American Preschoolers on Ritalin

BY JONATHAN LEO

At the start of the twenty-first century, it has become apparent that the American medical community's most controversial legacy to the science of child development and child rearing is a potent psychotropic drug. Ritalin is the drug of choice for Attention-Deficit Hyperactivity Disorder (ADHD) and every year, more of our children are taking it. American physicians, who prescribe 90% of the Ritalin produced worldwide, believe this is all based on "science." As an example of a child who the ADHD experts think should be medicated take Sarah. Sarah's story is on the web site at the Department of Psychiatry at New York University (1/01).

"Sarah chooses to sit in the back of the classroom and much of the time she's doodling in her notebook or staring out of the window. She seldom completes assignments and often forgets to bring the right books to class. Her desk is a mess and she generally can't find what she's looking for. Then she gets weepy and says that nobody understands her." According to the experts at NYU, her diagnosis is Attention-Deficit Hyperactivity Disorder and the treatment of choice for her is Ritalin. This little girl is crying out, Please understand me" and the American medical community's response is, "Medicate her." Sarah is a fourteen-year-old but we are currently prescribing Ritalin for children as young as two.

The ADHD experts are quick to point out that ADHD is one of the most thoroughly investigated and well-studied pediatric diseases. It is certainly true that millions of dollars, countless hours, and tremendous resources have all been consumed in an enormous effort to investigate ADHD. Yet, fundamental questions about ADHD are still vigorously debated. There is no proof of any underlying neurobiological deficit, it is not clear what the proper treatment should be, and it is not clear that the label "ADHD" is even valid. Even the *American Psychiatric Press Textbook of Psychiatry*, which overwhelmingly supports the idea that ADHD is a biological disease, has statements such as, "With unclear diagnostic boundaries, it is difficult to define or even conceptualize a unitary concept of ADHD or its etiology (p.838)," or "there remains considerable uncertainty about the validity of ADHD as a diagnostic entity (p. 827)."

The issue of medicating children has recently taken on new importance because the National Institute of Mental Health (NIMH) has just started an unprecedented study on the use of medications to treat ADHD in preschoolers (three-year-olds). This is the single most important moral question the scientific community will face in the next decade. The ethics of genetically altered tomatoes, health care rationing, organ transplants, prescription drug reimbursements, and even assisted suicide are just a walk in the park compared to the ethics of exposing a developing brain to a psychotropic drug. Giving three-year-olds medications to help them be better nursery school students is a giant leap across an ethical threshold that will have profound consequences for our society. The responsibility, or as some would say, the irresponsibility, is enormous.

TREATMENT IN SEARCH OF JUSTIFICATION

To examine the rationale for these experiments a good place to start is with an article titled, *Trends in Prescribing Psychotropic Medications to Preschoolers*. This article received a tremendous amount of coverage in the mainstream press because of one simple straightforward statistic. According to the authors, the number of preschoolers taking medications for ADHD increased 300%

Leo, Jonathan. 2002. "America's Preschoolers on Ritalin," *Society 39*(2):52–60.

from 1990 to 1995. "Shocked", "concerned", and "surprised" were just some of the reactions from the American medical community. In fact, while both sides of the Ritalin debate expressed significant concern about this statistic, the reasons for their concern could not have been more different.

The problem, even for those who endorse the use of Ritalin, is that Ritalin has never been officially approved for children under six. Although prescribing these medications to children in nursery school may be legal, doctors are entering new territory when they do so because there have never been any experiments on the effects of Ritalin in such young children. According to Dr. Steven Hyman, the director of NIMH, "Without good clinical data, every child who receives this medication represents an uncontrolled experiment—that is entirely unacceptable." The White House, Hillary Clinton, and NIMH immediately stepped into the fray, and amidst great fanfare, announced the allocation of five million dollars to investigate the safety and efficacy of these drugs for preschoolers.

