

8500 WORDS

Overlooking Mirror Neurons

Faye Snyder, PsyD

Imprinting

During undergraduate school in 1965 I took a course in cultural anthropology. My professor proposed that there was no such thing as human nature, because, as genetically programmed instincts died in the course of evolution, our special abilities to adapt catapulted us to the position of the dominant species. It is our ability as humans to adjust, unencumbered by any behavioral programming, which makes us so smart. Granted babies are born with some handy reflexes that quickly fade away, I have since come to look at all behavior as learned, and I believe it made me more perceptive than those who take behavior as inborn.

In graduate school we learned about Konrad Lorenz, who demonstrated that whoever is with a hatching will be “Mom”, including a human being, especially Lorenz, himself. Lorenz had a following of ducks, and he called this phenomenon “imprinting”. The instructions were not internal drives for mom, but a mental mechanism that accepted the first live body witnessing their entry into the world as mom. It seemed remarkable to me that the first impressions were so profound. It seemed astounding to me how much we belong to and need one another.

However, when I heard of Lorenz’s “imprinting”, I had already taken the term for my own and could not bring myself to relinquish such perfect nomenclature for my needs. I had formulated a theory of Imprinting based upon my own observations, which were somewhat related. In other words, forgetting the terminology, the phenomena still seemed related. We know the drive for human babies to attach is profound, but it is breakable, creating prematurely independent children. They can decide they don’t need anyone if they are hurt enough, even though that choice is self-defeating, because we all need relationships. I wonder what would happen to a duckling that lost its human or its mother goose. Would that loss impact the duck for life, as it would a human infant? Still are we talking about attachment or imprinting? Maybe both.

All human beings—attached or not—will emulate whoever is in our proximity, especially if they are our caregiver. In humans the drive to internalize relational experiences for a lifetime has been broadened beyond birth. Variations on our abilities to bond and emulate are functions of the brain’s ability to adapt to environment over instinct.

It may be that there are genetic instructions to set up the brain to learn. Those would be universal genetic instructions, applying to all humans. There may be genetic instructions to infants to attach, or it may be an inevitable lesson to every human that they need care by their person. Universal genetic instructions cannot be represented as the same phenomenon as specific and unique instructions that diversify human beings. I have noticed that people conflate these two alleged phenomena when speaking of the Nature Nurture Debate.

In my observations Imprinting is a process wherein a weaker person, especially an attached child, will internalize the *behavior* of the stronger person and will later reenact their behavior from the opposite end. Thus, I see the capacity to imprint as a genetic instruction, but the content of imprints will always be unique. Children grow up to treat their own children the way they have been treated. A mother cuddles her baby; later that baby grows to be a child who cuddles her doll in play; and even later, as a woman, she will cuddle her own child.

Thus, when the weaker person grows older and into power, they will be inclined to reenact the same behavior they experienced or witnessed from the other end. The victim of child abuse may become the perpetrator. Sometimes the rotation of power takes place in a shorter period of time. One

can even say that this is what's happening in an argument. As politically incorrect as this may sound, I have known numerous couples wherein one party is provocative until the other party explodes with violence. The provocateur collapses into a state of victimhood, and the exploding party ultimately enters into a state of remorse. The shrinking provocateur sees the remorse and is refueled with a drive to get even, becoming the provocateur again, and the cycle resumes. It was actually from observing this phenomenon that I realized the power of imprinting as related to power and powerlessness. Bullied children often become bullies in short order. Sometimes the process lasts over ages and generations. Assessing from my therapist's chair, I have found that African Americans whip their children more than whites, which I propose is the result of a chain reaction from slavery rather than an inborn genetic drive.

I have found that imprinting is a real and true phenomenon, which is observable everywhere that human beings interact. In order to articulate this phenomenon, I needed to describe a power cycle, which I do by referencing a clock. I speak of those who are out of power as people at 6 o'clock, such as a child, a student, or a victim of violence, and someone who is in power is at 12 o'clock, such as a coach, a parent, a teacher, a therapist or a perpetrator of violence. Most of our dynamics are between persons in power and out of power, for good or for evil.

Some people have suffered so much at 6 o'clock that they have to stay at 12 o'clock to be safe. This may put those around them off, if not in jeopardy. Healthy people enjoy being at 6 o'clock, especially to learn, and they don't especially relish 12 o'clock, but accept the duties that 12 o'clock may include. All of this is to say that 6 o'clock is an important state for learning and helping, and it needs to be safe from devaluing. 12 o'clock leadership should not be the end goal in a person's life, but a byproduct of mental health and giving back.

Of course imprinting is not that precise, because not only do we imprint a particular behavior in childhood, we have imprinted massive amounts of behavior, which form immense networks in our brain. Thus, how we respond to situations comes from multiple sources, but the younger we were, the more impactful were our sources. The more frequent a model was in our life, the more it became a constant thread in the fabric of our personality and behavior. Imprinting forms our worldview, especially how we see, think and act. We can even imprint our parents' beliefs, especially if they come with events.

