

COMPASSIONATE INSTINCT * WAKE UP THE SOCIAL NERVE * THE NURTURED WOMB

pathways

to family wellness™

HONORING THE
INNATE
POTENTIAL

Joseph Chilton Pearce

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TIMELESS WISDOM

Honoring the Innate Potential

BY JOSEPH CHILTON PEARCE

Joseph Chilton Pearce, through his writings and his intimate talks, has always displayed a deep humility and heartbreaking kindness that speaks volumes. In all of his relations an underlying resonance is laid down, echoing an ancient understanding. There is one heart belonging to us all, and it beats to the rhythm of love and play. **PAGE 8**

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If you have stories and photos to share about pregnancy, birth, family wellness lifestyle choices, or healthy recipes and nutrition ideas, please contact us by e-mailing editor@pathwaystofamilywellness.org.

THE *Heart* BRAIN



This issue of PATHWAYS is rich in information introducing readers to Stephen Porges’s newly proposed concept of the social branch of the autonomic nervous system (ANS), the social vagus. Our articles offer a glimpse of understanding for humanity from both an individual, physiological perspective and also a collective, sociological viewpoint.

As chiropractors, we emphasize the importance of the brain as the master controller of all body systems and functions. When the brain’s signals through the nervous system become impaired by misalignments to the cranium and spine, less intelligence is transmitted to the body’s systems, impairing important functions.

In 1991, new scientific discoveries revealed that there are sensory neurites in the heart. This discovery became known as “the little brain in the heart.” Now, undeniably, we recognize that the heart has the neurological capacity to think, learn, remember, and feel, just as the brain does. Discussion abounds about these two organs and the potent neurological network between them.

Although this is a new discovery for western culture, indigenous peoples have understood its basis for centuries. In their cultural customs, they have recognized the importance of tuning in to this heart intelligence, as it is the essence of their way of life. In fact, these indigenous people prepare themselves in such a way that the head brain actually receives instruction from the heart brain.

For example, scientist and author Gregg Braden tells us: “In the native traditions of the Midwest, there is a phrase for heart wisdom that has no direct equivalent in the English language. The phrase is *chante ista* (pronounced “shawn-tay eeshta”) from the Lakota Sioux language and roughly translates as ‘the single eye of the heart.’”

Chiropractic has recognized that physical, chemical, and emotional stressors affect neurological function. We also see how adjustments can stabilize and heal physical traumas and chemical deficiencies. This is largely by recognizing the brain as the master controller of all systems and functions. But what about those patients who report outstanding changes in their emotional and social

well-being once they start chiropractic care? Perhaps their heart brain is activated with the adjustments, and performance is enhanced in these cardiac sensory neurites. This is where I think Porges’s theory of the social branch of the ANS, the little brain of the heart, and chiropractic adjustment all connect. After all, the heart is innervated by the social vagus. Chiropractic care directly affects vagus nerve function. And the vagus nerve stimulates the production of oxytocin, the hormone of love.

In today’s hectic and seemingly chaotic climate, more and more people are proclaiming the importance of restoring love into our lives, our parenting practices, and our educational and cultural systems. Every aspect of our society seems to be in dire need of more healing love. As several authors discuss in this issue, we can become so

disconnected with the potential of our social well-being and its place of origin, our heart center. Has our hardwiring for love been disconnected?

“It is only with the heart that one can see rightly; what is essential is invisible to the eye.”

—ANTOINE DE SAINT-EXUPERY

Certainly, there are cultural methods we have adopted surrounding pregnancy and birth, parenting, and schooling that create a physiological disconnect from love. Can our awareness of these misguided procedures be the impetus for change? What about the neurological disconnect that these practices engender? Can they be restored by changing our modern, yet physiologically unsound, routines?

It is my humble opinion that we are heading into a new story, one in which our realization of the importance of this neurological expression becomes paramount in the life choices we make for ourselves and our children. One in which we recognize how the chiropractic adjustment restores our innate capacity for this to occur. One in which we open our hearts to new possibilities and regain a more profound expression of human potential. ♡

For the raising of the consciousness,

Jeanne Ohm D.C.
Jeanne Ohm, D.C.



Parenting ParadoxY

By Scott Noelle

Today my 3-year-old accidentally created a kind of Zen koan, and she discovered the joy of paradoxy in the process. Her new game goes like this:
“Daddy, could you say ‘no’?”

“No.”

“Could you say ‘no’?”

“No!”

“Would you please say ‘no’?”

“NO!!”

The more adamantly I decline her request, the more completely it is fulfilled, and we continue the spiraling cycle until we are both laughing our heads off. This is the magic of paradoxy. It makes no sense, yet it makes perfect sense.

Paradoxy is a way of thinking and perceiving that allows you to expand beyond the confines of logic and reason. Conventional wisdom is always “reasonable,” but extraordinary wisdom often defies reason.

If you’re attached to being “reasonable” and have children, then either you or your children (or both) are headed for trouble! Logic is useful to a point, but it will only get you so far. There’s a point of diminishing returns at which, if you fail to let it go, common-sense logic degrades into a rigid and oppressive mindset of orthodoxy.