According to those who oppose the use of Ritalin, handing out more money to investigate the safety of Ritalin for even younger children is exactly the kind of thinking that has created the current mess, and more money will only make more of a mess. The response by the White House, the pro-Ritalin advocates, and the drug companies is nothing but a face-saving move to deflect a potential public relations nightmare. In light of the fact that there seems to be a correlation between the amount of time, effort, and money that NIMH devotes to ADHD and the rising numbers of American children using Ritalin, it is easy to see why a study estimating that a quarter-million American preschoolers are on Ritalin could be a public relations disaster. The political reasoning coming out of Washington goes something like this: a group of doctors has been prescribing medications to very young children; this group of doctors is now exposed; so, now we are going to give money to this same group to investigate the safety of what they have been doing. Why? So they can continue doing what they are already doing.

For those who oppose the escalating use of Ritalin in such young children, the appropriate response to statistics documenting toddlers on Ritalin is, "Stop—Enough is enough." As Drs. Michael McCubbin and David Cohen put it, "That public education and health systems permit the massive drugging of children despite the lack of knowledge should set off alarm bells." There is no reason for any child under six, much less three, to be taking any kind of medication for hyperactivity. Investigating the safety and efficacy of these drugs in toddlers will have one result: ten years from now even more three-year-olds will be taking medication for ADHD.

The MTA Study

If one had to pick a "landmark" study in the history of ADHD research it would certainly be *Treatment Strategies for Attention-Deficit/Hyperactivity Disorder* written by the "MTA Cooperative Group." The fanfare surrounding the publication of this article was nothing short of extraordinary. In a segment titled, "Ritalin's Redemption" ABC News declared, "The early results of a large national study indicate that drug therapy for children with attention deficit and hyperactivity disorder is not only effective, but much better than psychological counseling alone." Note that ABC News did not quote an expert; they just declared it as fact.

In another article announcing the results of the study, one of the authors, James Swanson, was quoted as saying, "Treatment can mean the difference between a kid ending up at Berkeley or ending up in prison." In the ADHD literature, you would be hard pressed to find a single scientific study that has been more responsible for the huge number of Ritalin prescriptions written in this country. Any budding sociologist out there who would like to investigate why American physicians lead the world in passing out Ritalin should look no further than the MTA study.

According to the authors, the most important goal of the study was to answer the question, "How do long-term medication and behavioral treatments compare with one another?" It might seem like a fairly straightforward question, but it's loaded. A major point of contention in the Ritalin debate centers on answering the question of whether to treat an ADHD child with medication or psychosocial interventions.

The Ritalin proponents believe that a child with ADHD is "at risk" and will continue to fail at school, and if left untreated long enough the child

will probably develop a more serious condition. Without some sort of medication, the child is doomed to a life of frustrations, failures and possibly even incarcerations. Talk therapy might sound good, but in the view of the Ritalin advocates withholding medication from these kids is irresponsible and even verges on child abuse.

As an example, in one case in New York State the parents of a child on Ritalin become concerned about what the drug was doing to their child and wanted to discontinue the medication. However, child protective services and the courts got involved and would not allow the parents to take the child off Ritalin. When asked about the ethics of this, Dr. Peter Jensen, one of the authors of the MTA study, replied, "Certainly child-protection laws and the courts are not the best way for us as a society to see that our children receive appropriate care. But when a child's well-being is at stake, we cannot default on our responsibilities to ensure that he or she gets the necessary help."

The primary goal of the MTA study was to supposedly answer the question "to medicate or not to medicate." However, it needs to be mentioned that the study's authors never entertained any doubt about the answer to this question themselves. In their previous writings, most of the MTA investigators have made it very clear that they strongly favor the use of medications. Their goal in creating this study was obvious: To bring those skeptics who do not quite share the MTA philosophy of raising children into the pro-Ritalin fold.