If we didn't imprint something into our brains, it didn't happen. It isn't there. It cannot inform our actions. Thus, a person who has never been cherished or regarded in their entire life will not be able to cherish and regard any other human being. It would be impossible. What goes in must come out and what doesn't go in can't come out. This includes nurturing or not, empathy or not, neglect or not, abuse or not, languages, dialects, grammar, values, repression or expression, blaming or personal responsibility, sexual attitudes, commitment, drug usage, etc. If the concept of imprinting enlightens us, we must ultimately understand that people with diversely different childhoods cannot think like us. A neglected child will not have social skills. A child who has been chronically blamed and judged will not understand ethics. If a concept doesn't live vibrantly in our brains, it's not in our repertoire.

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At some point, our present thinking will become archaic. We will finally understand that if a person didn't think it, they couldn't have thought it. They have to be exposed to healthy experiences to think healthy thoughts. In many, if not most cases, a killer could not have turned out any other way. I am not saying that society doesn't need protection, but I am arguing for prevention. As much as we are

loath to acknowledge it, thoughtful parenting is critical. Parents are irreplaceable. The future of the world is in the hands of parents, and they must be reached.

Scapegoating

When a child is mistreated, it is usually unsafe to retaliate. Often they are threatened not to think about it and not to talk about it. So, the child stores the experience only to unleash it later on an unsuspecting victim, when they are finally at 12 o'clock. The child learns to keep her thoughts and feelings to herself, perhaps even to dissociate. She learns to "live underground", as I call it, initially for her parents' sake. She has come to understand that whatever she wants to do or express must be a secret, and whatever is kept a secret can be done. Worst of all, the injury does not dissipate with time, and the grown child carries a drive for revenge, which usually surfaces on an innocent, unsuspecting person or animal.

Boys kill frogs in play, but frogs do not die in play. They die in earnest.
--North Vietnamese haiku

I once knew a young man whose family brought him to see me. His family loved to go out to dinner once a week and to really do it up once a month. However, this member of the family was ruining it for the rest of them. From the time they would step into a restaurant, he began the process of berating the staff and ultimately the owner. Several restaurants in town would not serve this family, because of him.

The young man explained himself by telling me about all the bad service he encounters and that there's no excuse. I told him other ways he could represent himself that would work better and wouldn't be so offensive. Essentially, I wanted him to know that he could get more of the change he sought if he used some honey.

"That's no fun!" he retorted. This young man enjoyed what I call the "12 o'clock High." It is rewarding to be at 12 o'clock and to berate others. Who wants to give that up? It's bully consciousness. It's fun for some folks when the tables have turned. The young man recalled critical times in his life at dinner when, as the youngest member of the family, he was ordered around, to set the table, to get the linen placement just right, to subordinate himself and to use good manners. He was pressured and shamed into serving his elders. He came to hate dinners, because he would again become a servant. He hated dinners until there was someone else serving who was safe to scapegoat.

I was once invited to teach self-esteem at my son's private school. I declined, because I didn't want to teach children to override their feelings, thoughts and experiences. I offered to come in to teach them how to heal from feelings of being devalued by a parent when they couldn't talk back. I told them things they could do, to acknowledge their feelings, like draw, write or go to a private place to cry, if talking to their parents didn't work. One child said, "I can't wait to be a father so I can beat my children." Of course, I needed to make a child abuse report.

In another situation, I was working with a child who was four years old and had already been physically abused and molested. He didn't think he had come to see me for that. He wanted to see me because he couldn't make friends, and he felt hurt that other children didn't like him. Of course, both therapeutic goals were essential and mutual. The child had been kicked out of one school after another for hitting other children and/or trying to enroll them in some abusive sex play. He was a foster child now, and he was the youngest child with whom I ever did trauma work. I had him lie down and breathe. I noticed that his fists were clinched. He did not want to surrender. I told him that most people, including children, don't want to make friends with people who hurt them. However, people

who hurt people are afraid of their own feelings, memories and thoughts, and they don't want to remember their abuse or to think about it. Often, they have managed to "forget". I told him, "Your friends didn't hurt you. Your mother did. If you don't get your feelings out about how you felt when your mother hurt you, you will continue to take those feelings out on friends and be mean to children who are innocent. You have a choice to make enemies by hurting others or feel your feelings and cry...

"You have to be willing to be sweet-weak to heal," I told him, making up words I thought he would understand.

"No!" he bellowed, sitting back up, red-faced, to regain complete control. "I will *never* be sweet-weak!"

One can't heal if they won't become vulnerable. Sharing and disclosing is key to healing, so I worked to develop his ability to become vulnerable. His stepmother eventually healed this child with my guidance. If one can't afford private therapy, a group process that encourages vulnerability and open sharing, followed by gentle and honest feedback, would be valuable. Of course the facilitator has to be able to implement boundaries and teach ethics, as well. This is called Anger Management today.

