwide. The American Dental Association has claimed that in 2006 more than 70 million fillings of dental amalgam, equivalent to approximately 12 metric tons of mercury, were placed in the mouths of Americans alone (Needleman, 2006). The total amount being carried around in this form inside

human bodies has been estimated to account for approximately 55% of the world's total industrial mercury (Barr, 2004).

Thimerosal: Still Used in Vaccines

Although the public demand to get the toxins, especially mercury, out of childhood vaccines was met with tacit compliance in a published statement by the CDC and the AAP in 1999, many of the stockpiles of shots being used in the United States still contain the offending **ethyl mercury** (thimerosal) and many more of the vaccines being used in developing nations contain it (for instance, see Marques, Dorea, Fonseca, Bastos, & Malm, 2007).

Dr. Paul Offit (2007) not only acknowledges, but actually advocates the continued use of thimerosal, particularly in flu shots, in the United States and around the world. According to Offit, this chemical is completely harmless. The deaths and illnesses associated with vaccines, in his view, are purely coincidental (Gupta, 2008 ). Offit says in the interview with Sanjay Gupta that vaccines do not cause autism. He says it is just a statistical fact that before the vaccine some of the children are okay, but afterward not. Elsewhere, he has argued that it would be safe to give neonates as many as 10,000 disease agents in one shot (Offit, 2008; Offit et al., 2002). He affirms the recent reassessment by the CDC Advisory Committee on Immunization Practices (2006) that thimerosal is safe for infants and the unborn babies of pregnant women.

We will revisit these claims in Chapters 4–6 where we review the toxicology research especially on thimerosal. It has recently been pointed out that Offit benefits from money earned and donated by the vaccine manufacturer Merck. He is the creator of the rotavirus vaccine RotaTeq, manufactured by Merck, and holds the patent on it. He also occupies a \$1.5 million research chair at Children's Hospital of Philadelphia funded by Merck (Attkisson, 2008 .

Thimerosal: Recommended by CDC and WHO, and Used Abroad

In 2007, the Chilean government issued a statement saying that thimerosal is safe in vaccines and that its health agencies plan to keep on using it (Muñoz et al., 2007). This position is consistent with the stance taken by the WHO that thimerosal does not pose a health risk. Contrary to the public recommendation by the CDC and AAP, that thimerosal should be eliminated from all vaccines as soon as possible, it is still being used worldwide. Although thimerosal, as a preservative, has been removed from many vaccines in the mandated U.S. series of vaccinations, as mentioned earlier, it can still be found in existing stockpiles in this country and is used in the manufacture of new vaccines for non-U.S. markets.

Just as the vaccine manufacturers and their supporters have claimed that mercury is safe in vaccines, so the American Dental Association insists that it is safe to put 12 metric tons of methyl mercury per year in the mouths of patients. These “silver fillings” are actually half **methyl mercury** by weight.

Is either of these common practices safe? Are the watchdogs of public safety—the CDC and FDA in particular—sufficiently protecting the public interest? A similar question arises with respect to the medical organizations that are ethically obliged to guard the well-being of their patients. Are the American Academy of Pediatrics, the American Dental Association, and other professional medical societies honoring the long-standing requirements of the Hippocratic Oath, especially the caveat of doing no harm? We consider ethical and legal aspects of these questions in more detail in Chapter 3.

Essentially all of the healthcare professional organizations subscribe to the ethical standard requiring them, above all else, to protect the patient/client. The American Speech-Language-Hearing Association policy stresses that “speech-language pathologists and audiologists agree to the overarching principle of holding the patient's welfare paramount” (Chabon, Hale, & Wark, 2008, p. 26).

Among the outstanding questions, however, is whether and to what extent professional healthcare organizations and their members are actually providing the best possible care for individual patients rather than serving as representatives of other corporate interests.

Anticipating the Rest of the Story

In this chapter, we have introduced the “mysteries” (more accurately, controversies) surrounding the diagnosis of autism. In Chapter 2, we show that the autism epidemic is real. Throughout all of the chapters in this book, the focus is on **etiology**. What is causing the exponential growth in diagnosed cases of autism and a host of related neurological disorders, and what can be done about them? The voices of the families affected, as we can see from the cases already examined, are understandably urgent. Meantime, government agencies, medical groups, professional organizations, and pharmaceutical companies are devoting huge sums to advertising drugs, vaccines, and health care in various forms of sponsored “research.”