To compare medication and behavioral treatments, the investigators divided children aged seven to nine into several different groups. One group received medications, a second group received behavioral treatments, and a third group received both .There was also a fourth group that received no treatments from the MTA investigators but instead received the standard treatment available in the community. The experiment continued for fourteen months and the children in the different groups were compared. The main thrust of this study is found in the very first paragraph of the section titled, "Results." In the words of the investigators, "Robust differences were found according to two different data sources, indicating the superiority of medication management over behavioral treatment of ADHD symptoms." But who are these two data sources that say medication is better than behavioral management?

The first data source is the parents, and the second source is the teachers. To determine whether Ritalin or other similar drugs were working the authors of the study had the parents and teachers fill out a simple set of questions about the children's behavior. Note that neither the parents nor the teachers were "blind" to the treatments the children were receiving. According to the parents, the children who received medication did better than children who received behavioral treatment in terms of both attention span and hyperactivity/impulsivity. But can these parents be considered a random sample of the typical parents in this country? No, of course not.

The investigators have pre-selected a group of parents who believe that it is acceptable to medicate children; in this lack of random sampling, we find the experiments main shortcoming. According to the MTA investigators, this is how they found the parents: "In all instances, the child's parents contacted the investigators to learn more about the study, after first hearing about it through local pediatricians, other health care providers, elementary school teachers, or radio/newspaper announcements." The MTA investigators have ended up with a group of parents who accept the very idea that ADHD is a disease—which in and of itself is a biased group.

Even as the study progressed, built-in mechanisms guaranteed the formation of a biased group of parents. After the children were initially screened and examined, they were assigned to the various experimental groups. At this point, out of 289 children who were going to be receiving medication, eighteen parents refused the medication and pulled their children from the study. It would be very interesting to find out why these parents withdrew from the study. Although the MTA investigators do not supply this information, these parents very likely had a problem with putting their children on medications—just one more example of how the MTA investigators ended up with a group of parents who do not represent the entire population.

Many parents are leery about medicating their children. Popular culture has recently picked up on this wave of sentiment. For example, in the recent movie, "Superstar", the head priest at the local Catholic school is talking to a mother about her daughter's problems and says, "Upon reflection, I think a combination of prayer and Ritalin could eliminate her excess energy." The mother

responds," How dare you! You may call her hyperactive, but if the good Lord gave her excess energy then by God no one is taking it from her." There are many parents who share this view and these parents were not part of the MTA study.

The other problem with the study is that while the parents said that medication improved both attention and hyperactivity/impulsivity the teachers said that it only improved attention but *not* hyperactivity. Since we have known for many years that Ritalin will improve anyone's attention; this is really nothing new. What is surprising is that the teachers did not find any lessening in the level of hyperactivity

The problem with the built-in bias of the parents is also further highlighted by the study itself, because, in addition to the parent and teacher observations, there was a third group of raters who observed the children in the classroom. Unlike the parents and teachers; these raters did not know which children were receiving medication or behavioral treatments and these raters found *no* difference between medication and behavioral therapy. According to the three groups of raters we have the following conclusions: 1) the parents, who were the most biased, found Ritalin to be the winner; 2) the teachers, who have a broader background in child behavior than the parents, found that Ritalin did not help in terms of hyperactivity/impulsivity, and; 3) the outside raters, the only unbiased group, found no difference between Ritalin and behavior management. Since the results of this unbiased group did not deter the MTA researcher's enthusiasm for Ritalin, it is not clear why they used this group at all.

Furthermore, from reading the MTA study it is impossible to really know what the teachers or parents actually reported about inattention and hyperactivity/impulsivity. In the discussion (p. 1077) the authors say that according to the teachers—the children on medication were better off in terms of both hyperactivity/impulsivity and inattention. However, table 5 (p. 1082) in the data section contradicts this statement and says that according to the teachers—the students were better off in terms of inattention but *not* hyperactivity. There seems to be a typo somewhere. I am not faulting the authors for having a typo, but it must be pointed out that the MTA study has been portrayed as the pinnacle of ADHD research. It will not surprise the reader that, based on the experimental design, the actual results of the MTA study do not carry much weight with this author, but apparently for those reviewers who have been singing the praises of the MTA study the actual results are likewise not that significant.