Somehow it is my goal to get my client to remember what it felt like to be demeaned, shamed and injured. Somehow it becomes important to develop ethics, where we agree to treat others the way we *want* to be treated, rather than the way we have been treated. Somehow that goal needs to include an awareness of a greater payoff than enjoying the domination and suffering of others.

We not only imprint experiences; we have the ability to transcend imprints with our gift of overview, which some have called the third-eye. Overview doesn't work when we use it to judge others or ourselves. In order to transcend imprints we have to become aware of them and remember how we felt when they went in. If we suffered, we need to remember what we thought about our perpetrator in their meanest moments. We need to fully realize that we are creating the same suffering we once feared and hated. That's easier said than done, and it is often not anything a person aspires to do. Most of us prefer to indulge our drives to get even.

It is very important to understand that when a person has suffered abuse and has been denied the right to acknowledge, discuss or express that abuse, they will be driven to abuse others, who are weaker and innocent, if they don't turn in against them self. This is usually the cause of scapegoating, whether we are talking about bullies, "mean girls", serial killers or mass murderers.

Transcending imprinting may sound simple. It is, and it isn't.

Compounding Causal Factors

Attachment

There are primary critical childhood events in one's history that are imprinted and that compound bad experiences, or good ones, for that matter. These are attachment, abuse, neglect, and family systems of blaming versus self-reflection, as well as openness versus repression ethics, all of which are also imprinted.

The most impactful of these is the security or insecurity of attachment in our earliest moments and years of life. Children who have *attuned* caregivers in infancy and are raised with their primary caregiver consistently in the first three years are the most resilient of human beings, given that their caregiver is engaging, adoring and nurturing (Winnicott, D. W. 1958. *Primary Maternal Preoccupation. Collected Papers: Through Pediatrics to Psycho-Analysis*).

This same caregiver must also be *consistently* in their life to form a secure attachment (Bowlby, John. 1973, 1980. *Separation, Volume II, Loss Volume III*). I realize this is another politically incorrect

statement. I do understand that many families need both parents to work, and especially, single mothers have to make a living. Nevertheless, I am just the messenger. I didn't create the human design, and everyone deserves to know what it takes to get a leg up on the evolutionary ladder. Children who have insecure attachments, whether because their mothers are unattuned or because they spend the majority of their days in daycare, will have behavioral issues, and the younger they were when they endured these experiential deficits, the more impactful it will be on their long-term personality.

The ways that a mother attunes to her newborn creates temperament, and she can have children with different temperaments, because her babies had different early experiences, sometimes in the process of birth or hospitalization or having a baby that simply had siblings when the first one didn't. No two children in the same family have the same beginning or the same mother.

When babies are born a substantial portion of their right brain is fully in tact and online. This is the part of the brain that understands emotions, feelings, vibes, facial expressions and tones of voice. It is also the creative part of our brain. A baby knows the difference between tenderness and thoughtlessness or rough mannerisms. They may not have learned yet any symbols of meaning, such as speech, but they can interpret manner. It is from our eyes, voice and our attitudes that they are able to form an understanding of who they are, what they are worth and how safe is the world.

This early worldview is the foundation of future imprints. It colors future experiences and creates self-fulfilling prophecies. The worst interpretation of all from an infant is that they are rejected, alone, worthless, and unsafe when a primary parent leaves them regularly or for an extended time. They are no different than adults, for that matter. In fact, they are more sensitive to these insults than adults. Adults who react the most strongly to break ups and loss, have a history of abandonment as an infant.

Securely attached babies and toddlers will be able to fend off traumatic events later in life better than others. They are the twice blessed. According to researcher-clinician Bessel van der Kolk, et al, children with secure attachments handle trauma better than children with insecure attachments (1996). Positive imprints run deeper and may be more long lasting when the child is securely attached. This is evidently why some of us seem to be so lucky in life and others inherit such a hard life.

This is also to say that negative imprints run deeper and may be more indelible when the child is insecurely attached. These children are the double-damned, as I call them. This replicated fact correctly explains what has been misinterpreted by the genetic research world to be the result of fragile genes. No genetic or epigenetic research has ever ruled out early attachment experiences when explaining behavior. What's very bizarre, however, is that epigeneticists are experimenting on rats to prove that suffering affects how they parent their newborns. They explain the intergenerational transmission by the way environment triggers genes, not by the way we experience and transmit experiences to our young.

Abuse

If a rose is a rose is a rose, abuse is not abuse is not abuse. A juror in the Menendez trial said at the end of the trial, "I was abused, and I didn't turn out that way." She did not understand that the degree to which a personality is abused is determined by how securely attached was the child and how early in life the abuse took place, as well as how frequent and severe or intense was the experience. To reiterate, the three factors of abuse are age, frequency and intensity. Thus, a child who was whipped by a belt from the age of three to seven on a weekly basis for bad behavior will become far more negatively impacted for life than the child who was whipped three times from the age of ten to thirteen. This is not to say that the older child was not terribly hurt, but we are attempting to predict and understand the long-term effects on personality and what it will take to treat them (ACE Study, 1998).