Many of the sponsored articles and research studies have the ostensible purpose of trying ever so diligently, but altogether unsuccessfully, to find links between toxins in vaccines, dental amalgam, and drugs with autism. In reality, the underlying purpose of many of these “searches” for causes of disorders is to defend the claim that no relationship can be found between the neurological and other problems in autism, for instance, and the toxins being placed in patients’ bodies by medical practitioners. Meanwhile, the fact that recommended vaccines contain potent toxins such as mercury, aluminum, formaldehyde, and other preservatives (including the major component of automobile antifreeze), not to mention multiple disease agents consisting of viruses, bacteria, protein fragments, extraneous biological contaminants from animals, and additional unstudied animal viruses, suggests that vaccines may be playing a significant role in the etiology of the ongoing epidemic of neurological and self-immune diseases. One of the most devastating manifestations of the many diseases linked to these toxins, proteins, and contaminants in vaccines and other medicines and medical procedures is autism.

WHAT IS DIFFERENT ABOUT THIS BOOK

There are several features in this book and its accompanying DVD that are not common to books or courses about the autism epidemic or about communication disorders in general:

1. For one, the whole book unfolds like a narrative and we ordinary citizens, our own children and theirs, are characters at risk in the true story as it is developing.
2. The material is user-friendly for instructors because it is user-friendly for students.
3. Students love it because of its importance to them personally and because of its readability, interest, and learnability.
4. Instructor’s want to use it because the book and DVD are well designed easy to teach, and because students love it.
5. The research and theory in this book are up-to-date and the best available.
6. This book and DVD use the Internet, the Web of Science, Medline, and all the resources of our modern technologies. The selected Internet sources especially are being reviewed, in many instances, on a daily basis by many competent individuals.
7. This book plus user-friendly digital study materials, contained or linked on the DVD, is further enhanced by:
 - a. A PowerPoint Summary for each chapter that makes lecture preparation and classroom work fun, colorful, and 100% relevant to the course.
 - b. A searchable copy of an expanded table of contents (a greatly abridged version of the book) with hyperlinked URLs and playable media files; open-ended Study and Discussion

- Questions at the end of each chapter providing for essays, class discussions, further research, and testing.
- c. A complete Glossary of technical terms, the entire list of References, and an Index of subjects and authors that make it easy to find definitions, crucial threads of inference, and to track down researchers and theoreticians who are pursuing answers to remaining questions.
 - d. An *Instructor's Manual* containing a pretested series of 600 Multiple Choice Study Questions that are presented in sequence and cross-referenced to pages of the unfolding text (provided in Acrobat, MS Word, and WordPerfect formats enabling construction of any number of distinct “machine scorable” tests).
 - e. Prefabricated tests, 12 of them consisting of 50 items for each chapter; 6 tests of 100 items each covering consecutive pairs of chapters; and 5 tests of 200 items each over the entire course. These tests are provided in Acrobat format for convenient printing and use by instructors.
 - f. There is a section in the *Instructor's Manual* showing how the Study and Discussion Questions can be used to verify comprehension of material in the Multiple Choice Study Questions provided on the DVD.
 - g. An introduction to the Web of Science, Medline, and Wikipedia is also provided in the *Instructor's Manual* showing how and why these resources are invaluable.

On the whole, the materials for the course are self-explanatory, but a few points need emphasis.

It's a Narrative

Our own research on communication and learning shows that narrative organization is foundational (Badon, 1993; J. W. Oller, L. Chen, N. Pan, & S. D. Oller, 2005; S. D. Oller, 2005; N. Pan & L. Chen, 2005). It is essential to human experience, learning, recall, retention, and our ability to make sense of what we have learned. That organization, together with the relevance, depth, and up-to-date research presented here, is the most distinctive feature of this book. Teachers and students alike can get excited about this narrative *because they are in it*. The risks at stake are real and they are *our risks*. They affect our own children, their children, and us.

The most important difference, which cannot be overemphasized, is that the ongoing (actually developing) story is true. It concerns the largest and most pressing problem confronting health professionals worldwide and especially in the United States today. The autism epidemic is unfolding before our eyes in our newspapers, on the television, in YouTube broadcasts, in classrooms, clinics, hospitals, homes, and neighborhoods everywhere.

