## NOTES

1. Angela Valenzuela, Subtractive Schooling: U.S.-Mexican Youth and the Politics of Caring (Albany: State University of New York Press, 1999).
2. Rodolfo Acuña, Occupied America: A History of Cbicanos, 3rd ed. (New York: HarperCollins, 1988).

## "Who am I as a learner?" <br> Would Girls and Boys Tend to Answer Differently?

MICHELLE GALLEY

So many theories about why boys and girls achieve academically at different levels have been put forth in recent years that some have dubbed the verbal jousting the "gender war" in education. First schools were shortchanging girls; then it was the boys who were getting left behind. Even as some arguments grew heated, it was clear that educators needed to do more to address gender differences. But what exactly? How do gender differences play out in the emerging identities of adolescents, and how do these differences affect them both as people and as learners?

The answers to these questions are almost too numerous to count and can vary greatly, depending on whom you ask. Carol Gilligan's groundbreaking book, In a Different Voice: Psychological Theory and Women's Development, fired what some saw as the first shots in this gender war when it was published in 1982. ${ }^{1}$ At a time when many in the feminist movement were insisting that there are no differences between men and women, Gilligan, a longtime faculty member of the Harvard Graduate School of Education and now a professor at New York University, theorized that there are fundamental and important differences between the sexes. In subsequent work Gilligan expanded her exploration of these differences and focused specifically on how they play out for adolescent girls. She found in her research that ats girls entered their preteen years they became unsure of themselves, eveniff they were previously daring, perceptive, and outspoken in the
ways they communicated and acted. They became more focused on what they were "supposed to do," even if that differed from what they knew was right. Gilligan theorized that in order to maintain relationships with oth-ers-often those they were expected to please, including teachers and boys-adolescent girls would sacrifice "relationship" with themselves. ${ }^{2}$

More shots were fired on the education front when the American Association of University Women (AAUW) issued the influential—and highly con-troversial-report entitled How Schools Shortchange Girls: The AAUW Report, A Study of Major Findings on Girls and Education. The report claimed that schools were geared more toward educating boys than girls. It also said the books schools used were male oriented and had more male role models and central characters; in essence, they were more supportive of boys' identities than girls'. In addition, the report noted that teachers called on boys more often and suggested that girls were taught to view themselves as less capable of working in the highest-paying professions. Girls were discouraged from taking courses that could eventually lead to lucrative jobs, the researchers charged. They believed that the "glass ceiling" women faced in the job market was also found in classrooms across the country. ${ }^{3}$

Not long after that report was released, research showed that girls were scoring lower on math and science standardized tests. Those test scores were used as further evidence that boys were being better served in schools. More recently, however, girls have started to close the gap in scores on these tests. Recent results show that as high school seniors, girls are trailing boys by an average of only four percentage points on the National Assessment of Educational Progress (NAEP) mathematics test. ${ }^{4}$ Even more impressively, girls are excelling on the NAEP reading tests, with twelfth-grade females scoring an average of fifteen points higher than their male counterparts. That number went up five percentage points between 1992 and 1998. ${ }^{5}$ This finding is not unique to the United States; in many countries around the world, girls score significantly higher than boys on language arts tests. ${ }^{6}$

Partly fueled by such test scores, the gender war has shifted fronts in recent years to include concerns about boys. Perhaps the best-known writer about the difficulties boys face in school and elsewhere in their lives is William Pollack of Harvard University, who cites the disproportionate number of boys in special education as one piece of evidence that schools are not as "boy friendly" as they could be. ${ }^{7}$ (Males make up about two-thirds of the special education population in U.S. public schools.) According to Pollack, the curriculum in most schools is set up in a way that is friendlier to girls than boys. Boys have a natural learning tempo that is more action oriented
and hands on than girls', Pollack says, but because most curricula require students to work independently and quietly, many boys end up feeling like failures.

While these theories and research findings may seem difficult to reconcile, one fact seems to emerge from all of them: There are differences between boys and girls in school. As the research suggests, many of these differences may be related to the ways boys and girls see themselves as learners, what might be called their "learner identities." There are, of course, countless exceptions that remind us of the need to put such generalities in perspective. (Pollack, for example, would never argue that all boys' learning styles are ill served by schools.) Still, it is important for educators to consider some of the patterns that researchers have observed in the different learner identities of boys and girls. This will help teachers and administrators envision classroom environments that might yield the greatest success for both.