Family Systems of Blame and Repression

There are two other major considerations in predicting and understanding the long-term impact of childhood on personality to be found in family systems. One is a repression ethic that prohibits and inhibits self-expression and thereby self-reflection (Maté, 2010, Miller 1981, 1984, 1990, 2001, 2005). The other is a family system that blames rather than self-reflects (Dutton, 1995). When these two systems are found in the same family, we have a disaster waiting to happen.

The repression ethic has multiple inroads to shutting down authenticity: The most flagrant example is the overt lesson not to cry or complain: “Cry and I’ll hit you again!” A child may learn, “Big boys don’t cry,” or “You’re ugly when you cry,” or “Don’t upset mommy.”

Gabor Maté, MD, says that human beings are born with two needs, one is to attach (and be loved) and the other is to be authentic (*In the Realm of Hungry Ghosts*. 2010). When a child learns to deny their authentic self in order to be loved or connected, their hope to ever become authentic is lost long before they understand it. Inauthenticity may begin in the crib, and the earlier this happens, the deeper it becomes. The loss of one’s authentic self, our very own voice and the meaningfulness of our very own thoughts is a tragedy. I cannot imagine living my life as a shell of a person, always acting my way through relationships and never sharing my real self, rarely sharing my real thoughts or worse, never even knowing my real self. I would not be free to feel what I really feel and to know what I really know. I would become an automatic person living a programmed life with programmed defenses. In sacrificing our authentic selves to be loved, the irony is that we become quite unlovable. Vulnerable and authentic people are far more loveable, but they feel safe and secure.

When a child is raised in a family where the best defense is a good offense and where blaming others for our failures is the norm, then there can be no growth. These families build imprints of accusations, revenge and grudges. Self-reflection looks like taking the blame, which is taken as an admission and is considered a sign of defeat. I worked with a paranoid schizophrenic patient once who quit me when I self-reflecting. Others, however, have admired me for modeling self-reflection. Where there is blaming there is a hotbed of anger and rage, as if it were about actual survival. If this is what a brain imprints, this is what will happen. No amount of church, boy scouts or threats will change a child’s repertoire of responses if the system of self-reflection is not introduced into the child’s life. At best, this child is damned to defend and blame her way through life. This child will become a professional victim, if not a professional offender.

Perhaps the most common shutdown message is the most unconscious message from our right brain to her right brain. If mom or dad seems fragile and unable to handle the child’s hurt feelings, the child will learn to modify his behavior. It can actually start in the crib. If the child cries in the crib and a parent comes, leans over and displays an angry and disgusted face, the child will learn to shut down and hold back at a very early age. Sometimes it’s not an angry face. Sometimes it’s a vacant and unfeeling face. Sometimes it’s a hurt face. Sometimes a parent seems fearful or anxious when the child is emotional, so the child learns that their feelings threaten their parent. Survival takes over, and the child begins to keep his thoughts and feelings to himself (if the child doesn’t decide to taunt the parent for her weakness). This is the repression ethic. It becomes an assumed, thought to be inborn, family value system.

Living Underground and Making Criminal Choices

Children may learn to live underground before the age of three, sometime between their crib years and their kindergarten years. When a child learns that a parent can’t perceive them or handle their authentic expressions, the child begins to develop a secret self. If an underground child becomes

molested, they may not tell. They *probably* won't tell. They have already learned that their experiences are irrelevant to others, and what others don't know won't hurt them.

The next step is the discovery of deceptiveness. When what I do is none of your business, it's the end of ethics and personal responsibility. An underground child who becomes molested is far more likely to become a perpetrator than a child who lives openly in the world. This is to say that before a violent criminal is ever abused, they were very likely already underground. The underground child is the most susceptible of all children to abuse and criminal behavior. I'm proposing that this is the primary reason why some molested children never offend and some do (Crittenden, 2008).

How to Heal Imprints

So far, research shows that imprints take place in the motor cortex. We will talk about scientific explanations later in this article. Suffice it to say for now that imprints are full body imprints to include the right brain. Conscious override, as I call it, takes place in the frontal cortex. This is to say that we have the ability to reason and determine what imprints are wrong. We can then use our capacity for self-awareness to diligently dismantle imprints, piece by piece.

Abuse and neglect are not everything, even though the brain imprints them and leaves a drive to reenact and return these imprints from power. When we have a drive to get even with an innocent party—which is to scapegoat—we can nip it in the bud if we are self-aware enough and can catch ourselves. We need to slip into the memory or experience of the child within, our earlier self who suffered the original injury. If we can do that and identify with our victim, we can stop.

Further, if we can be clear that the event is over, that what is left is only a feeling and a scary memory from a time gone by, we can allow ourselves to finally process the event, letting it go and leaving only an uncharged memory. Sometimes that will include releasing an appropriate, yet once forbidden emotion of deep hurt. I call this slipping through the eye of the needle, because it is perhaps the hardest thing we have ever done to go against our programming, and it is also the easiest. It is almost like breathing out, but it requires the loss of ego and a willingness to stop defending and immunizing our immunized parents.

