

Where the Boys Are

Boys can't hear as well as girls, yet typically sit at the back of the class.

By Leonard Sax

When I left Philadelphia to begin my residency in family practice, I threw out most of the papers I had accumulated during my six years at the University of Pennsylvania. But there was one manila folder I didn't throw out, a folder containing a series of studies done by Professor John Corso at Penn State during the 1950s and 1960s demonstrating that females hear better than males.

Four years later, after I finished my residency, my wife and I established a family practice in Montgomery County, Maryland. Years passed. I wasn't thinking much about gender differences.

Then in the mid-1990s, I began to notice a parade of grade 2 and grade 3 boys marching into my office, their parents clutching a note from the school. The notes read: "We're concerned that Justin [or Juan or Michael or Tyrone] may have attention deficit disorder. Please evaluate."

In some of these cases, I found what these boys needed wasn't drugs for ADD, but rather a *teacher* who understood the hard-wired differences in how girls and boys learn.

Upon further inquiry, I found that nobody at the school was aware of innate gender differences in the ability to hear. I reread Professor Corso's papers, which documented that boys don't hear as well as girls.

Just think about the typical grade 2 classroom. Imagine Justin, six years old, sitting at the back of the class. The teacher, a woman, is speaking in a tone of voice that seems about right to her. Justin barely hears her. Instead, he's staring out the window or watching a fly crawl across the ceiling.

The teacher notices that Justin isn't paying attention. Justin is demonstrating a deficit of attention. The teacher may reasonably wonder whether Justin perhaps has attention deficit disorder.

The teacher is absolutely right about Justin showing a deficit of attention. But his attention deficit isn't due to "attention deficit disorder", it's due to the fact that Justin can barely hear the soft-spoken teacher.

The teacher is talking in a tone of voice that is comfortable to her and to the girls in the class, but some of the boys are practically falling asleep.

There's good evidence now, from several different sources, that newborn baby girls really do hear better than newborn baby boys. Pediatric audiologists Barbara Cone-Wesson, Glendy Ramirez, and Yvonne Sininger have done careful studies of the hearing of newborn babies.

When any baby or child (or adult, for that matter) hears a sound, there's an immediate reaction, called an acoustic brain response. Cone-Wesson and her colleagues decided to measure the acoustic brain response of more than 60 newborn girls and boys.

For a 1,500 Hz tone played to the right ear, they found that the average girl baby had an acoustic brain response about 80% greater than the response of the average baby boy. (The range of sounds around 1,500 Hz is especially important, because that range of sound is critical for understanding speech.)

Other studies have demonstrated that teenage girls (for example) do in fact hear better than boys do. The female-male difference in hearing only gets bigger as kids get older. These built-in gender differences in hearing have real consequences.

The difference in how girls and boys hear also has major implications for how you should talk to your children. I can't count the number of times a father has told me, "My daughter says I yell at her. I've never yelled at her. I just speak to her in a normal tone of voice and she says I'm yelling."

If a 43-year-old man speaks in what he thinks is a "normal tone of voice" to a 17-year-old girl, that girl is going to experience his voice as being about 10 times louder than what the man is hearing. He *is* yelling at her, but he doesn't realize it. The father and his daughter are experiencing the same sound in two different ways.

The gender difference in hearing also suggests different strategies for the classroom. More than 30 years ago, psychologist Colin Elliot demonstrated that 11-year-old girls are distracted by noise levels about *10 times* softer than noise levels that boys find distracting.

That boy who's *tap-tap-tapping* his fingers on the desk might not be bothering the other boys, but he *is* bothering the girls – as well as the (female) teacher. One reason for that difference, of course, is that 11-year-old girls *hear* better. Girls learn best in a quiet classroom, free of distractions

When I speak to teachers, they are fascinated to learn that girls and boys do indeed differ in their ability to hear. Experienced teachers often figure this out on their own – after five or ten years of teaching. One veteran teacher told me that she puts the boys in the front of the class and the girls in back.

That's pretty much the opposite of how girls and boys normally seat themselves. In most classes, you'll have two or three academically-talented boys sitting in the front row, the rest of the boys at the back, and the girls in the middle.

(Adapted with permission from Why Gender Matters: What parents and teachers need to know about the emerging science of sex differences, Random House, 2005. For more information, including book reviews and streaming video, visit www.whygendermatters.com.)