

Baby Brain and Mommy Brain — A Dynamic Pas de Deux

—By *Noelle Robbins*

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Louann Brizendine, MD

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From our earliest moments, months before we are born, our brains are busy growing connections and pathways that will help determine who we are. With our genetic codes in place, awash in a sea of hormones as we rock in the dark of our mothers' wombs, we become boys or girls, male or female.

And for those of us born female, and who become mothers, a delicate dance unfolds, binding us not only to our mothers and daughters, but to generations past and generations to come. It is this dance that author, researcher and physician Louann Brizendine explores in her newly released book, *The Female Brain*.

Brizendine, a neuropsychiatrist at the University of California, San Francisco and the founder of the Women's and Teen Girls' Mood and Hormone Clinic, has long been intrigued with what makes us unique as females, and how early the process starts that sets us on our life-long path of biological and social identity.

According to scientific findings detailed in an engaging, accessible fashion in *The Female Brain*, the process starts very early indeed. In fact, it is during the first 18 weeks of pregnancy that waves of hormones determine whether a baby's brain becomes male or female. "Until eight weeks old, every fetal brain looks female." And then, in male babies, a huge flow of testosterone actually kills off brain cells in the communication centers and fosters growth of cells in the parts of the brain that support aggression and sex. The female baby brain, absent this male hormone bath, "sprouts more connections in the communication centers and areas that process emotion."

Brizendine clearly lays out the facts. "Although we were taught that sex differences mostly came from how your parents raised you as a boy or girl — we now know that's not completely true," she writes. "There is no unisex brain. Girls arrive already wired as girls, and boys arrive already wired as boys."

In conversation, Brizendine acknowledges that this discovery took her by surprise. As an ardent feminist, she knew that her findings amounted to "feminist heresy" by suggesting real biological differences between males and females in utero. Men and women are not equal when it comes to brain biology and Brizendine sees this as a good thing. "Where once I felt the need to overthrow oppressive male forces in society, I now see a rich woven tapestry and interaction between male and female," she says. "When we see reality, we see that society and culture are built around biology."

Brizendine emphasizes in her book that awareness of how baby girls' brains are wired differently than boys' brains before birth, and the impact that wiring has on growth and development, can play a crucial role in how we can raise our next female generations to succeed in a biologically structured world.

For example, she describes how baby girls "come out wired for mutual gazing. Over the first three months of life, a baby girl's skills in eye contact and mutual face gazing will increase by over 400 percent, whereas facial gazing skills in boys during this time will not increase at all. Baby girls are born interested in emotional expression." From day one, baby girls are designed to pick up and process subtle emotional cues that confirm their worthiness and lovability and build empathy skills.

Equally important, according to Brizendine, is the special interaction between baby girls and their mothers, an interaction that starts with the birth of the "mommy brain." For as baby girls are busy in utero growing female brains, mommy brains are also undergoing rapid hormone-triggered changes which prepare them for their new roles. "Throughout pregnancy, a woman's brain is marinated in neurohormones manufactured by her fetus and placenta." The result is a mellow but aware mommy brain attuned to safety and nutrition, not necessarily business meetings and reports.

Immediately following birth, mommy brains kick into high gear with enhanced senses and protective instincts. Even adoptive mothers, with high levels of skin-to-skin contact with their babies, can experience these same hormonal surges that support the

mother/baby bond, and the same foggy mental state that can hamper effectiveness at work.

Brizendine cautions new mommies about letting professional performance concerns create stress which not only can interfere with mommy/baby girl bonding, but can affect the ability of a little girl to mother her own little girl. According to her research, baby girls resonate more easily with their mothers, responding to efforts to soothe and calm crying and fussy behavior. This can be a good thing, or a little scary, when Brizendine goes on to note that "because of her ability to observe emotional cues a girl actually incorporates her mother's nervous system into her own," and that "the 'nervous system environment' a girl absorbs during the first 24 months becomes a view of reality that will affect her for the rest of her life." Talk about guilt inducing.

And Brizendine knows about this guilt first hand. "This book was very painful to write," she says, "as I relived my own pregnancy and baby-rearing experiences." She knows on a deeply personal level the conflict that can arise between the "profound joy, pleasure and intense attachment" many women feel with their newborns and the desire to return to the work environment, "which actually may be more relaxing with its structure and sense of control." She has been there herself, and has conducted workshops with many new moms who, perceiving themselves as competent and organized businesswomen, are completely thrown for a loop by their new responsibilities.

But never fear. Brizendine is quick to reassure new moms. "While stress can definitely be biologically transmitted from mommy to baby," she says, "three years of a low-stress family life can be a great healer." Her words of advice for businesswomen contemplating or engaged in the mommy/baby dance? Nurture your new mommy brain and your new baby's, "by creating a predictable and efficient environment at work and home with a good support system." Then relax, and enjoy the mommy/baby pas de deux.