

**TO LEARN ABOUT BABIES IS TO LEARN ABOUT INTERDEPENDENCY**  
**Michael Trout**

It has to be one of the most fascinating, and fundamental, discoveries of this most recent era in infancy research--contributions to which, by the way, now come from fields as disparate as cellular and molecular biology, and both spiritual and neurological investigations into mindfulness. It is the discovery (drum roll, please) of our *interdependency*.

It shows up when we try to understand whether we should look to genes or environmental influences as the cause of heart disease, or as the predictor of violent behavior, only to discover that we cannot think about genes and environment separately. Experience exerts a level of authority over genes at least as profound as the contribution genes make to experience. Lived (and perceived) experience changes our genetic makeup, and our genetic makeup influences how we experience the world.

It shows up when we discover that the likelihood a person will suffer with chronic whiplash syndrome years after a vehicle crash has far less to do with the severity of the crash than it does with the victim's experience of abuse as a young child (Scaer, 2001). The body remembers experience, and changes itself in order to cope with such experiences in the future, so that everything that happens to us is interdependent with things that have happened to us, before (Siegel, 1999).

It shows up when we learn that no part of the brain operates apart from interdependent connection with other parts of the brain. Even motor firing may require information from a seemingly unrelated area in the brain responsible for narrative history, so that we don't act before we gather data (from our own brains) about the meaning of what we are perceiving and are about to act *on*, and the possible meanings of our several possible actions (Siegel, 2007).

It shows when the snail species that so preoccupied Nobel prize-winning molecular biologist Eric Kandel demonstrated its requirement for a specific chemical, available only from a particular species of red seaweed, in order to metamorphose from larva to juvenile slug. No seaweed (*Laurencia pacifica*), no snail baby (*Aplysia*) (Kandel, 2006). All that remains is for plant scientists to teach us what that snail leaves behind that is necessary for the survival of the seaweed that enabled the snail's metamorphosis, for yet another example of this astonishing interdependency that seems to characterize nature.

So, it almost failed to surprise when those macaques in the lab at the University of Parma demonstrated interdependency even in a community of monkeys. When one animal ate, a motor neuron (responsible for the movement involved in bringing a peanut to the mouth) fired--in an observing animal several feet away (Rizzolatti and Craighero, 2004)! But, of course. As the researcher said who watched this dynamic display of interconnection on that remarkable day in Italy : "We are exquisitely social creatures. Our survival depends on understanding the actions, intentions and emotions of others...Mirror neurons allow us to grasp the minds of others not through conceptual reasoning but through direct simulation.

By feeling, not by thinking" (Blakeslee, 2006, p. 1).

Babies have always taught us this, as we watched them awaken attachment behavior in parents, and watched parents awaken feelings of security (and assurance of survival) in the babies. Astonishingly, however, we have not taken the next, obvious step: To act as if we understand interdependency when we establish domestic social policy, when we respond to shared global concerns, and when we assault other nations.

This has been much on my mind as I take note of an upcoming anniversary. It was 40 years ago, in April, when I steered my clapped-out Volvo into the main gate of Jacksonville State Hospital to meet the 6,000 patients who lived there, in those days. I had just left theological school in San Francisco, having been ordered to alternative service as a conscientious objector to war. On the day I began my career in psychology, Bobby Kennedy was speaking at the City Club of Cleveland. Martin Luther King had been killed the day before. Bobby was exactly two months away from being gunned down, himself, as he addressed the crowd, "On the Mindless Menace of Violence":

*...Whenever any American's life is taken by another American unnecessarily - whether it is done in the name of the law or in the defiance of the law, by one man or a gang, in cold blood or in passion, in an attack of violence or in response to violence - whenever we tear at the fabric of the life which another man has painfully and clumsily woven for himself and his children, the whole nation is degraded.*

*...Yet we seemingly tolerate a rising level of violence that ignores our common humanity and our claims to civilization alike. We calmly accept newspaper reports of civilian slaughter in far-off lands. We glorify killing on movie and television screens and call it entertainment. We make it easy for men of all shades of sanity to acquire whatever weapons and ammunition they desire.*

*...Some look for scapegoats, others look for conspiracies, but this much is clear: violence breeds violence, repression brings retaliation, and only a cleansing of our whole society can remove this sickness from our soul.*

*...We learn, at the last, to look at our brothers as aliens, men with whom we share a city, but not a community; men bound to us in common dwelling, but not in common effort. We learn to share only a common fear, only a common desire to retreat from each other, only a common impulse to meet disagreement with force. For all this, there are no final answers.*

Oh, how I miss him.

I believe this is why we study babies. If it isn't, yet, for you, let it become the reason. We study human adaptability in order to discover, finally, the way toward understanding each other. We study attachment because we have not given up on love.

But I fear that we have lost, as a nation, the capacity to know of the sorrow in the

hearts of children in the nations we attack. I fear we lost our wits, somewhere along the line, about the obvious: When we kill each other, children are watching, and they will not forget. Research in our very field has demonstrated this, over and over. Babies *will* remember. They must; evolution demands it. *What* they remember--and later deliver to succeeding generations, not only in stories, but in parenting behavior, intolerance and radicalism--will unquestionably come back to haunt us all. It might be two generations until a child who watches his family blown up in front of him manages to grow up, turn his rage into religious teachings, find some other injured souls who share his hatred of the West, and join with them to come bomb us.

How hard is this to understand? Even if our hearts have lost these common sense truths, science now leads the way to tell us it is so: People don't forget. Trauma lasts. The mind must retaliate, somehow, somewhere, someday.

We allowed ourselves to be played like fiddles after 9-11. We turned into frightened children, and we clapped when daddy told us he would go beat up the bad guys--*any* bad guys--for us. People who knew how to manipulate, in order to increase their own power, saw our weakness and our fear, knew the somatic markers (Damasio, 1994) they could pluck, and we gave them the right to determine whether or not our grandchildren would die, or--just about as awful--survive in a country no longer free, closed down by its own fear and anger.

If we had heeded the lessons learned from infancy research--if we had shown that we truly understood interdependency as a law of living, as a law of nature--we might have acted differently. What if we had stood tall, that night our President came on television, and announced to the world what we knew: that very damaged people had hurt us terribly. Their babies (and ours) were watching. We wept. But we wept for them, as well as for us. What if this great sleeping giant that we are awoke not to revenge, but to compassion: We had been ignoring the cries of babies (including grown up babies) around the world. We could now spend trillions to go beat them up, or we could spend trillions to go hold them up. It was our call.

I fear, that night, that we missed the lessons of babies, and I was no more courageous and compassionate about it than anyone else.

This science, this good news of the human capacity for love and adaptation, this commitment to assuring that babies are cradled and their parents are held up--this is the secret to the survival of our civilization. Surely it must be why we do what we do, and why we should take such joy in it, every day.

Kennedy concluded:

*...But we can perhaps remember, if only for a time, that those who live with us are our brothers, that they share with us the same short moment of life; that they seek, as do we, nothing but the chance to live out their lives in purpose and in happiness, winning what satisfaction and fulfillment they can.*

*...Surely, this bond of common faith, this bond of common goal, can begin*

***to teach us something. Surely, we can learn, at least, to look at those around us as fellow men, and surely we can begin to work a little harder to bind up the wounds among us and to become in our own hearts brothers and countrymen once again).***

### **References**

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