I have only critiqued the portion of the MTA study that the investigators seem to say is the most important. The MTA study did look at other issues. For instance, the MTA investigators say that they have shown that Ritalin improves reading scores. But there are several studies that contradict this finding and the ethics of giving children a drug to improve reading scores falls prey to the same arguments that I am making about the rest of the study. In the case of improving reading scores with Ritalin one must ask, "Do the ends justify the means?"

The bias of the MTA experiment could be compared to designing a study to determine if teachers should continue to use corporal punishment in the classroom. Imagine taking a group of teachers who believe in corporal punishment for their students and asking them if it works. Would there be any doubt about their reply? Obviously not. Their opinion however, in no way constitutes proof that corporal punishment is good for children. Physical intimidation will certainly work as a means to force children (and adults for that matter) to obey orders. We do not ban physical punishment in the classroom because it does not work in the short run. We ban it because of its negative long-term effects and society's acknowledgement that children are people, too.

Is Ritalin quick, easy, and cheap? Yes. Will it work? Probably, if all that is meant by *work* is that the children are easier to control. But the real question is will it *help* children? No one is going to disagree that Ritalin will make kids easier to control or that it improves their ability to pay attention. What we don't know is how Ritalin affects a child from within. Children cannot tell us what it is like to live with Ritalin.

However, an insightful, first hand account of Ritalin's effects was written by Walter Kim, an editor for *GQ* magazine who started taking Ritalin when he was thirty-one. For the first several months, he thought it was a wonder drug that gave him incredible powers of attention, but when he started to notice that it was fundamentally changing his personality he took himself off Ritalin. Besides lamenting the fact that children will not have the luxury of taking themselves off the medication, Kim is also concerned about what constitutes success when it comes to evaluating the effects of Ritalin. In

Kim's words, "The pills are a kick. They're uppers. Get it? Uppers. They act like downers on kids who truly need them, according to the experts, but what do they know? The experts are on the outside looking in, monitoring behavior, not emotion. All they see are rows of little heads sitting obediently at little desks."

In summary, the MTA investigators found a group of parents who believe in medicating children and then asked them if it worked .They then trumpeted the results of a survey taken from a group of biased parents as the solution to keeping more kids out of jail. In retrospect, it appears that the media coverage and marketing of the MTA study far outpaced the actual scientific value of the study. The MTA study is significant only for those who already believe in medicating children; for those who do not believe in medicating children to help them get through the school day, the MTA study does not provide much direction.

The PATS Study

Based on the success of the MTA experiment, the Ritalin experts are now investigating the use of Ritalin in preschoolers. The study is referred to as PATS, which stands for "Preschool ADHD Treatment Study."A recent article in *Science* magazine entitled: "Planned Ritalin Trial for Tots Heads into Uncharted Waters", addressed some of the ethical issues surrounding the upcoming experiments on the use of medication in such young children. The end of the article holds a surprising paragraph about the laboratory classroom that Dr. Lawrence Greenhill, with funding from NIMH, is planning. In response to a question about how researchers will know whether a three-year-old is functioning "on task," (one of the goals of giving Ritalin) Dr. Greenhill explains: "*We're going to set up a laboratory classroom, and we'll observe common tasks done in nursery school,* such as stacking blocks and stringing beads on a thread. Children will be asked to sit in a circle and take part in group events. The test will be whether the child is *compliant* and participates or *attends for a few seconds before drifting away and doing everything else in the room*" (Greenhill's words are in italics, the reporter's paraphrasing in the original article is not in italics).

