

# **Adoption and Genetics Why We Need to Pay Attention**

**by E. Kay Trimberger**

In 2006 I helped my twenty-five-year-old son Marco locate his biological families. I hoped this reunion would help him overcome some of the challenges he was wrestling with on his path to adulthood. I was thrilled when the families of both his white mother and his black father welcomed him. But I was unprepared for the discovery of how much he had in common with his birth parents: not just appearance, but also many personality traits, talents and problems.

When I adopted in 1981, I believed—like many social scientists and adoption professionals at that time—that nurture was everything, each infant a blank slate awaiting parental inscription. Even when Marco was a young child, I recognized that this idea was too simple, that my son had many attributes different from those of anyone else in my family. Still, I was surprised by these reunion revelations.

The adoption theory that I absorbed over the years never mentioned genetic heritage. Marco's difficulty finding his way as a young adult, I was told, might stem from a number of psychological factors. First was the loss of a birth mother with whom he had bonded in utero—a "primal wound" that supposedly made it difficult for him to bond with an adoptive mother. This idea never resonated with me, for we always had a close connection, with a lot of emotional and verbal sharing. Even in our most troubled times, we never lost contact, and he often confided in me. If anything, I saw him as too close to me, his only parent.

More compelling was the idea that he had been affected by the fetal environment of a stressed teenage birth mother, who probably drank and smoked. This, possibly combined with a weak sense of self deriving from a loss of ethnicity and family history, especially prevalent in the transracially adopted, might help to explain why he chose a life outside the mainstream, one that for many years involved heavy marijuana and alcohol use.

None of these theories, however, prepared me for the shock of finding that my son's birth mother and father—out of touch with each other for twenty-five years—had both struggled

with drug addiction throughout their lives. I was especially surprised because in my phone conversations and a visit with them, I had seen that they (like Marco) were charming and intelligent people. I learned, however, that substance abuse had taken a toll on their lives, especially the father's.

Reunion has helped Marco secure a stronger sense of self, especially since he found mixed-race heritage on both sides. His mother married another black man and had three more biracial children, and his father's extended family is multiracial as well. But reunion also added many complications to his life, as he has tried to reconcile the heritage of what he calls his "three families." Only gradually, through moving to Louisiana for six months and living first with his birth mother and then with his birth father, did Marco acknowledge their shared substance abuse problems. This realization led him for the first time to enter a recovery program, something his birth parents have never done. He sought to overcome the negative part of his birth heritage so he could build on the positive. Recently, I asked Marco how he was different from his birth father.

"Not a heck of a lot," he replied. "But I have better tools."

Marco's reunion experience led me to undertake my own search, a quest to understand genetics and how they might impact adoption. Perhaps I hoped to find that nature is everything, and that I could let go of my parental guilt for his problems. As a social scientist with little biological education, I began by looking at science journalism, then turned to the original research. I found that genetics alone could not explain either Marco's positive behavior or his addiction; genes provide only probabilistic propensities not predetermined programming. They provide probabilities for behavior and risk factors for disease, but do not indicate whether any individual will sustain a behavior or succumb to a particular mental or physical disorder, or how severe the disease will be. I did, however, gain important insights into adoptive parenting.

What I found astounded me: an interdisciplinary field that I'd never heard of called behavioral genetics. Though not focused

on adoption per se, many of its findings are based on the study of adoptees. 1 While I had not known about this field by name, I had heard of some of its more infamous practitioners, like those at the turn of the century who advocated selective breeding and forced sterilization. I also knew about a few more recent behavioral geneticists who published controversial studies of racial differences in I.Q. But now I discovered that behavioral genetics had gained legitimacy as a science for its studies on individual differences.

Behavioral genetics tries to explain how much of the variation among individuals' cognitive and psychological traits can be attributed to genetic heritage and how much is due to the environment. Their major methodology is a natural experiment which separates genetic heritage and environment by comparing the similarities and differences among adoptees, adoptive parents, and biological parents, and also between biological and adoptive siblings. Behavioral genetics, in addition, studies identical twins raised apart. In studies over a number of years in many different countries, researchers concur that identical twins separated at birth and adopted into different families, compared to identical twins raised together by their biological parents, are very similar on a number of measures of personality, temperament, intelligence, interests and susceptibility to physical and mental disease. Additionally, identical twins raised apart are more similar than fraternal twins raised together.

Even more interesting is a study published in 1997 by Robert Plomin and his colleagues at The Colorado Adoption Project. Their twenty-year longitudinal study of 245 adoptees, placed in the first few months of life, compared the children's cognitive abilities to those of their birth and adoptive parents. (Ninety percent of the biological parents and ninety-five percent of adoptive parents were white and from roughly equal social classes.) Before age five, the adoptees' cognitive skills correlated more with those in their adoptive families. As they matured, however, the adoptees' cognitive skills, including verbal ability, became more like those of their biological parents. The researchers concluded that "environmental transmission from parent to offspring has little effect on later cognitive ability." A number of other studies, including ones on transracial adoption, have replicated these results.

