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Op-Ed Columnist

Is Chemistry Destiny?

By DAVID BROOKS

Over the past several weeks, I've found I can change the conversation at any social gathering by mentioning Louann Brizendine's book, "The Female Brain." Brizendine is a neuropsychiatrist and the founder of the Women's and Teen Girls' Mood and Hormone Clinic in San Francisco. She's written a breezy — maybe too breezy — summary of hundreds of studies on the neurological differences between men and women.

All human beings, she writes, start out with a brain that looks female. But around the eighth week in the womb, testosterone surges through male brains, killing cells in some regions (communications) and growing cells in others (sex and aggression).

By the time they are three months old, girls are, on average, much better at making eye contact with other people and picking up information from faces. During play, girls look back at their mothers, on average, 10 to 20 times more than boys, to check for emotional signals. Girls can also, on average, hear a broader range of sounds in the human voice, and can better discern changes in tone.

Later, girls are much more likely to use sentences that begin with "Let's ..." while playing: Let's do this or Let's do that. They are more likely to take turns. Brizendine argues that of course culture and environment powerfully shape behavior, but brain structure and chemistry incline girls to pursue certain goals: "To forge connection, to create community, and to organize and orchestrate a girl's world so that she's at the center of it."

During adolescence, the female brain is washed in estrogen. Female teenagers, in general, experience an intense desire for social connection, which releases near-orgasmic rushes of oxytocin in the brain. They are, on average, more sensitive to stress (by age 15, girls are twice as likely to suffer from depression). The male brain, meanwhile, is producing 10 times more testosterone than the female brain, meaning the male sex drive is, on average, much greater.

Brizendine then describes waves of hormonal activity as women age. Female brains vary with the seasons of life much more than male brains. During menopause, for example, estrogen levels drop. Personalities can change as some women derive less pleasure from

nurturing and more from independence. Women initiate 65 percent of divorces after age 50.

These sorts of stark sex differences were once highly controversial, and not fit for polite conversation. And some feminists still argue that talking about biological differences between the sexes is akin to talking about biological differences between the races. But Brizendine's feminist bona fides are unquestionable. And in my mostly liberal urban circle — and among this book's reviewers — almost everybody takes big biological differences as a matter of course.

Without too much debate or even awareness, there has been a gigantic shift in how people think human behavior is formed.

Consider all the theories put forward to explain personality. Freud argued that early family experiences relating to defecation and genital stimulation created unconscious states that influenced behavior through life. In the 1950's, the common view was that humans begin as nearly blank slates and that behavior is learned through stimulus and response. Over the ages, thinkers have argued that humans are divided between passion and reason, or between the angelic and the demonic.

But now the prevailing view is that brain patterns were established during the millenniums when humans were hunters and gatherers, and we live with the consequences.

Now, it is generally believed, our behavior is powerfully influenced by genes and hormones. Our temperaments are shaped by whether we happened to be born with the right mix of chemicals.

Consciousness has come to be seen as this relatively weak driver, riding atop an organ, the brain, it scarcely understands. When we read that male voles with longer vasopressin genes are more likely to remain monogamous, it seems plausible that so fundamental a quality could be tied to some discrete bit of biology.

This shift in how we see human behavior is bound to have huge effects. Freudianism encouraged people to think about destroying inhibitions. This new understanding both validates ancient stereotypes about the sexes, and fuzzes up moral judgments about human responsibility (biology inclines individuals toward certain virtues and vices).

Once radicals dreamed of new ways of living, but now happiness seems to consist of living in harmony with the patterns that nature and evolution laid down long, long ago.