Medications aside, the NIMH laboratory classroom, with its heavy emphasis on children's compliancy, is not the type of nursery school that many parents want for their children. Evidently, the PATS investigators have never heard of Montessori schools. In a Montessori school, there are several stations that are set up in the classroom and children are urged to visit whatever station they desire. The children are given the *choice* to stack blocks; they are not *forced* into stacking blocks. Maria Montessori was not overly concerned with making preschoolers "compliant"; instead she focused on creating an environment that was conducive to the child, not forcing the child to fit the environment. In Montessori's words, "A more just and charitable approach toward the child would be to create an 'adaptive' environment different from the repressive one in which he operates and which has already formed his character. The implementation of any educational system ought to begin with the creation of an environment that protects the child from the difficult and dangerous obstacles that threaten him in the adult world."

To say that Maria Montessori and the PATS investigators have entirely different views about the ideal classroom would be an understatement. The NIMH classroom seems to be about drawing lines; Montessori's classroom is all about expanding boundaries.

As another example take John Holt, an educator who lamented the rigid structure of most classrooms, "Our hearts leap for joy at the sight of a roomful of children all slogging away at some imposed task, and we are all the more pleased and satisfied if someone tells us that children don't really like what they are doing. We tell ourselves that this drudgery, this endless busywork, is good preparation for life, and we fear that without it children would be hard to control."

I could list example after example of educators who have different philosophies of education than the PATS investigators. John Holt and Maria Montessori might be at one extreme of the ideological spectrum concerning education, and, yes, there will certainly be people who brush them off by calling them extremists, but that would be missing the point. I am not arguing for any one specific philosophy of education over another; instead, I am merely pointing out that a philosophy of education is part and parcel of the whole Ritalin debate. The PATS investigators are designing the best way to whittle away at square pegs (the students) so that they fit into a peg board (the classroom) with round holes,

but there are still schools in this country that take the opposite tack, which is to adapt the school to the child.

When the PATS investigators see a child who does not want to stack blocks, they see a disease that needs to be medicated. When educators like Holt and Montessori see a child who does not want to stack blocks they look to the environment. It needs to be mentioned that the people who believe that non-compliant three-year-olds have some sort of neurobiological disease are the same people who are largely responsible for the epidemic of Ritalin use in this country. These are the same people who for years have said the following: ADHD is a "disease"; these children have a malfunctioning cerebral cortex; 3% to 5% of our children have this disease; and the best treatment for these children is Ritalin.

If the researchers investigating the efficacy of Ritalin in three-year-olds are planning to use an experimental design similar to the MTA study, then the study is flawed from the start. The type of parent who would send a three-year-old to this kind of school is simply not a fair representation of the typical parent in America. To seek out parents who place a high importance on "compliance" in three-year-olds and even contemplate medication as an option, and to then ask these parents if medication works is not science .This is like taking a group of Democrats (or Republicans) and asking them how they would vote, and then declaring that scientists have proved the superiority of the Democratic Party. An appropriate response from the Republicans would be "Nice try."

Based on the faulty experimental design of the PATS investigators, it is quite likely that several years from now the headlines in the paper will read, "Ritalin Is Safe and Effective to Use in Three-Year-Olds." The PATS investigators will probably find that, at least according to a certain group of parents, Ritalin is effective in improving preschoolers' performance. But these findings will still not convince every parent of non-compliant preschoolers to use Ritalin, because many parents will still see a fundamental ethical problem when it comes to controlling a three-year-old with a drug, even if it "works." There will still be parents who take seriously the notion that children should be accepted for who they are, not just 90% of our children, but all of them.

In the book, *Punished by Rewards*, Alfie Kohn does not talk about Ritalin but he does talk about the issue of control. According to Kohn, "Before we resort to control, we should be absolutely certain that less intrusive, more respectful interventions cannot work. We should also think about how an act of control is exercised: Do we justify it with a reasonable explanation? Do we pause to ask whether what we are getting the child to do is really necessary? Are we thinking about how best to help the child become a responsible person (as opposed to just getting her to obey)?"