One thing about being human that keeps the Nature-Nurture Debate alive and unresolved is that every generation has a substantial percentage of the population that militantly commits to denial and blind regard for their parents in order to survive childhood or simply to be loved. Those of us who were enlisted in childhood to think more on behalf of our parents than our own selves have learned at our very core not to criticize our parents or any parents, for that matter. All human beings who spend intimate time together will have issues. It is important that we are all entitled to our experience, feelings, memory and point of view. We need to be clear that everyone gets to have their own experience until the impinge on the other. This is true for children, unless they impinge on the needs—not egos—of others. If my needs and experiences are in competition with my parents, that's where ethics come in. Parents have the responsibility to correct their children's ethics, but they harm a child when they shut them down for what they experienced. "Don't tell Daddy." "If you cry, I'll slap you again." Thus, in childhood, we need to learn how to have those issues in a respectful way, granting everyone their authentic selves.

Healing imprints also requires letting go of 12 o'clock, as well as the courageous willingness to relive the event one more or a few more times. One needs to revisit the feelings and vent them out of the body. It's difficult at first, like learning to wiggle your ears, but one can find it and do it. One can find their vulnerable self and allow her to come out in a safe place. One can discover that a feeling is only as awful as our idea of it. If we give up labeling it and just re-experience it and cry, it will become neutered. If we can simply revisit the experience without judging it, feel the feelings and release them,

we can heal the trauma. The successful completion of this choice is so meaningful to personality that I have witnessed many times the actual dissolution of a personality disorder. This is also the eventual result of meditation, which just takes longer.

Thus, healing and recovery require the willingness and ability to go to a humble and vulnerable place within one's self in order to reflect on the truth of our injuries. As all of these dysfunctional personality adaptations meet up with the psyche's requirements for healing, it becomes clearer that repression takes away the hope for healing. It is important that families allow the expression of feelings even if those feelings implicate us. This means families also have to learn how to present these injuries without blaming and to give understanding without defense and much less, retaliation. This is where self-reflection and expressions of remorse can create healing in our children (Breggin, 2000). Warning: Do not express remorse for giving your child a consequence for unethical behavior. Recanting consequences can create another behavioral issue.

Historical Precedents

All the phenomena that I have just reviewed that impact human behavior are learned. Their interactions are varied and complex. They are not only learned in an intellectual way, but they are first learned in a visceral way. Every experience a child imprints will become the fabric of memory, identity and drive. They become the makeup of who they are, what they know, how they think and what they are driven to do. If their experiences are devoid of family ethics, they will not have them with which to reason and think. If they have been treated badly, they will have an irresistible drive to treat others badly. If those around them are inauthentic and do not self-reflect, the child, who must grow up, will not develop the tools to modify her own behavior.

The phenomenon of imprinting is far more profound than we have begun to realize. This imprinting takes place minute-by-minute and day-by-day. We internalize the big things and the little things. They become the essence of our personality and the heart of our point of view. Mostly imprinted experiences work together to produce a unique self—like no other—that drives our behaviors.

I make up words to teach, but I am clear that I am not the first to observe the phenomenon that I relentlessly call imprinting. We all witness imprinting in others as well as ourselves in the course of our lives, and we take these experiences as normal most of the time. I propose that this primary phenomenon has been observed and forgotten again and again over the course of human history. It shows up in the Golden Rule. I recently saw a show on *60 Minutes* where a researcher speaks of “goal contagion”. It was the same phenomenon being discovered and relabeled again.

Historically, psychotherapists have been subject to politics. Sigmund Freud had a theory that incest caused histrionic behavior, but when he was ostracized for such a theory, he recanted and revised his theory to the internal drive theory, wherein the origins of psychopathology were considered inborn.

Still, in graduate school I learned about modeling by Albert Bandura. However, it was in family systems theory that I learned that Murray Bowen introduced the intergenerational transmission process, in which family systems are conveyed from generation to generation. Other systems theorists, such as Don Jackson and Gregory Bateson, discovered that parenting and family systems create schizophrenia, as well, aptly describing their mothers as “refrigerator mothers”. Then, other psychotherapists and researchers recoiled as if defending their own mothers. Some cringed and began to distance from theories that “blamed” parents. John Bowlby broke away from Melanie Klein, who forwarded Freud's concession of inborn traits. He reportedly said to her, “There is such a thing as a bad parent!” It appears remarkable to me that we recognize the abundance of criminals in society, but

refuse to recognize bad parents. Do we imagine that a criminal is a good parent too? This rejection of systems theory, Bandura, Bowen, Jay Hailey, Don Jackson, and others who proposed the possibility that unhealthy behavior results from bad parenting was a perfect turn of events to reinstate the notion of genetics. It was to be a boon for the pharmacology industry, which benefited from most from genetic explanations for behavior.