## A BIOLOGICAL BASIS?

By the time young people reach adolescence they have had years of educational experiences influenced both by biological factors and by the ways society socializes boys and girls. According to Michael Gurian, author of the book Boys and Girls Learn Differently, many of the differences in the ways boys and girls develop as learners can be traced back to their brain functions. ${ }^{8}$ Girls' brains mature earlier than boys', Gurian says, which is why they are, on average, able to read earlier and speak with better grammar. He notes that girls are also able to hear, smell, and feel tactile sensations better; have better overall verbal abilities; and are better able to control their impulses than boys because of differences in the ways their brains are wired. According to Gurian, those differences result in girls being less likely to take risks and cause boys to be more likely to show a tendency toward aggressive behavior, both of which greatly affect how they see themselves and interact with others in the school context. (See "II am not insane; I am angry," by Michael S. Kimmel, pp. 69-78, and "Male Adolescent Identity and the Roots of Aggression: A Conversation with James Garbarino," pp. 79-83, in this volume.)

On the other hand, because the male brain tends to have better development in the right hemisphere, boys have more advanced spatial abilities on average, according to a study released in the fall of 1999 by researchers at the University of Chicago. ${ }^{9}$ The Chicago researchers found that differences in girls' and boys' spatial abilities show up by age four and one-half and are
manifest in tasks such as interpreting graphs and maps and in understanding geography. In addition, boys tend to rely on nonverbal communication, which Gurian says has enormous ramifications for them in an education system that relies so heavily on conversation and words.

These factors and a host of others are bound to have an effect on how children view themselves as learners: the extent to which they connect to and like school, how they see their place in the social environment with both teachers and peers, and whether they believe they are "good at" certain subjects or tasks. Because teenagers spend so much of their time together at school, Gurian notes that outside the family, school is the primary identity development system for adolescents: "By the time we turn fifteen, we've expanded the palette or canvas of our identity development well outside our parents." ${ }^{10}$

## DIFFERENT VIEWS OF SUCCESS AND FAILURE

One difference in boys' and girls' identities as learners is reflected in the way they view success and failure, according to research by Janice Streitmatter, a professor of educational psychology at the University of Arizona. Boys, Streitmatter says, tend to see failure as something that is caused by external factors and is unstable, "that there is some reason other than themselves that caused the failure." For example, to explain why he performed poorly on an exam, a boy might say that his teacher wrote a bad test, that he was unlucky, or that he was just having a bad day. The cause of his failure has relatively little to do with his actions and is more tied to the education system or factors beyond his control. However, when adolescent boys succeed, they have more of a tendency to identify that success as internal and stable. They say things like, "Of course I aced that test. I knew the material." In other words, boys have a relatively easy time taking credit for their victories.

Girls, on the other hand, seem to do the reverse, says Streitmatter. When girls do well on a test-particularly in math and science-they tend to report that maybe the exam was easy or that they just got lucky that day. And if they don't do well they say that they have never been good at that subject, or that it is just very difficult for them. Streitmatter notes, "Even girls who are in upper-level math classes, like Advanced Placement geometry, tend to hold to this pattern."

What kind of learner we become can be influenced by how we view ourselves in relation to our educational achievements and challenges. If we think that we are just random victims of bad tests when we fail, for exam-
ple, we might be less invested in our learning. Therefore, teachers may need to help some boys understand that failure is often just as much a result of their own doing as success. On the other hand, seeing success as something random could be just as damaging, so it is vital for girls to take ownership of their successes and learn to appreciate when they have performed well.

## SEEING SCHOOL AS RELEVANT

Boys' and girls' identities as learners are also revealed in the degree to which they see school as relevant to their everyday lives. Research has found that boys in particular can have a difficult time finding practical uses for school, especially in the subjects of reading and writing. And, as any observant teacher can tell you, a student who sees course content as irrelevant to "real life" is one who is more reluctant to learn.

In the book Reading Don't Fix No Chevys: Literacy in the Lives of Young Men, researchers Michael W. Smith and Jeffrey D. Wilhelm describe their study of the reading habits of forty-nine boys from different academic, ethnic, and socioeconomic backgrounds. Smith and Wilhelm found that even though many of the boys they interviewed valued school, they rejected reading because they saw it as something they had to do for no immediately apparent reason. Even when teachers told them that they needed to pass their classes in order to go to college, for example, the boys still failed to see the importance of that because college, to them, was far off in the future. What mattered most to them was what was happening right then and there. When the boys talked about the experiences with reading that they enjoyed, these were connected to their lives in some concrete way. One boy complained to the researchers that his girlfriend read romances. When asked what was wrong with that, the boy replied, "You can't fix a toilet when you're done." ${ }^{11}$

Smith and Wilhelm also found that the boys tended to look for a sense of "flow" in their activities. The state of flow, originally conceived by psychologist Mihaly Csikszentmihalyi, is one "in which people are so involved in an activity that nothing else seems to matter. ${ }^{12}$ Csikszentmihalyi used eight principles to define that experience, which Smith and Wilhelm have combined into four: a sense of control and competence, a challenge that requires an appropriate level of skill, clear goals and feedback, and a focus on the immediate experience.