When a preschooler does not want to stack blocks or take part in group activities can we really be sure that she suffers from a disease? Kohn continues, "Parents and teachers who defend the use of control without reservations do not, as a rule, pause to ask these sorts of questions. If someone persists in controlling others, something else may be at work—a set of values and a view of relationship that no argument or evidence will suffice to challenge." Our society is leading the world in Ritalin consumption and we cannot ignore the fact that this is partially due to the value system in this country. Sure, Ritalin will help us control our kids, but as a society maybe we need to take a step back and reevaluate this issue of "control."

The narrow ethical reasoning of the ADHD experts is well summarized by Dr. Robert Ward, a professor of pediatrics at the University of Utah. According to him, "Without controlled clinical trials, we are treating children with less than optimal information about effectiveness, dosing, and safety. You have to ask the question—Which is more unethical? To do that, or to treat a child in a controlled clinical trial?" But statements like this miss the point, because it is impossible to limit the discussion of ADHD to "science" and only talk about ADHD in terms of "effectiveness","dosing", and "safety." Narrowing the discussion to only these terms simplifies the debate, but over-simplification leads to a simple answer—of course anyone who is medicating children would like to know it is safe. However, simplifying a very complex problem does not do it justice .The real ethical question is much more complex and complicated. If the American medical community is not treating a disease but is instead selling a performance-enhancing drug the ethical ramifications are overwhelming.

The major ethical question is not, "Is Ritalin safe?" but, "Is it right to drug little children because we don't like their behavior or because they don't fit in?" If the entire approach to dealing with these

children by drugging them is ethically bankrupt then any questions about Ritalin's safety are a non-issue. Who decides whether 2%, 5% or 10% of our children have this disease? Is it right to give a three-year-old a drug to control him? Why does America lead the world in Ritalin consumption, while the British are talking about banning Ritalin for children under five? These are the real ethical questions.

Besides objecting to the PATS investigators' somewhat simplistic philosophy of education, there are also plenty of objections to be made on a purely scientific level. For instance, research has shown that the dopamine receptor, which has been implicated in the formation of ADHD, reaches a peak density at about three years of age and then starts to taper off. Given that the long-term treatment of many psychotropic drugs has been shown to alter the numbers and sensitivity of dopamine receptors, a perturbation of the dopamine system at a critical developmental time period could have severe consequences. Considering that we know so little about the effect of Ritalin on the developing brain, even the developing rat brain, it seems odd that we are dispensing it to such young children.

The Diagnosis of ADHD

To the news reading public, the diagnosis of ADHD is out of control. In the last several years, in addition to the legal consumption of Ritalin, the illegal use of Ritalin has risen sharply. When one examines the ADHD diagnosis and sees that it is essentially going to a doctor and saying, "I cannot pay attention" or "my child cannot pay attention" it is surprising that anyone would go through great lengths to get Ritalin illegally. In twenty-first century America it is easier to get a legal prescription for Ritalin than it is to get a library card.

Dateline NBC recently reported on the illegal use of Ritalin in our schools and colleges. On college campuses across the country, undercover reporters simply asked students studying in the library where they could get Ritalin illegally. In one case the students recommended just going to the student health service and getting a prescription because the ADHD test which the doctors give is so subjective.

What the *Dateline* report failed to recognize is that the major problem with Ritalin is not the illegal use but the legal use. Many of the students who *Dateline* interviewed were using Ritalin illegally for the very same reason that doctors prescribe it—to pay attention. It is disingenuous to criminalize these students who are seeking to improve their performance, and then turn around and use the performance enhancing aspect of the drug as the major reason to prescribe it. If anything, the fault lies more with the adults than with the students, because the adults should know better. Think about the hypocritical message we are sending to our children. On one hand we tell them it is acceptable to go to a doctor and get a prescription for Ritalin to improve ones ability in school. But on the other hand we tell them it is wrong to get the very same drug for the very same reason from a classmate. No wonder our children are confused about drugs.

