You know the expression, “When you were only a twinkle in your parents’ eyes.” The phrase conjures up the happiness of loving parents who truly want to conceive a child. It turns out it is also a phrase that sums up the latest genetic research suggesting that parents should cultivate that twinkle in the months before they conceive a child. That growth-promoting awareness and intention can produce a smarter, healthier, happier baby.
conception. In the final stages of egg and sperm maturation, a process called genomic imprinting adjusts the activity of specific groups of genes that will shape the character of the child yet to be conceived. Research suggests that what is going on in the lives of the parents during the process of genomic imprinting has a profound influence on the mind and body of their child—a scary thought, given how unprepared most people are to have a baby. Thomas R. Verny writes in Pre-Parenting: Nurturing Your Child from Conception, “It makes a difference whether we are conceived in love, haste or hate, and whether a mother wants to be pregnant...parents do better when they live in a calm and stable environment free of addictions and supported by family and friends.” Interestingly, aboriginal cultures have recognized the influence of the conception environment for millennia. Prior to conceiving a child, couples ceremonially purify their minds and bodies.

Once the child is conceived, an impressive body of research is documenting how important parents’ attitudes are in the development of the fetus. Again Verny writes: “In fact, the great weight of the scientific evidence that has emerged over the last decade demands that we reevaluate the mental and emotional abilities of unborn children. Awake or asleep, the studies show, they [unborn children] are constantly tuned in to their mother’s every action, thought and feeling. From the moment of conception, the experience in the womb shapes the brain and lays the groundwork for personality, emotional temperament, and the power of higher thought.”

Now is the time to stress that the New Biology is not a return to the old days of blaming mothers for every ailment that medicine didn’t understand—from schizophrenia to autism. Mothers and fathers are in the conception and pregnancy business together, even though it is the mother who carries the child in her womb. What the father does profoundly affects the mother, which in turn affects the developing child. For example, if the father leaves and the mother starts questioning her own ability to survive, his leaving profoundly changes the interaction between the mother and the unborn baby. Similarly, societal factors, such as lack of employment, housing and healthcare, or endless wars that pull fathers into the military, can affect the parents, and thus the developing child.

The essence of conscious parenting is that both mothers and fathers have important responsibilities for fostering healthy, intelligent, productive, joy-filled children. We surely cannot blame ourselves, nor our parents, for failures in our own or our children’s lives. Science has kept our attention focused on the notion of genetic determinism, leaving us ignorant about the influence beliefs have on our lives—and more important, how our behaviors and attitudes program the lives of our children.

Most obstetricians are also still uneducated about the importance of parental attitudes in the
development of the baby. According to the notion of genetic determinism that they were steeped in as medical students, fetal development is mechanically controlled by genes with little additional contribution from the mother. Consequently, ob-gyns are only concerned with a few maternal prenatal issues: Is she eating well? Taking vitamins? Does she exercise regularly? Those questions focus on what they believe is the mother’s principal role, the provision of nutrients to be used by the genetically programmed fetus.

But the developing child receives far more than nutrients from the mother’s blood. Along with nutrients, the fetus absorbs excess glucose if the mother is diabetic, and excess cortisol and other fight-or-flight hormones if the mother is chronically stressed. Research now offers insights into how the system works. If a mother is under stress, she activates her HPA (hypothalamic-pituitary-adrenal) axis, which provides fight-or-flight responses in a threatening environment.

Stress hormones prepare the body to engage in a protection response. Once these maternal signals enter the fetal bloodstream, they affect the same target tissues and organs in the fetus as they did in the mother. In stressful environments, fetal blood preferentially flows to the muscles and hindbrain, providing nutritional requirements needed by the arms and legs, and by the region of the brain responsible for lifesaving reflex behavior. In supporting the function of the protection-related systems, blood flow is shunted from the viscera organs and stress hormones suppress forebrain function. The development of fetal tissue and organs is proportional to both the amount of blood they receive and the function they provide. When passing through the placenta, the hormones of a mother experiencing chronic stress will profoundly alter the distribution of blood flow in her fetus and change the character of her developing child’s physiology.

At the University of Melbourne, E. Marilyn Wintour’s research on pregnant sheep, which are physiologically quite similar to humans, has found that prenatal exposure to cortisol eventually leads to high blood pressure. Fetal cortisol levels play a very important regulatory role in the development of the kidney’s filtering units, the nephrons. A nephron’s cells are intimately involved with regulating the body’s salt balance, and consequently are important in controlling blood pressure. Excess cortisol absorbed from a stressed mother modifies fetal nephron formation. An additional effect of excess cortisol is that it simultaneously switches the mother’s and the fetus’s system from a growth state to a protection posture. As a result, the growth-inhibiting effect of excess cortisol in the womb causes the babies to be born smaller.

