

I INTRODUCTION

A new biological determinism is sweeping through American society. Old myths about gender differences are being packaged in shiny new bottles and sold to parents and teachers desperate to do the best they can for the children in their care. And the major media—including PBS, *Newsweek*, the *New York Times*, the *Washington Post*, *Parents* magazine, and many others—are uncritically embracing these new-old stereotypes.

From the media, you'd think that there is a scientific consensus that boys and girls are profoundly different from birth, and that these differences have huge consequences for aptitude and performance in such areas as math and verbal abilities, for how the sexes communicate, for the careers for which they should aim, and for the kinds of classrooms they should attend.

As a parent or teacher, you can be forgiven for assuming that all of these beliefs are based on fact; the idea of great differences between boys and girls is the new scientific truth, "proved" by many experts and many studies. This toxic message—which is everywhere

today—has real-life consequences. Important new research shows that kids pick up very early—often as early as two years of age—on gender stereotypes, and if parents and teachers don't intervene, kids may get stuck in damaging straitjackets.

The true story is exactly the opposite of the popular narrative. The overwhelming consensus, validated by dozens of researchers using well-designed samples, is that girls and boys are far more alike than different in their cognitive abilities and the differences that do exist are trivial. That's not to say there are no differences between the sexes—indeed there are—but when it comes to the way boys and girls learn and the subjects they are good at, sweeping statements about innate gender differences don't hold up. Human beings have multiple intelligences that defy simple gender pigeonholes.

Unfortunately, the real (and complex) story line is generally missing from the popular media. It is buried in scholarly peer-reviewed journals and articles that seldom see the light of day. The stories that dominate the headlines frequently come from a few “experts” and a few studies that are often deeply flawed. In many cases, the samples are too small, the studies are poorly designed, and the subjects are animals, not people. Moreover, many researchers make wild leaps from small, inconclusive findings to Grand Theories.

Others see conspiracies everywhere—such as American Enterprise Institute scholar Christina Hoff Sommers, who claims in her book of the same title that there is a war against boys and that female teachers are deliberately destroying their male students.

Such arguments are repeatedly debunked by serious scientists, but the story line rolls merrily along. We hear that boys are interested in objects while girls are interested in people, that boys have poor verbal skills and girls can't do math, that boys need to read books about combat and girls need to learn science through cosmetics. (These are opinions actually parroted back to the media by classroom teachers.)

If this were all simply arcane scientific trivia, it might not be dangerous, but such ideas are gaining credence among educators across

the country, and new curricula are being designed to cater to the “Boy Brain” or the “Girl Brain.” In fact, many school districts are reshaping their educational systems, racing to set up single-sex classrooms on the premise of proclaimed massive gender “differences.” In short, educational policy decisions are being based on scant or no scientifically sound data.

Even the most enlightened parents can’t help but respond to the unending media messages that boys and girls have such different brains, different ways of reasoning, and different hormones that they might as well belong to separate species. Parents are led to believe that their little girls and boys need different stimulation; they need to be handled differently, educated differently, and given different levels of protection.

Educators, too, fall prey to such ideas. Many teachers are buying books that promote extreme gender differences based on questionable science. At the 2006 National Association of Independent Schools convention (where we were keynote speakers), one teacher told us that his headmaster was redesigning the entire curriculum on the ideas of best-selling author Leonard Sax, who promotes pseudoscientific ideas about boys and girls. Unfortunately, management gurus are also telling young women that they should focus on their communication skills and multitasking abilities, while accepting the “fact” that men have more ability to focus and command.

The New Segregation?

Today, there is a major drive under way to create more gender-segregated public school classrooms. The Bush administration issued new rules in 2006, letting schools override the antidiscrimination provisions of Title IX, thereby clearing the way for many more classrooms segregated by gender. As of January 2010, 547 public schools

in the United States offered single-sex classrooms. South Carolina has recently set the goal of having such classrooms widely available. Not surprisingly, then, more school administrators, teachers, and parents are considering this idea carefully. They appear to be buying the notion of great gender differences in cognitive abilities, while the opposing view—backed by the latest peer-reviewed science—gets short shrift.

Increasingly, new public policies, the debate on American education, and the marketing of products to kids are being seen through the “gender lens.”

What’s on offer is astonishingly retrograde—almost Victorian—in its view of the sexes. In fact, we’re going backwards in many areas, with toy stores setting up more and more blue and pink toy aisles.

This message is couched in the language of science, but what’s really being offered is at best pseudoscience, in which anecdotes are presented as data and sweeping generalizations are based on inconclusive research.