I am a feminist, and I understand how the Causal Theory seems to threaten mothers and feminism, but I can also see clearly how we become who we are. I have seen that genetic theory supports a breakdown in attachments, as mothers began to leave their babies under three in daycare or with other childcare givers. I have seen them search diligently for the right daycare, as if that will make the difference. The issue was never about with whom they left their child, unless that person was abusive. It could have been Mother Teresa, because attachment requires mom or whoever is in the role of mom. Children with weak attachments are more susceptible to trauma, and children with strong attachments are more resilient, something else that geneticists re-interpreted as evidence of fragile genes. I have listened to more mothers than I could count tell me that if only they had known the effect that daycare would have had on their infant or toddler, they would have figured out another way. I have sat with a group of mothers discussing this phenomenon, talking about a class action lawsuit against their therapists or, “better yet, the field of psychology. No, better yet, their colleges. No, their governing boards.”

The War of the Researchers

Geneticists have misread the phenomenon of “imprinting” or “modeling” or “goal contagion” or “intergenerational transmission” as evidence that genes for behavior run in families. To reiterate, geneticists have interpreted that behaviors that repeat in generation after generation have done so because of genetic instructions, not events that are experienced, learned, recorded in the brain, acted out and internalized by offspring. One set of researchers doesn’t know what the other is doing. Their research reveals opposing evidence for opposing points of view. One side, the side that supports genetic theory, is pro-parent, because it ignores the wrong choices some parents make that create behavior and puts responsibility on the child’s inborn nature. The other side that supports environmental theory is pro-child, as I call it, because that research represents the inalienable needs of children for caring parents. These two opposing research goals result from childhood experiences of the scientists that even direct the endeavors of so-called neutral researchers. Yet, there was never a clearer delineation between the soldiers in the War of the Researchers, as I call it. It needs to be said right now that only one side of this war has had research that could be replicated, which is the true test of valid research (Snyder, 2016, *The Search for the Unholy Grail: The Race to Prove that Behavior and Personality Are Inherent.*). If you don’t believe me, I challenge you to read my book, because I have exhaustively reviewed the evidence and revealed the pattern of dismissal again and again. I present the information in lay terms as succinctly as possible, with a goal to keep it from becoming too boring.

As a professional I realized I had to deal with this argument that genes influence behaviors, because my clients believed it. It was a shock to me that clinicians believed it too. Clients and colleagues regularly brought me articles that supported genetic theories for behavior, and these articles appeared to be based in research. Articles on behalf of the impact of childhood experience seemed rare, although they were available for anyone who wanted to search for them. So were books.

The pro-parent researchers had generous public relations funding by the pharmaceutical industry, probably because research also demonstrated that patients who believe their issues are genetically driven are more likely to seek chemical therapy than those who believe issues are born of

childhood experiences (Phelan, *et al.*, 2006). While pro-parent “research” floods the media of magazines, journals and educational television programming, pro-child researchers have operated on a shoe-string budget. Nevertheless, they have been producing the only quality research, information that appears to be completely ignored by geneticists and epigeneticists. Actually, the latter researchers have the easier job. They don’t have to prove something that isn’t true.

I never took to science, but I understood that this was what was in front of me to do. I had to research the research. I began seeking information on the famous Danish Studies and the twin research and worked from reviews of pro-parent and pro-child scientists. I soon saw that there were two opposing messages coming from clinicians and researchers. Some seemed pro-parent and some seemed pro-child. I discovered that the results of these studies, as well as all of the major genetic studies, were rigged. After 15 years of researching the research, I wrote my most difficult book, *The Search for the Unholy Grail*.

Scientists consistently overlooked the critical first years, and never ruled out symptoms from adoption or the effects of separation in these studies. Eventually, we thought they addressed the influence of parenting. We heard about “identical twins separated at birth,” but they were not separated at birth. Almost all of them were separated after the critical attachment period of three years of age. Some of them were separated as late as 15 years old. Researchers and theoretician Don Jackson (1960) and Juel-Nielsen (1965) searched high and low for twins in research that were separated at birth and only found four pair in the world, and they were separated at about three years of age and remained in contact with one another. (Jay Joseph, *The Trouble with Twin Studies: A Reassessment of Twin Research in the Social and Behavioral Sciences*, 2015).

Scientists were able to look at dysfunctional families, in which there were dynamics of insecure attachments, neglect, abuse, flawed ethics of blaming and repression, and yet concluded that their offspring’s insecure and troublesome behaviors were genetic. The scientists were single-mindedly driven to prove genes create behavior, and what they needed was evidence of phenotypes, that one generation had symptoms of their former generation. It was surmised that since blue eyes proved genes for blue eyes, legacies of dysfunctional families proved genes for behavior.

One had to wonder why this was so important that they had to turn a blind eye to other evidence. Perhaps they were not very perceptive. Perhaps they were extraordinarily loyal to their parents, and that created confirmation bias. Perhaps they wanted to be the ones to make the greatest discovery of all time. Perhaps, the bribes and threats offered by the pharmaceutical industry for results that support genetics, made all the difference in whether a scientists would work or not.