Suboptimal conditions in the womb that lead to low birth-weight babies have been linked to a number of adult ailments that Peter W. Nathanielsz outlines in his book Life In The Womb.
including diabetes, heart disease and obesity. For example, Dr. David Barker of England’s University of Southampton has found that a male who weighs less than 5.5 pounds at birth has a 50 percent greater chance of dying of heart disease than one with a higher birth weight. Harvard researchers have found that women who weigh less than 5.5 pounds at birth have a 23 percent higher risk of cardiovascular disease than women born heavier. And David Leon of the London School of Hygiene and Tropical Medicine has found that diabetes is three times more common in 60-year-old men who were small and thin at birth.

The new focus on the influences of the prenatal environment extends to the study of IQ, which genetic determinists and racists once linked simply to genes. But in 1997, Bernie Devlin, a professor of psychiatry at the University of Pittsburgh School of Medicine, carefully analyzed 212 earlier studies that compared the IQs of twins, siblings, and parents and their children. He concluded that genes account for only 48 percent of the factors that determine IQ. And when the synergistic effects of mingling the mother and father’s genes are factored in, the true inherited component of intelligence plummets even further, to 34 percent.

Devlin, on the other hand, found that conditions during prenatal development significantly impact IQ. He reveals that up to 51 percent of a child’s potential intelligence is controlled by environmental factors. Previous studies had already found that drinking or smoking during pregnancy can cause decreased IQ in children, as can exposure to lead in the womb. The lesson for people who want to be parents is that you can radically shortchange the intelligence of your child simply by the way you approach pregnancy. These IQ changes are not accidents; they are directly linked to altered blood flow in a stressed brain.

In my lectures on conscious parenting, I cite research, but I also show a video from an Italian conscious parenting organization, Associazione Nazionale Educazione Prenatale, which graphically illustrates the interdependent relationship between parents and their unborn child. In this video, a mother and father engage in a loud argument while the woman is undergoing a sonogram. You can vividly see the fetus jump when the argument starts. The startled fetus arches its body and jumps up, as if it were on a trampoline, when the argument is punctuated with the shattering of glass. The power of modern technology, in the form of a sonogram, helps to lay to rest the myth that the unborn child is not a sophisticated enough organism to react to anything other than its nutritional environment.
Nature’s Head Start Program

You may be wondering why evolution would provide such a system for fetal development that seems so fraught with peril and is so dependent on the environment of the parents. Actually, it’s an ingenious system that helps ensure the survival of your offspring. Eventually, the child is going to find itself in the same environment as its parents. Information acquired from the parents’ perception of their environment transits the placenta and primes the prenate’s physiology, preparing it to more effectively deal with future exigencies that will be encountered after birth. Nature is simply preparing that child to best survive in that environment. However, armed with the latest science, parents now have a choice. They can carefully reprogram their limiting beliefs about life before they bring a child into their world.

The importance of parental programming undermines the notion that our traits, both positive and negative, are fully determined by our genes. As we have seen, genes are shaped, guided and tailored by environmental learning experiences. We have all been led to believe that artistic, athletic and intellectual prowess are traits simply passed on by genes. But no matter how “good” one’s genes may be, if an individual’s nurture experiences are fraught with abuse, neglect or misperceptions, the realization of the genes’ potentials will be sabotaged. Liza Minelli acquired her genes from her superstar mother, Judy Garland, and her father, filmmaker Vincent Minelli. Liza’s career, the heights of her stardom and the lows of her personal life, are scripts that were played out by her parents and downloaded into her subconscious mind. If Liza had the same genes, but was raised by a nurturing Pennsylvania Dutch farming family, that environment would have epigenetically triggered a different selection of genes. The genes that enabled her to pursue a successful entertainment career would have likely been masked or inhibited by the cultural demands of her agrarian community.

Conscious Mothering and Fathering

I used to close my public lectures with the admonition that we are personally responsible for everything in our lives. Such a closure did not make me popular with the audience. That responsibility was too much for many people to accept. After one lecture, an older woman in the audience was so distressed by my conclusion that she brought her husband backstage and in tears vehemently contested my conclusion. She did not want any part of some of the tragedies she had experienced. This woman convinced me that my summary conclusion had to be modified. I realized that I didn’t want to contribute to foisting blame and guilt on any individual. As a society, we are too apt to wallow in guilt or scapegoat others for our problems. As we gain insights over a lifetime, we become better equipped to take charge of our lives. After some deliberation, this woman from the audience happily accepted the following resolution: You are personally responsible for everything in your life, once you become aware that you are personally responsible for everything in your life. One cannot be “guilty” of being a poor parent
unless one is already aware of the above-described information and disregards it. Once you
become aware of this information, you can begin to apply it to reprogram your behavior.

And while we’re on the subject of myths about parenting, it is absolutely not true that you are
the same parent for all of your children. Your second child is not a clone of the first child. The
same things are not happening in your world that happened when the first child was born. As I
said above, I once thought that I was the same parent for my first child as I was for my very
different second child. But when I analyzed my parenting, I found that was not true. When my
first child was born, I was at the beginning of my graduate school training, which was for me a
difficult transition fraught with a high workload accompanied by high insecurity. By the time my
second daughter was born, I was a more confident, more accomplished research scientist ready
to start my academic career. I had more time and more psychic energy to parent my second
child and to better parent my first daughter, who was now a toddler.