Most of the boys Smith and Wilhelm studied experienced flow outside of school, often when they were playing video games. This was in part because
they felt like they had control over the activity and its outcome, the researchers note. In school, however, many of the boys reported that they never felt in control and that this alienated them from their studies. For example, some felt they never really mastered one activity before they were asked to move on to another one. Wilhelm says that "the very structure of school is contradictory to the elements of flow" and that this circumstance has an effect on the way boys see themselves in connection to learning.

## MAKING CONNECTIONS DIFFERENTLY

The girl reading the romance novel in the earlier anecdote was obviously not expecting it to have a practical, immediate application. Researchers have noted that girls are generally able to stick to subjects for longer periods of time and are less distracted from them than boys. They also are far less likely than boys to be diagnosed with attention-deficit/hyperactivity disorder ( $\mathrm{AD} / \mathrm{HD}$ ). Girls are therefore more willing to be patient with a lesson even if it doesn't pertain to their everyday lives or seem to give them immediate benefits. This focus seems to give girls at least one kind of edge in school.

But there may be other aspects of schooling that run counter to girls' identities as learners, say researchers Frances A. Maher and Janie Victoria Ward, in their book Gender and Teaching. ${ }^{13}$ They say the teaching styles prevalent in too many schools are based on competition, thus making them less conducive to girls' success. "Pedagogies built on competitive hand waving silence the quieter students, particularly the girls," Maher and Ward write, because often it is boys who do most of the hand waving. ${ }^{14}$ Girls are able to garner more information and make more connections from discussion than from trying to find the absolute right answer, they note.

Not only do girls have the problem of trying to make their way through a competitive school environment, but entering puberty also pulls them in a different direction. For example, Gilligan has found that the pressures of trying to succeed academically by speaking up, but also trying to be attractive to boys by staying quiet, can cause girls to silence themselves in school. Citing Gilligan, Maher and Ward note, "Beginning with puberty, girls 'fall silent' as they try to meet the contradictory expectations of pleasing orhers, accommodating male standards for female attractiveness and docility, and yet succeeding academically." ${ }^{15}$

Interestingly, however, even in some single-sex classrooms girls still remain relatively quiet. Kathryn Herr, an associate professor of education at
the University of New Mexico in Albuquerque, spent the 1999-2000 school year studying 1,100 students-boys and girls-who were being educated in single-sex classrooms at a public middle school in Long Beach, California. In many of the girls-only classes, just a few of the girls spoke up and took leadership roles, says Herr. Some teachers thought these classes were successful because there were no disruptions. But "a quiet classroom is not necessarily the ideal, and we can't equate that with an equitable education," Herr says. Perhaps the pressure of still being in the same school, and thus the same social setting, as boys caused the girls to stay silent in class. Or perhaps the teaching methods used in those classes did not encourage group discussion. Whatever the reason, it is obvious that just excluding young men did not in and of itself cause girls to speak out more.

Interestingly, while taking boys out of the classroom may not have done much to bring out the voices of girls, teaching boys separately did seem to have some benefits, Herr found. The boys she studied who were educated in single-sex classes felt that they could take more risks in class and in making friends. They reported that it felt like a release to be in classes without girls and said that they asked questions they might not have felt comfortable asking if girls had been in the room. Thus, boys were better able to express their learner identities, including being able to speak freely and take risks, in classes that did not include girls.

## A WORD OF CAUTION

Of course, as every teacher knows, each student is an individual. Although there are many similarities that researchers have observed among students with certain defining characteristics, such as gender, it is dangerous to oversimplify the issue. Not all boys are alike, nor are all girls alike. Wilhelm and Smith claim that the battle lines in the gender war are misdrawn because there are boys and girls on both sides. They write, "Though people often must necessarily think in generalizations and categories, these are always too simple. Many girls excel in math; many boys love to read. We categorize for the sake of argument, clarity, and for ease of thinking, but sometimes our categories cause problems and keep us from seeing the students before us." ${ }^{16}$

While it is important to note that young women are generally less likely than boys to speak up in class and tend to perform better than boys in reading and writing, that does not mean that every adolescent girl fits into that category. Such assumptions would surely fail those girls who need extra
help with literacy skills and falsely define the ones who are natural leaders. Likewise, researchers note that boys tend to respond better to hands-on learning opportunities and perform better in science and mathematics. That does not mean, however, that in science and math classes one should assume that every boy will perform well. Finally, the fact that boys in Herr's study felt freer to take risks does nor mean that single-sex classes are a panacea or that they enable all boys and girls to express themselves fully as learners in school.