Behavioral geneticists have found that all behavioral traits, cognitive and psychological, normal and abnormal, have at least a modest genetic component. However, since genetic heritage accounts for only about fifty percent or less of the difference between individuals, there is plenty of room for an impact by the environment. We might think—and traditional psychology has taught us—that the family environment would be the most important other factor in explaining adult outcomes. But a number of studies have found that highly important in explaining behavioral variation are the experiences a child does not share with siblings, whether because of different prenatal conditions, distinct interactions between parents and the individual child or because of different experiences outside the home, many of them chosen by the child as she or he matures. This "non-shared environment" is partially influenced by genes. Science writer Matt Ridley in *The Agile Gene: How Nature Turns on Nurture*, explains: "The environment acts as a multiplier of small genetic differences, pushing athletic children toward the sports that reward them and pushing bright children toward the books that reward them." The non-shared environment also allows for unsystematic, idiosyncratic and serendipitous events during

the individual life course that cannot be predicted by research.

This is not to say that the family environment does not matter. Rather, the researchers conclude that nature acts through nurture; the care provided by parents (biological and adoptive) is necessary for the genetic heritage to express itself. But the nature of an adopted child also affects the nurture offered them. For example, a child's auditory sensitivity and the speed at which they can decode language affects how she or he experiences a parent's voice. Thus, nature and nurture are two inseparable sides of the same coin, which continues to spin throughout life.

Currently, behavioral genetics, combined with molecular genetics, tells us that behavior is influenced by many genes, each of which may have a large or small effect. Geneticists know that genes build proteins which influence the nervous system and the brain before leading to certain behaviors, but they haven't yet identified the exact mechanisms of this process. Gene expression is further complicated by new findings that genes can turn each other on or off, and are affected by environmental changes.

So why should we be interested in a field with a tainted past and controversial findings which look too complicated to provide useful knowledge in the near future? The answer is that the large, international pool of data about adoptees, and some of the research findings they have generated, can alter the way we think about and act in adoption.

Behavioral genetics indicates that the more we know about the birth families, the better parents we can be. Thomas Bouchard, a prominent behavioral geneticist, concluded in a 1990 article in *Science*: "If the correct formula is nature via nurture then intervention is not precluded even for highly heritable traits, but should be more effective when tailored to each specific child's talents and inclinations." For too long, the practice of closed adoption, and adoptive parents' fears about open adoption, have hindered our efforts to be effective parents.

Beth Hall, the director of Pact, provides an example of how knowledge about the birth family can help adoptive parents:

I remember a case once where a kid who was kind of a tinkerer was placed with a family that was very goal-oriented. The family felt that he was not motivated and not "trying" in school, but when we talked with his birth family, it turns out that many of them were engineers and web designers who had similar histories in school, but later bloomed into professional tinkerers if you will, who learned by doing. Once the adoptive parents were enlightened about this, they were able to take a different attitude and actually promote his tinkering. They stopped taking down his "projects" because it was "time to clean up."

When getting to know their child, non-adoptive parents have the advantage of access to extended family information. They may see a bit of themselves in their child—or they may recognize traits of a parent, sibling, or other relation. Adoptive parents often don't have this advantage. Parents who adopt internationally and others with no access to birth families must accept that their child is not a blank slate. All of us need to

discover our child's interests and abilities, and figure out how to parent to the child's strengths and weaknesses. We can provide them with "better tools," but behavioral genetics tells us we can't control whom they will become as adults.

Some may say that an emphasis on genetics could have harmful effects on adoption. Prospective parents, for example, might ask for genetic testing of the birth mother and/or the baby. Even if such testing were done, however, it would reveal only a potential, not an actual, asset or problem. I'm not advocating a return to the adoption policy of the 1940s through the 1960s which encouraged social workers to match adoptive parents with birth parents by race, looks, social class, and education. . Rather, I seek a new ideal of an extended family characterized by varying levels of contact between adoptive and birth families. Such extended families will not only have tremendous benefits for adoptees and birth parents, but will lead to more satisfied and effective adoptive parents, ones with fewer illusions and more knowledge.

As for me, I wish I could have had the courage to open my son's adoption sooner. If, during his teenage years, I had known about his birth parent's substance abuse, I would have been less anxious and confused, could have sought effective help, and taken a stronger stand against drugs and alcohol. This may or may not have made a difference for Marco, but meeting his half-brother at sixteen rather than at twenty-six could have been decisive. His brother, in all likelihood, would have told him ten years earlier what it was like growing up with addicted parents, and how it motivated him to never take a drink or use a drug. I wish too that at an earlier age, Marco could have known his birth uncle, who like me, and my father, has a Ph.D. Whether he chose to participate or not, Marco could have seen that some of his birth family are also in our "family business" of education.

Whatever my regrets, I'm fortunate that adoption brought me a loving son, whose differences from me have enriched my life.

Author's Note: Marco read this article before publication and gave me permission to share personal details. We are still close and both still struggling with how adoption, nature, and nurture have impacted our lives, our identities, and our relationship.

*E. Kay Trimberger was one of the volunteer leaders of Pact's reading and film group in 2009-2010. She is writing a memoir, Creole Son: An Adoptive Mother's Story of Nurture and Nature.*

Endnotes:

1 For those interested in further reading, you can request a short annotated bibliography on this topic from Pact at [info@pactadopt.org](mailto:info@pactadopt.org).