We hear from one best seller, *The Female Brain*, that such an entity does exist, but the book’s own footnotes contradict what the author says. A runaway best seller, *The Dangerous Book for Boys*, urges a return to the boyhood of the rural nineteenth century, when boys skinned rabbits, shot arrows, and reenacted heroic male battle adventures. Girls have no place in this scenario of adventure and risk, but distressingly, Disney films has already bought the rights to the book. Amazon is recommending a new book by best-selling author Michael Gurian, titled *The Minds of Boys*. Among Gurian’s unscientific beliefs is the notion that boys have brain structures that girls don’t possess, structures that allow boys to excel in math and science. The author is in great demand as a lecturer at schools and education conventions. Meanwhile, the *New Republic* contends that schools offer “verbally drenched” curricula that discriminate against boys, and *New York Times* columnist David Brooks writes that we have to give boys simple books about combat to overcome their lack of verbal ability.

At a time when parents, teachers, and the public at large need real information, what they get instead is bias and misinformation, and both boys and girls are being harmed by the simplistic, stereotyped view of their “natures.” Stereotypes retain their hold, especially when they are endlessly promoted in advertising, TV, the news media, popular music, movies, novels—everywhere. These powerful beliefs act as funnels, directing girls and boys into particular ways of being and behaving. We are told that girls can’t excel at math, and shouldn’t aspire to the highest levels of management, and that boys are hyperaggressive, and can’t be nurturing or cooperative even if they want to. Children internalize such stereotypes at an early age, thus putting brakes on the fulfillment of their individual potential.

However, research tells us that these stereotypical beliefs have no basis in fact. There is no evidence to support the claims of massive innate gender differences in such critical areas as math, verbal ability, nurturance, aggression, leadership, and self-esteem. Most differences are tiny, a far cry from what the media and some very vocal pundits present.

It’s ironic that as neuroscience tells us more and more about the similarity of our brains, popular culture incessantly beams the opposite message, drowning out the real story. Lise Eliot, a professor of neuroscience at the University of Chicago, conducted an exhaustive review of the scientific literature on human brains from childhood to adolescence and concluded that there is “surprisingly little evidence of sex differences in children’s brains.”

Despite this fact, parents and teachers still operate as if the sexes were hugely different. Eliot notes, “In many ways the world for preschoolers is more gender divided than ever.” This trend is troubling because “the more parents hear about hard-wiring and biological programming, the less we bother tempering our pink or blue fantasies and start attributing every skill of deficit to innate sex differences. Your son is a later talker. Don’t worry, he’s a boy. Your daughter is struggling with math. It’s okay, she’s very artistic.”

The net effect of all this is more, rather than less, stereotyping by parents and teachers, the most important adults in children's lives.

A Message That Needs to Be Heard

Although we are swimming against this strong media current, our voices are starting to be heard. We were, as we noted, invited to keynote the annual convention of the National Association of Independent Schools in Denver in 2006. Between us, we have been invited to give major presentations at Columbia University and at a major conference on boys and girls sponsored by the American Enterprise Institute. We have presented our ideas at schools around the United States and Canada, and we gave a major keynote lecture in Germany on coeducation and gender stereotypes. Building on our lectures and extensive research, this book has an urgent message. Adults provide the environment for our children. What we do and how we do it affect how our children's brains begin to organize themselves and to process information. We now know that the young brain is not something that is formed at birth and always remains the same. New pathways are constantly being laid down and others are being destroyed.

The good news is that armed with understanding and solid information, we can avoid the traps of fostering traditional—and restrictive—behavior in children. And we can limit the unintended consequences of well-intentioned parents and teachers who may be unwittingly encouraging stereotyped behavior in children.

An example: It may be that mothers in particular have internalized stereotypes about boys, even when their children are very young. Mothers of boys, research finds, often talk differently to their sons than to their daughters. Boys are often given commands and instructions—*"Pick up those blocks!" "Come here!"* while mothers more often infuse emotion into exchanges with their daughters (*"Does the doll*

feel good today?” “*Do you like Michele and her mommy?*”) Young boys may get the message that emotions are not “boy turf.”

Here’s another example. Every time parents toss a ball around with their sons, the boys’ brains learn something about speed, distance, perspective, and velocity. As a boy gets better at this game, he wants to play more, and his parents are likely to want to engage more in ball playing. A daughter who doesn’t get such experience doesn’t develop these brain pathways and connections, is less good at playing catch, and is less likely to engage with her parents in this kind of activity. Years later, she may decide she’s not good at sports—or math.