To get a better understanding of each side of the ADHD debate, it is helpful to refer to two diametrically opposed authors. Dr. Richard DeGrandpre wrote a book called, *Ritalin Nation* and Malcolm Gladwell wrote an oft-cited article in *The New Yorker* titled, "Running From Ritalin." Both these authors have a similar take on the current sociological conditions in this country. They both see the world as a revved up merry-go-round that is leaving a group of children behind. According to Gladwell, "The world we live in increasingly values intellectual consideration and rationality—increasingly demands that we stop and focus. Modernity didn't create ADHD. It revealed it." DeGrandpre also sees a similar environment: "Life in rapid-fire culture means first and foremost a life in constant motion, an end to slowness. In these times of rush, either we are in motion or something's in motion around us."

While their diagnoses are somewhat similar, their recommended treatments are at opposite ends of the spectrum. DeGrandpre wants to slow down the merry-go-round while Gladwell sees no problem with medicating those children who are having trouble keeping up. According to DeGrandpre, "We should be fighting for a world that is no longer so toxic that millions of kids will become psychologically sick just because they happen to live in it." It should be evident that the decision to either slow down the merry-go-round or medicate the children who cannot keep up is not a decision that should be left to scientists. The decision goes way beyond "science."

An interesting side debate about Ritalin is whether or not Huck Finn and Tom Sawyer would

be medicated if they were alive today. Gladwell suggests that if Huck Finn were alive today he would be taking Ritalin, and he would be better off for it. Maybe Ritalin would have made Huck a better student, but would he still have had the gumption to run away from his abusive father? One of the major points of the story involves Huck's insight into the world of the adults around him. Huck is surrounded by one of the most insidious crimes of the modern world—slavery, and while the adults all seem to accept slavery, Huck does not. If Huck had been on Ritalin would he still have had the same insightful observations about slavery?

For those who would quickly dismiss Huck Finn and Tom Sawyer as fictional characters, maybe Mark Twain's preface to *The Adventures of Tom Sawyer* would make them think twice. "Although my book is intended mainly for the entertainment of boys and girls, I hope it will not be shunned by men and women on that account, for part of my plan has been to try to pleasantly remind adults of what they once were themselves, and of how they felt and thought and talked, and what queer enterprises they sometimes engaged in."

It is impossible to read Huck Finn without seeing that Huck is let down by most of the adults in his life, and not his own biology. Somehow, amidst all the confusion in his world, he rises above the somewhat shallow society he lives in. There is no doubt that Huck Finn is definitely above average on the hyperactivity scale, but he is also above average when it comes to intelligence, compassion, insight, and empathy. One wonders how many Huck Finns and Tom Sawyers we are medicating today?

Controlling or Diagnosing Normal Kids?

When challenged with statistics documenting out of control Ritalin use it is common for the "experts" to fall back on the "little monster scenario." In defense of Ritalin, the advocates point out that even if Ritalin is overprescribed, there are children out there with a real disease who need Ritalin to function and that without their medication these children are out of control one-man wrecking crews. The organization, "Children and Adults with Attention Deficit Disorder," also known as CHADD, is a strong proponent of the disease model of ADHD. CHADD supports the idea that the best treatment for ADHD is medication. According to E. Clarke Ross, the CEO of CHADD, "The critics always spotlight a handful of children who have experienced side complications or side effects from medication. But what about the millions of children who have been helped by medication?" Okay. So let's spotlight a child whom CHADD thinks is helped by medication. This case study appears in a pamphlet that CHADD distributes to schoolteachers.

"John, a third grade student, is often non-compliant and does not begin tasks when asked. During a two-week observation period, he exhibited the following behaviors on a routine basis: John sharpened his pencil three times before sitting down and working. John fell out of his chair when given an assignment with 50 problems. He pretended to be the class clown. The class laughed. After leaving his reading group, on the way back to his seat for independent work, John tripped Sally. He was sent to the corner of the room."