At any rate, the scientists in these studies couldn’t think clearly and succeed. The results were actually rigged and the implications of deception were inescapable. To name just a few such diversions, they began to alter research designs after the results came in; to change the definition of schizophrenia to include any troubled behavior; to lower the bar of significance from 100% or 50% or 25 % to 8%; to make up far-fetched explanations, such as “incomplete penetrance”, “fragile genes”, or the “multiple gene theory” (that many genes influence behavior), which would make actual genetic prediction mathematically irrelevant, if not impossible; and to reporting great results where there were none. The logic, let alone the deception, has bewildered me. When I wanted to address the research, I kept hearing irrationality out of the minds of scientists and laypersons alike.

Eventually they could deceive themselves and one another no more. Eventually, most of them, especially the lead scientists, admitted that it was unlikely that genes would ever be isolated for any particular behaviors (Plomin, Robert, *et al.* 2013. *Behavioral Genetics*). In other words, in the argument between nature and nurture, nurture won for *behavior*. 100%. It’s as if the light shone through the keyhole for a very short time. There was no fanfare. Actually, hardly anyone heard the

concessions. Acknowledgements were buried in journals where few could find them, unless they were looking for precisely such an acknowledgement from the horse's mouth, something that was barely a neigh (Snyder, 2016). Still genetic researchers forge ahead continuing to produce headlines, if not results.

Oliver James identifies how behavioral geneticists and molecular geneticists still refuse to acknowledge overwhelming evidence for the null hypothesis, as they continue to try on the glass slipper this way and that way, holding out hope:

In the meantime, papers reporting studies of twins continue to ignore the HGP [Human Genome Project] null evidence when introducing their studies, or in discussing them. Equally, reports of HGP findings continue to flatly state at their outset that the traits under investigation "are" highly heritable, citing twin studies. Neither of these practices should continue.

Equally, students at all stages of education continue to be taught that traits are highly heritable, with little or no reference to either the flaws of twin studies or to the null findings of the HGP. At the very least, it is time for teachers in secondary and higher education, and in clinical trainings, to begin teaching that there are strong reasons to doubt that traits are highly heritable. (Oliver James, "Not in Your Genes: Time to Accept the Null Hypothesis of the Human Genome Project", 2014)

Nevertheless, some knew there was a void to be filled, as behavioral geneticists ran out of self-deception, the pharmaceutical industry faced a crisis. Fortunately for them, a pharmacologist, Moshe Szyf, was working on an alternative theory of genetics. He and colleagues revised a version of the 50/50 Assumption with the theory of epigenetics. They observed that in some cases genes have various ways of expressing themselves such as the fur of a rabbit that can change color in winter. The concept that there are different genetic programs for different environments filled the void. It seemed to be a win-win theory for everyone, once behavioral genetic researchers conceded (MacLeod, Rouleau and Szyf, 1995).

While some species may have genetic programs for varying environments, it *may* be true for some *physical* traits in some species at some times, this is not generally true. On the other hand, it may not be any truer than to say a person has genetic instructions that if they eat little, they will be thin and if they eat a lot they may become obese; if they stand in cold weather they shiver, and if they stand in heat they sweat; if they eat well, they will be stronger and if they eat poorly they will become weak and sickly. Of course, these would have to be interpreted as *universal* genetic instructions, if one wants to take it that far. At some point giving genes credit for environment, instead of giving environment credit for environment, will be seen as another shell game of language played with us by scientists. It was purely conjecture to generalize that genes provide optional expression according to environment. It was reckless to suggest that this model could apply to behavior. But it worked, because it was a needed explanation for the pharmaceutical industry and a public that still apparently needed to believe in the 50/50 Assumption, especially with an economy that required both parents to work from the time a baby is born. Further, it kept the notion of genes up front with a theory proposing pharmaceutical solutions (MacLeod & Szyf, 1995).

Szyf and his colleagues took it further to say that genes for multiple *behaviors* preexist, and environment can switch these genes on and off. It didn't matter that genes for behavior had never been discovered in the first place. Maybe he didn't know. Most of us didn't know. They proposed some sort of sheath on the surface of DNA cells that facilitated the hypothetical shift, a receptive surface that would specifically respond to environmental triggers: medication. They even made reference to an epigenetic code (as if it were something like a DNA code). Some epigeneticists said that pharmaceuticals could replace mother love. The new theory was cause for celebration and rewarded

with research grants and major public relations dollars, including public educational television and lead articles in all the major magazines with recaps that turned up everywhere.

Eventually the geneticists must have told the microbiologists that they never found the genes. The microbiologists then introduced another version of epigenetics. This theory suggested that environment changes DNA for a generation or more (Yehuda, 2015). Definitions of what constituted genes or DNA had to be changed to present this concept, which frustrated behavioral geneticists looking on (Van de Vijver, et al. Epigenetics: A Challenge for Genetics, Evolution and Development? 2002). Some statements were revised to say that environment doesn't change the DNA itself, just its *expression*, and only for a few generations. How do they know that the transmission of behavior from one generation to the next is gene expression rather than a brain function of learned behavior, accompanied by chemical moods that we call emotions? One thing is clear today. Epigeneticists dare not find out about mirror neurons.