It's Easy to Teach


Students love this book because it presents facts they need and want to know. They are sometimes shocked but always motivated by what they are learning, and they are never bored or offended by the honesty and intensity of the ongoing discussion. They want to understand the autism epidemic because they are living through it. They are just like theoreticians in wanting to get to the bottom of what is causing this epidemic so that they can understand how to protect themselves and their loved ones. Many of our students have chosen communication disorders, a closely related area such as nursing, or a premed program as their field of study because they or someone they care about has been affected by autism or a related disorder.

The Facts Are Intelligible and Amazing

The evidence, research, and theory in this book are all presented at an introductory level so that all users can understand and benefit from the ongoing discussion. Most of our students, and many

seasoned instructors, never dreamed that industrial mercury, a heavy metal that is highly **neurotoxic** in concentrations as sparse as parts per billion and fatal in parts per million, is found in dental amalgam, the silvery metal material used commonly in dental tooth restorations. As we have noted, although these restorations are commonly called “silver fillings,” they contain approximately 50% elemental mercury by weight. The American Dental Association continues to hold that the mercury in amalgam is safe and stable, and that nearly 90% of practicing dentists continue to use it. Similarly, students are often amazed to discover that as recently as 2006, contrary to its stated plan in 1999 to eliminate thimerosal from all vaccines “as soon as possible,” the CDC has advocated requiring flu shots, some still containing thimerosal, for all U.S. infants at birth, including preterm babies of low birth weight. Thimerosal is even claimed to be safe for unborn children still in their mothers’ wombs (CDC Advisory Committee on Immunization Practices, 2006).

The CDC also advocates giving the HepB (hepatitis B) vaccine at birth to all babies. This particular vaccine is controversial because the disease against which it supposedly protects babies is a sexually transmitted one. The fact that babies at birth are not being exposed to sexual intercourse is just one of the major reasons for the controversy. The recommended procedure, according to the CDC, is to expose all babies at birth to multiple disease agents and toxins and then to reexpose them an additional 35 times at a minimum to many other disease agents and toxins before their sixth birthday. But does this policy really make sense?


In addition, the CDC has publicly agreed (in 1999) with statements by the WHO advocating the use of thimerosal-containing vaccines in developing nations around the world. Although the CDC has vacillated in its domestic position within the United States, agency personnel now say they prefer the vaccines with thimerosal (see CDC, 2008c ). According to published statements, the CDC and WHO are working toward regimens with increasing numbers of vaccines, including ones containing thimerosal, for all children either at birth or as soon as possible afterward, irrespective of their birth weight. Meanwhile, as the number of vaccinations continues to escalate, so does the diagnosis of autism.

Real Cases

If you are a human who is being touched in any way by the autism epidemic or by the issues related to it, this book and this course are for you. By relating sound research and theory to real-life cases, healthcare providers who work through this course will be better able to provide much-needed information, help, guidance, and therapy in homes and neighborhoods, schools, clinics, and hospitals to the persons most affected.

The Harvard Case-Based Problem-Solving Approach

We follow the “Harvard model” of case-based problem solving (Mostaghimi et al., 2006; Tosteson, Adelstein, & Carver, 1994) for several reasons. First, such an approach is consistent with what we know of language acquisition and valid learning in general. It focuses on the primary protagonists—the persons affected by autism and related disorders and their families—who provide continuity to the story that is unfolding before our eyes.

As the research shows, the most effective teaching is grounded in true representations of actual persons, things, events, and situations in the real world. We identify with Jenny McCarthy at the neurologist’s office. When he said, “I’m sorry but your son has autism,” after a few moments, Jenny said, “Well, you know, I believe my son is trapped inside. I’m not settling for this. He’s trapped inside and all these little characteristics that I thought were Evan’s personality . . . were just autism. So he’s lost and I said to myself that day, I’m gonna get ’im out. I’m gonna get ’im out—and that started the journey” (McCarthy, 2007a .

Real-life cases move us to action. They give us the energy to get up early and stay up late. They motivate us to spend our own resources and to do whatever it takes to make things better. Real-life

cases must also be examined closely if we are to answer critical questions about diagnosis, causation, and intervention.