According to the Ritalin advocates: John has a neurobiological disease; his antics in the classroom are only a foreshadowing of bigger problems; he is destined to a life of frustrations and failures; his problem is biological and he needs medication to function. Granted, he would have been better off if he had been treated in preschool, but it's not too late to turn his life around with Ritalin.

But is John a "little monster" or is he the class clown? Is it possible that he is bored with school and needs more intellectual stimuli? Is he in a classroom with thirty students and one teacher? Is there really nothing else that will work for John other than medication? In the eyes of the Ritalin advocates, John has a disease that needs medication but in the eyes of many educators, John's behavior would be considered fairly normal. The problem is not that we are prescribing Ritalin to kids who apparently don't need it. The problem lies with the Ritalin advocates' definition of who needs it. According to many people in this country, the diagnosis of John with ADHD represents nothing less than a fundamental misunderstanding of children.

In spite of the obvious problems with the diagnosis, the ADHD experts continue to state that the diagnosis is clear-cut and uncomplicated. Take for example Drs. Joseph Biederman and Stephen Faraone, who say, "The childhood diagnosis is contemporaneous and straightforward." But if the diag-

nosis is so straightforward then why do we have such a problem? If the problem with overdiagnosis is due to some deficiency in the average doctor's education, then the experts need to better explain their surefire and reliable method to correctly diagnose ADHD. It is highly unlikely, however, that the ADHD experts are hiding their expertise.

Dr. Steven Hyman, the director of NIMH, has said, "overdiagnosis is a disaster, underdiagnosis is a disaster" but this statement implies there is something wrong with the physician making the diagnosis and not with the diagnosis itself. It is wrong to blame the average physician when it is clear the fault lies with the creators and marketers of the diagnosis. They have given the American medical community an unworkable, unscientific, and unreliable diagnosis that could fit just about any kid in America.

In the past several years, the Ritalin advocates have had nothing but disregard at best, and contempt at worst, for anybody who is skeptical or concerned about the rising use of Ritalin. A favorite for the pro-Ritalin crowd is to link the Ritalin naysayers with "Scientology." It is true that the Church of Scientology opposes the use of Ritalin, but this does not mean that everyone who opposes Ritalin is a Scientologist.

In reality, there is growing resentment among mainstream scientists, the media, and the general public about the Ritalin racket. In the past year alone, George Will, Nicolas Regush, Thomas Sowell, and Arianna Huffington have all written negative editorials about Ritalin, and these writers are certainly not Scientologists. (Note to the pro-Ritalin lobby—this author has never been associated with Scientology: if you asked him about it, all he could tell you is that Scientology was founded by a guy who wrote some science fiction novels.)

Ritalin Meets Human Genome Technology

The human genome project is going to change the way we treat disease. No one has discovered an "ADHD gene" and it is highly unlikely that an ADHD gene or even a set of ADHD genes will ever be discovered yet talk of gene therapy for these children is in the air. Several generations from now, heart disease, diabetes, Parkinson's disease, and ADHD will all be treated with gene therapy. Wait a minute. Rewind. Double take. Are we really ready to use gene therapy to treat ADHD? If we accept the logic of biological psychiatry that ADHD is just like any other disease, then the answer is yes. If ADHD is really a disease then the technology of the Human Genome Project holds great promise. Consider Dr. Alan Zametkin's closing remark in a discussion on the future of ADHD research: "Can pharmacological or gene manipulations lead to a cure?"

There are two barriers to using gene therapy—technology and ethics. The technological barrier will be overcome shortly, yet most people believe the ethical barrier will prevent us from altering the genome. But they are wrong, because as a society we have already embraced the belief that it is acceptable to chemically alter the neurobiology of a developing child. The logic of the Ritalin advocates has taken us across the ethical barrier; the technology of the human genome project will simply make the entire affair more efficient. Medicating three-year-olds in nursery school is just a harbinger of things to come.

Suggested Further Readings

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Jonathan Leo *is associate professor of anatomy at Western University of Health Sciences in Pomona, California. He has written several articles on the use of Ritalin in children.*