Of course, this is simply another obfuscation of imprinting. All of this is theory that has been taken as fact like they finally found the Holy Grail. It gives both sides of the war credit. Everyone seems to love it, simply because it's "fair". It's the perfect political and diplomatic solution wrapped up with a scientific bow.

However, one of the greatest discoveries of all time is the actual phenomenon that accounts for the transmission of behaviors from one person to another, from one generation to another. It is the blackboard model. Genes create the blackboard. Experience writes upon it. The body creates mirror neurons, and experience fashions them uniquely from one person to the next.

Mirror Neurons

Dr. Rizzolatti, an Italian neurophysiologist and professor at the University of Parma discovered "mirror neurons" quite by accident. While studying neural representation of motor movements in monkeys, Rizzolatti discovered that when one monkey had an experience, not only did his brain light up, but so did an observing monkey's brain light up in the same location of the brain, as if it were happening to the other monkey, as well. Since then, mirror neurons have been located in the human brain in the premotor cortex, the supplementary motor area, the primary somatosensory cortex and the inferior parietal cortex.

Theoretical speculation and application of this phenomenon have been quite remedial and limited. Notification of this discovery has been even sparser. Different scientists and theoreticians have remarked that this may explain autism, language or even empathy. I predict it will be discovered that it is mirror neurons, not genetic instruction, that fashion behavioral repertoires.

If one is exposed to empathy, they may have it to offer. If one is exposed to the English language, they will soon speak it. If one is exposed to repressing feelings, they will learn to repress their feelings. One, who experiences kindness, will likely be kind (in proportion to any unkindness they have also experienced). The same is true for good grammar, ethics, and discourse, *ad infinitum*. I say that we imprint down to posture, the toss of one's hair and the holding of our nose higher or lower in the air. I dare say that all the events to which we are exposed that constitute experiences, especially experiences that are done to us by those in power, are stored in the brain as events to re-enact some day. Stored in our brain for use when a similar situation arises, these imprints become a registered part of our repertoire and our so-called personality. They drive our behavior as if our behaviors are automatic. They don't require thought, unless we consciously decide to modify these experiences, so we don't pass them on. They form a constellation, a conglomerate, a live fabric of our relational experiences recorded and stored from moment to moment, fully charged but dormant, awaiting

activation. I believe that the discovery of mirror neurons will one day be recognized as the greatest discovery in all of human behavior, certainly worth of a Nobel Prize.

I have noted that there is both first and second generational imprinting. If a woman was incested at a young age, she may have histrionic behavior. If she has a girl child, her daughter may imprint histrionic behavior from her, which we can call an imprint of simply second-generation behaviors. If the daughter, too, were the victim of incest, then she has both imprinted the affect of sexual abuse and experienced it directly. The former, a second-generation imprint, could have even set her up for incest in a multitude of ways. The latter would be a direct, first-generation experience. Behavior may be an adaptation from the child's direct experience as well as an imprint from the behaviors and mannerism of her parents.

I believe we imprint the big picture too, including an entire gestalt of beliefs, fears, and hopelessness or optimism. We imprint abuse and become abusers, especially if our attachments were insecure. We imprint neglect and neglect others and ourselves, especially our own children. We become inclined to parent the way we were parented, unless, we also learn self-reflection and reason, some traits that enable us to transcend our imprints. I find it fascinating to observe the behaviors of two people from different histories act as if they wear their histories inside out.

I have also observed that negative imprints go in deeper, stay longer and have greater impact when they are taken in on a weak foundation of insecure attachment. Positive imprints have more strength when taken with a foundation of secure attachments. Further, those of us who imprint or are directly taught to repress our feelings, our truth, and our authentic selves, have far more difficulty transcending imprints and will also have far more difficulty being perceptive and logical. They have denied themselves permission to see and feel what is, and thus, they cannot perceive apparent cause and effect or the authenticity of others. While they may be very logical, they are not very perceptive or innovative or insightful. They are more susceptible to being misled or to self-serving motives. This includes pro-parent clinicians and scientists, who learned to be true to their parents above themselves.

If one ever wanted to design a superior culture, they would have to begin by supporting a primary caregiver at home for at least the first three years of a child's life. From there, we would need to teach parents about imprinting, especially blaming versus self-reflection, repression versus expression, abuse versus coaching, and neglect versus nurturing, at a much more robust rate than we do now, as we tend to relegate parenting to a menial endeavor.

There is abundant, replicated research proving that behavior is caused by environment. It seems that the right hand does not know what the left hand knows. For reasons both deliberate and unintentional, the greatest discovery in the history of psychology—the discovery of mirror neurons—goes under-recognized, underestimated, under-funded and overlooked.