The One-Minute Writing Exercise

As we note in the *Instructor's Manual* we recommend the routine of asking students to write a sentence or two at the end of each class related to the material that was covered during that particular session. We usually ask them to write at least a sentence about whatever they found the most interesting, controversial, or in need of further discussion. We urge instructors to read the comments after each session. Students are insightful and well able to think critically about the material in this book. They are also eager to learn and to contribute to the course from their own experience. One of the comments most commonly voiced by many of our own students (such as Matthew Chiasson, Heidi Kidder, Melissa Fowlkes, and Stephanie Grant) at the end of each class meeting is that they “can’t wait to come back for the next class meeting!” (We thank these individuals for permission to mention them by name.)

Find the Causes, Stop the Epidemic, Recover the Children

Families of individuals affected by autism cannot afford the luxury of another half-century or more of statistical epidemiological research. It is not enough to advocate increasing the number of caregivers, or enhancing the resources and facilities dedicated to the treatment of autism and related communication disorders, or improving the pay of persons who administer the treatment. It is not enough to train more and more professionals to provide more and more care and treatment. It is not enough to raise public awareness about communication disorders or to inform the public and professionals about the emotional, economic, and personal costs associated with autism and related communication disorders.

As desirable as any or all of those objectives may be, the highest and best goal, as implied by the American Speech-Language-Hearing Association (ASHA) in its Code of Ethics, is to discover the causes of autism so as to cure, prevent, or lessen its negative impacts. We must aim for finding the causes, stopping the epidemic, and recovering the children. We cannot settle for less.

In this course, we aim for the jugular vein of the autism epidemic. We must first find out what is causing the epidemic if we are to stop it. For many children who would otherwise be affected by autism, understanding its etiology can prevent them from developing this disorder. For others already affected, understanding the etiology can keep them from being further injured and may enable many of them to be recovered, or at least greatly helped.

SUMMING UP AND LOOKING AHEAD

In this chapter we have seen why the very existence of the autism epidemic and its causation are emotionally and politically charged. From what we have already considered it appears that autism is central to communication disorders in general. We reviewed the cases of Hannah Poling, Dov Shestack, Evan McCarthy, and Vance Walker, among others—putting faces on the autism epidemic. In this chapter we also overviewed critical features of the course. Among its distinctive elements are the narrative style, as well as the historical depth and currency of the research reported. Because of the narrative style, the real cases discussed, the up-to-date research findings from published literature, and application of the most powerful Internet and media tools, this book is easy to teach and learn from. It is also different from many other books because of its reliance on the case-based model of learning through problem solving. In the next chapter, we discuss all of the popular arguments that have been proposed to explain away the autism epidemic. Among them are the arguments of the CDC and some of its collaborators that the autism epidemic may be a product of better diagnosis coupled with publicity, hype, and imagination.

STUDY AND DISCUSSION QUESTIONS

1. Discuss the symptoms of gut disease observed in Kanner's first 11 patients diagnosed with autism.
2. Why is the genetic explanation for autism powerless to account for the increasing number of diagnosed cases over the last three decades?
3. Have you observed or known of situations where an undesired result was difficult to comprehend? Discuss the process of some folks "seeing what they believe rather than what they see" in relation to the autism epidemic. If such a problem exists, how can it be cured?
4. What is your reaction to the idea that interactions of toxins and disease agents coming to us from medicines and medical procedures can cause chronic diseases as well as autism?
5. What connection is there between Dr. Richet's findings that won him a Nobel Prize in 1913 and Dr. Kartzinel's appearance on *Larry King Live* in 2008 with Jenny McCarthy? How does SIDS figure in the discussion?
6. In what ways are the cases of children such as Hannah Poling, Evan McCarthy, Dov Shestack, and Vance Walker typical or atypical? What did all of them have in common? As you reflect on this question, how do you feel about Dr. Julie Gerberding's reaction to the out-of-court concession made by the government in the Poling case?
7. Why is it unlikely that all of the potential interactions of vaccines, toxins, and drug components will be tested prior to marketing these agents to the general public?
8. Is it just a coincidence—as the CDC argues—that Pediarix, Prevnar, and RotaTeq account for approximately half of all SIDS deaths reported in clinical studies? Do you find the government's arguments about SIDS and vaccines persuasive? Why or why not?
9. What is wrong with piecemeal approaches to health care and the health sciences?
10. In your judgment, how plausible is Dr. Offit's claim that neonates ought to be able to handle 10,000 disease agents at a time? If you agree, why so? If not, why not?