And while girls in affluent schools that sponsor elite sports, such as varsity soccer, are learning great new spatial and motor skills, girls in poorer public schools are not so fortunate. In such districts, recess is being canceled and girls have many fewer opportunities to take part in sports, in school as well as at home.

Our children face a time of unprecedented change and uncertainty. One thing for sure is that we are moving fast into an information age in which skills such as problem solving, critical thinking, communication, and cooperation will be crucial for success. All our children, boys and girls, need to master these skills, and they all have the ability to do so.

Of course, over time, because of boys’ and girls’ varying experiences, some gender differences do appear, and they can have consequences for behavior or career choice. But if parents and teachers act early enough to counteract stereotypes, these differences can be overcome.

We will look at the most popular books on parenting that deal with gender, and show how they are filled with pseudoscience. Many best-selling books have a very traditional agenda and are written in a way that makes them seem highly authoritative. But those who read these books don’t know how biased and ill-informed they are.

Introduction

Here are the major problems these books have, to one degree or another:

- They are not written by trained researchers in the field.
- They are based on anecdotal material or on the authors' own observations.
- They are based on studies of adults, not children.
- They are heavily based on animal studies.
- They are based on clinical work with disturbed patients.
- They make sweeping generalizations from small and non-representative samples.
- They are not informed by peer-reviewed scientific data.
- They are often written by people with an ideological agenda, who blithely disregard new science that challenges their entrenched positions and threatens their financial stake in promoting their ideas.

Through the incredible attention given to these books by the media, most of us believe that the sexes are vastly different. And these beliefs affect our expectations for our kids, the experiences we provide for them, our response to their behaviors and choices, the schools we select for them, and just about every other aspect of our relationships with them. They also affect the expectations kids develop about their own competencies.

Harvard's Howard Gardner, one of the nation's most eminent experts on learning, suggests a different way of looking at kids. His thesis is that there are seven different kinds of "intelligences" and that children can possess them all, although they might be most gifted in particular areas. (More detail about this later on.)

Gardner thinks that children, when they are very young, have wide-ranging curiosity and learn all sorts of things from the world around them. "In the first five years of life, young children the world over develop powerful theories and conceptions of how the world works—the physical world and the world of other people. They

also develop at least a first-draft level of competence with the basic human symbol systems—language, number, music, two-dimensional depiction, and the like.”

The intriguing fact is that kids don’t need adults teaching them how to do all this. “Children develop these symbolic skills and these theoretical conceptions largely by dint of their own spontaneous interactions with the world in which they live.”

But as this period closes, kids enter the culture created by adults, a culture that guides them into areas the adults think appropriate. Shortly after the age at which school begins, youngsters begin to assume a quite different stance toward the opportunities in their culture. More often than not, these opportunities are highly different for boys and girls. “This period then functions as an apprenticeship—an apprenticeship en route to expertise in specific domains, and an apprenticeship en route to expertise in the ways of one’s culture. The free-ranging explorations of the young child have ceased.”

It’s almost like the Middle Ages, when young children, especially boys, were sent off to guilds to become stonemasons, painters, armor-makers, and so on. (Girls, of course, were mainly confined to the domestic arena.)

At this critical developmental juncture, kids are no longer little sponges soaking up what they find interesting; rather they have become very apt and motivated students of what adults think they ought to know.

If Gardner’s ideas are correct, grown-ups have tremendous power over what and how school-age children learn. Instead of having the whole world at their fingertips, school-age children are being directed to certain paths and away from others. And when adults point out a direction, children want to go there.

If we are not careful, we may be cutting off these little eager beavers from the “road not taken,” as Robert Frost would have said it. If the authors of this book have a bias, it’s that we believe school should encourage children to develop all the intelligences they possess,

to find their passion by drinking from many springs. And if schools can't—or won't do that—then parents need to do it.

Our idea is the exact opposite of the gender-lens theories about education that force kids down certain “gender-appropriate” paths. This notion is especially critical today because we shouldn't close off options for any of our children. Nearly all of them will spend the bulk of their adult years involved in the workforce. Flexibility will be the key to whether they succeed or fail in both their economic lives and their personal lives. Satisfaction in both arenas will be vital for their personal fulfillment and well-being.

Today, parents and educators are being fed a diet of junk science that is at best a misunderstanding of the research and at worst what amounts to a deliberate fraud on the American public. The education of our children is too important to the future of our nation to allow this situation to go unchallenged.

To get to the truth about girls and boys, we need to go beyond pink and blue.