A struggling student needs extra attention, regardless of gender. What this research tells us, however, is that if a student is not achieving to her or his full potential, educators might consider the ways in which issues related to gender may play a part.

## NOTES

1. Carol Gilligan, In a Different Voice: Psychological Theory and Women's Development (Cambridge, MA: Harvard University Press, 1982).
2. One of several works in which Gilligan reports these findings is a book she coauthored with Lyn Mikel Brown, Meeting at the Crossroads: Women's Psychology and Girls' Development (Cambridge, MA: Harvard University Press, 1992).
3. American Association of University Women, How Schools Shortchange Girls: The AAUW Report. A Study of Major Findings on Girls and Education, research by the Wellesley College Center for Research on Women (Washington, DC: AAUW Educational Foundation, 1992).
4. National Assessment of Educational Progress (NAEP) 2000 Mathematics Assessments (Washington, DC: National Center for Education Statistics).
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6. Organisation for Economic Co-operation and Development (OECD), Knowledge and Skills for Life: First Results from PISA 2000 (Paris: OECD, 2001).
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8. Michael Gurian, Boys and Girls Learn Differently! A Guide for Teachers and Parents (San Francisco: Jossey-Bass, 2001).
9. Susan Levine, Janellen Huttenlocher, Amy Taylor, and Adela Langrock, "Early Sex Differences in Spatial Skill," Journal of Developmental Psychology 35, no. 4 (November 2002): 940-949.
10. Quotations in this chapter are from interviews with the researchers, except where noted.
11. Michael W. Smith and Jeffrey D. Wilhelm, Reading Don't Fix No Cherys: Literacy in the Lives of Young Men (Portsmouth, NH: Heinemann, 2002).
12. Smith and Wilhelm, Reading, 28.
13. Frances A. Maher and Janie Victoria Ward, Gender and Teaching (Mahwah, NJ: Lawrence Erlbaum Associates, 2002).
14. Maher and Ward, Gender and Teaching, 93.
15. Maher and Ward, Gender and Teaching, 93.
16. Smith and Wilhelm, Reading, 9.

## Profile

## Writing Their Way Through: Adolescent Girls and Note Writing

## THERESA SQUIRES COLLINS

Many researchers in the latter part of the twentieth century lamented what they saw as the neglect of the adolescent female. Girls, they wrote, were silencing themselves, drowning in a girl-hating culture, and generally being forgotten in schools. ${ }^{1}$ By contrast, the advent of the twenty-first century has produced a new crop of writers who classify girls in a different way, based on the allegedly aggressive social habits they exhibit in school. Instead of silenced and forgotten wallflowers, they see overly aggressive young women manipulating one another for social status.

These conflicting views of girls give us reason to step back from overly simplistic characterizations of their behavior and experiences. While it may be tempting to lump girls into categories such as "queen bee," "wannabe," or "alpha girl," the lives of girls defy labeling in many ways. ${ }^{2}$ One way girls express who they are, beyond the facile labels, is through note writing. As a teacher-researcher studying the note-writing practices of adolescent girls, I have come to appreciate this activity, which most teachers and other adults find frivolous, as one that helps girls navigate the academic and social changes that are vital to their developing sense of self at this important juncture in their lives. ${ }^{3}$

School is the place where the personal meets the academic. Obviously, course work is of paramount importance in an adolescent's school life, but because middle and high schools are also places where girls develop into young women, the impact of the hundreds of social interactions they have during the course of any day cannot be ignored. Many girls make space for their friendships and for other concerns in their busy lives by writing notes to each other in class. Adolescent boys also write notes occasionally, though the purpose of their writing is almost always in response to a note received from a female acquaintance or girlfriend.

Though many of the girls who participated in my study admitted that they feel compelled to write a note to a friend as soon as they have finished reading one, few believed that writing notes interfered with their class work. Instead, many felt that writing a note alleviated the social tension they were experiencing and allowed them to regain focus. In this way, girls negotiate the reality of how social life and academic life are intertwined. As one of my respondents explained, "If your mind's not there [in class], it'll do no good to try and con-centrate-write it [the note] and get back to class with the conflict off your mind; at least you know that the person will know your feelings, and then you can do your work." Another concurred, saying simply, "Either way, it's on your mind, so you might as well write about it and get it off."