Another myth I’d like to address is that infants need lots of stimulation, in the form of
black-and-white flash cards or other learning tools marketed to parents to increase the
intelligence of their children. Michael Mendizza and Joseph Chilton Pearce’s inspiring book,
Magical Parent— Magical Child, makes it clear that play, not programming, is the key to
optimizing the learning and performance of infants and children. Children need parents who can
playfully foster the curiosity, creativity and wonder that accompanies their children into the
world.

Obviously, what humans need is nurture, in the form of love and the ability to observe older
humans going about their everyday lives. When babies in orphanages, for example, are kept in
crib and only provided with food, but not one-on-one smiles and hugs, they develop
long-lasting developmental problems. One study of Romanian orphans by Mary Carlson, a
neurobiologist at Harvard Medical School, concluded that the lack of touching and attention in
Romanian orphanages and poor-quality day-care centers stunted the children’s growth and
adversely affected their behavior. Carlson, who studied 60 Romanian children from a few
months to three years of age, measured their cortisol levels by analyzing samples of their saliva.
The more stressed a child was, as determined by the higher than normal levels of cortisol in its
blood, the poorer the outcome for the child.

Carlson and others have also done research on monkeys and rats, demonstrating crucial links
among touch, the secretion of the stress hormone cortisol, and social development. Studies by
James W. Prescott, former director of the National Institutes of Health’s section on Human
Health and Child Development, revealed that newborn monkeys deprived of physical contact
with their mothers or social contact with others develop abnormal stress profiles and become
violent sociopaths.

He followed up these studies with an assessment of human cultures based on how they raise their children. He found that if a society physically held and loved its children and did not repress sexuality, that culture was peaceful. Peaceful cultures feature parents who maintain extensive physical contact with their children, such as carrying their babies on their chests and backs throughout the day. In contrast, societies that deprive their infants, children and adolescents of extensive touch are inevitably violent in nature. One of the differences between populations is that many of the children not receiving touch suffer from somatosensory affective disorder. This disorder is characterized by an inability to physiologically suppress surging levels of stress hormones, a precursor to violent episodes.

These findings provide insight into the violence that pervades the United States. Rather than endorsing physical closeness, our current medical and psychological practices often discourage it, from the unnatural intervention of medical doctors in the natural process of birthing (for example, separating the neonate for extensive periods from the parents into distant nurseries) to advising parents to not respond to their babies’ cries for fear of spoiling them. Such practices, presumably based upon science, undoubtedly contribute to the violence in our civilization. The research regarding touch and its relationship to violence is described in full online at violence.de.

But what about the Romanian children who come out of deprived backgrounds and become what one researcher called “the resilient wonders”? Why do some children thrive despite their backgrounds? Because they have “better” genes? By now you know that I don’t believe that. More likely, the birth parents of these resilient wonders provided a more nurturing pre- and perinatal environment, as well as good nutrition at crucial points in the child’s development.

The lesson for adoptive parents is that they should not pretend their children’s lives began when they came into their new surroundings. Their children may have already been programmed by their birth parents with a belief that they are unwanted or unlovable. If more fortunate, they may have, at some crucial age in their development, received positive, life-affirming messages from their caretakers. If adoptive parents are not aware of pre- and perinatal programming, they may not deal realistically with post-adoption issues. They may not realize that their children did not come to them as a “blank slate” any more than newborns come into the world as blank slates, unaffected by their nine months in their mothers’ womb. Better to recognize that programming and to work, if necessary, to change it.
For adoptive and non-adoptive parents alike, the message is clear: Your children’s genes reflect only their potential, not their destiny. It is up to you to provide the environment that allows them to develop to their highest potential.

Notice that I do not say that it is up to parents to read lots of parenting books. I’ve met lots of people who are intellectually attracted to the ideas I present in my books. But intellectual interest is not enough. I tried that myself. I was intellectually aware of everything in my book The Biology of Belief, but before I made the effort to change, it made no impact on my life. If you simply read my books and think that your life and your children’s lives will change, you’re doing the equivalent of accepting the latest pharmaceutical pill thinking it will “fix” everything. No one is fixed until they make the effort to change.

Here is my challenge to you. Let go of unfounded fears and take care not to implant unnecessary fears and limiting beliefs in your children’s subconscious minds. Most of all, do not accept the fatalistic message of genetic determinism. You can help your children reach their potential and you can change your personal life. You are not “stuck” with your genes.

Take heed of the growth and protection lessons from cells and shift your lives into growth whenever possible. And remember that for human beings, the most potent growth-promoter is not the fanciest school, the biggest toy or the highest-paying job. Long before cell biology and studies of children in orphanages, conscious parents and seers like Rumi knew that for human babies and adults, the best promoter of growth is love.
The Twinkle in Your Parents' Eyes: Conscious Conception and Conscious Pregnancy

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