Note writing, in addition to freeing up cognitive space, can be a key factor in helping girls discover the primacy of relationships as they make sense of who they are and what's important to them. Notes from friends are, as one of my respondents said, a "casual reminder of everyday life . . . little things that most people wouldn't think of but that make you feel good when you read them in a note." For example, in a note to her friend Kate about planning a disruptive "revolution" in French class, Jessica writes a friendly postscript: "Sorry, but I have to break the military talk to inform you that you look cute today." The note is simultaneously mischievous and supportive, subversive and sweet, and, as in most cases, is concerned with the maintenance of the friendship.
Conversely, notes can also be a place where girls work out their feelings about the difficult life transitions that take place as they mature, including ending friendships that have run their course. This kind of conflict is illustrated in the following excerpt from one respondent's note to a longtime friend:

For me I entirely believe that absence makes the heart grow fonder and I want to be able to say that that was true in our case. Time and timing is everything to me. And I need time because now is not our time. Also, I think you need to figure out why you are after my friendship and many other ones and figure out if the reasons are valid. Also, please figure out what would actually make you truly happy and work to achieve that. .. . Whatever happens I will always love you, I will never forget you, and I hope that I never can say, "I don't know Kat anymore."

Notes also can be an outlet through which girls discover different parts of themselves. They may draw on artistic sensibilities, experiment with emer-
gent voices, play with conventions of style, and defy the oppressions of the classroom. For example, as girls compose letters to one another, they sometimes use writing techniques that are more sophisticated than any they've used in a required paper; their notes contain passages that are vivid and heartbreaking as well as vicious and hilarious. One girl in my study prided herself on her "Technicolor notes," written in several colors of ink and enjoyed for their cleverness by friends throughout the day. Jessica and Kate created an elaborate cartoon/story series in their notes that chronicled the trials and tribulations of a beleaguered high school girl.

In a particularly poetic exchange, eighth graders Fern and Jo-Jo gave each other-without comment or explanation of subject matter-photographs they had taken. Each girl then pasted the photographs into a notebook and wrote a poem in response. The resulting two books of their original poetry, they said, reflect their creativity as well as "where we were mentally that year." Many of the photographs are of singular images that suggest solitude or a desire for calm, such as a bird in flight or the Lake Michigan shoreline at dusk. The girls have kept these books now for four years and look back at them from time to time to remember how far they've come since their middle school years. Having separated as friends in the transition between middle and high school, the two girls have recently reconnected as friends and as budding poets.

Adolescent girls' notes reveal that they are coping together with stresses and issues that, in very significant ways, are central to their middle and high school experiences. This is not to say that notes take care of every emotional and social need that girls have, or that girls do not need caring adults in their lives to assist with difficult times. Still, note writing shows girls' spirit, independence, and solidarity in the face of the difficult transition of adolescence.

Girls obviously do not think about their identity development in the same way that adult theorists do, but their notes reveal that they are thinking about more than gossip. The act of note writing is prevalent within class-rooms-almost so common that it becomes invisible. We need to take seriously the things that girls do independently in school to help them navigate through the minefield of cliques, tests, passing periods, and social traumas.
"They are our food," remarked a girl I interviewed. Notes give their readers "a chance to know that someone was thinking about you that day," as one student put it, and they can assure a girl that she will make it through a particularly rabid bout with the rumor mill. They praise good grades, a goal scored, and a date made, and in so doing they help girls foster one another's positive self-esteem. Notes are the arbiters of disagreements between
friends and enemies alike. They are colorful and creative, coded in case they fall into enemy hands. More often than not, these messages written on $81 / 2 \mathrm{x}$ 11 -inch notebook paper are binding missives that chronicle an adolescent girl's most meaningful thoughts, feelings, and relationships within the context of the school day.

## NOTES

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2. Rachel Simmons, Odd Girl Out: The Hidden Culture of Aggression in Girls (New York: Harcourt, 2002); Rosalind Wiseman, Queen Bees and Wannabes: Helping Your Daughter Survive Cliques, Gossip, Boyfriends, and Other Realities of Adolescence (New York: Crown, 2002)
3. For my 1995 master's thesis at Northwestern University ("Handwritten with Care: A Study of Girls' Notewriting in School"), I conducted an ethnographic study of this practice among high school girls at Evanston Township (Illinois) High School. Though the sample of girls whose interviews were used in the paper numbered three, I conducted group interviews throughout the year and collected, read, and categorized more than two thousand notes. All quotes from interviews and notes come from my thesis. With the exception of Jessica and Kate, who granted permission to use their names, all other names were omitted or changed.