The word orthodox literally means “correct thinking.” Orthodoxy, in this context, is any strict adherence to conventional beliefs, customs, and ways of thinking.

It draws a clear line between right and wrong, and it tends to exclude anything (or anyone) on the wrong side of the line. Political correctness is a kind of insidious orthodoxy that has tainted even the “alternative” parenting scene.

The opposite of orthodoxy is called heterodoxy—the quality of being unorthodox. It includes political incorrectness and any kind of resistance or rebellion against the



PARADOXY RISES ABOVE THE CONVENTIONAL AND THE UNCONVENTIONAL TO REVEAL THE MIRACULOUS. IT TRANSFORMS THE IMPOSSIBLE INTO THE POSSIBLE.

status quo, but it's not the same thing as paradox. From the perspective of paradox, there is no significant difference between orthodoxy and heterodoxy. They are just two sides of the same, dualistic coin.

Are you still with me? If not, hang in there. A paradox is inherently confusing until you finally “grok” it.

The word paradox literally means “to think beyond.” A paradox is any statement or situation in which seemingly contradictory truths coexist without negating each other, like my daughter’s “no” game. It involves first thinking outside the box, and then *outside* of outside the box! Paradox, then, is a creative mindset that transcends and includes both orthodoxy and heterodoxy.

Paradox rises above the conventional and the unconventional to reveal the miraculous. It transforms the impossible into the possible. It releases you from the ever-swinging pendulum of oppressive dualities—from right/wrong to us/them to yours/mine to love/hate and even to mainstream/alternative. Paradox is a higher-order game that’s inherently light, free, playful, creative, and...well...paradoxical.

Fortunately, as progressive parents we have ample opportunities to cultivate paradox, courtesy of our children and parenthood itself. Paradox is required to resolve the contradictions inherent in our chosen parenting path: giving abundantly and generously even when there seems to be not enough to go around; seeing children’s innate goodness even when they “misbehave”; honoring children’s human nature while participating in a culture that’s more-or-less inhumane and anti-nature.

Children, especially those under about 5, are natural teachers of paradox because they generally lack the ability to reason themselves into a corner. The logical walls we impose on children instantly vanish when they don’t serve the children’s natural and magical impulses.

The miracle of birth is one of the most powerful contexts for paradox. For example, the “pain” of childbirth can be experienced as profoundly pleasurable—spiritually if not physically. But while mystical experiences of childbirth are not uncommon, the opportunity to transcend orthodoxy is often lost in the everyday interactions between parents and children.

Unfortunately, the conditions of our culture have led us to rely too heavily on orthodox thinking for a sense of security or even a sense of self—especially in our roles as parents. Great books like Jean Liedloff’s *The Continuum Concept* can give us a glimpse of a radically different worldview as it relates to parenting, and this may propel us temporarily into a mindset of paradox. But one can’t just flip a switch to engage in full-time paradox, as one’s ego/mind is likely to object. And that’s putting it lightly: In my experience, the ego will kick and scream and throw tantrums and create havoc until it becomes too painful not to surrender to the higher intelligence of paradox.

More common, though, is our tendency to try to put the lessons of paradox into some kind of orthodox box, especially here in America, where packaging is everything. But how do you put “outside the box” in a box? Simple: You create a bigger box.

The bigger box called “attachment parenting” is a good example. AP topples the walls of modern, conventional parenting and opens the field to allow much more of Mother Nature’s magic to flourish. But it’s limited by definition. It’s like taking a pet bird out of its cage and allowing it to fly around the house: It has more freedom, but it’s not exactly free.

Nevertheless, bigger boxes—or more expansive orthodoxies—are an important part of any consciously evolving parenthood. The trick is to use them as resting places or grounding stations along a path of ever more enlightened parenting, and to avoid the trap of confusing a larger cage with ultimate freedom. 🍷



Scott Noelle is a life coach and the author of *The Daily Groove: How to Enjoy Parenting...Unconditionally!* Since 2006, he has been sharing practical parenting wisdom through the free Daily Groove mailing list, online at dailygroove.com. Scott believes that children are innately good and that a natural partnership style of parenting is the best way to foster their goodness. He teaches parents how to avoid coercive parenting methods by focusing on four positive pathways to power—Partnership, Authenticity, Trust, and Heart—an approach he calls PATH Parenting. Scott is also an advocate of self-directed education through natural, freedom-based, pleasure-driven learning. He lives in Portland, Oregon, with his partner, Beth Noelle, and their two teenage children. View article resources and author information here: pathwaystofamilywellness.org/references.html.



HONORING THE *innate potential*

By Joseph Chilton Pearce



I have experienced a lot in my life, and I think I am really fortunate for that. I think other people probably experience a great deal more than they talk about. I just happen to talk about my experiences.

I will be talking about the only subject that is of importance in my life, and that's the heart-mind connection. It's been one of the main themes in my own life, and everybody's, whether they know it or not.

Back in 1974 I was finishing my third book, *Magical Child*. I had been working on this book for quite a while, and part of it was bothering me a great deal—the issue of play. Somehow I knew that play played a principal part in the whole development of the child, myself, and everyone else...but exactly what part, I could not tell. I knew it was principal, but in what way? So I did a lot of study. For several weeks I gathered every bit of information I could find from anywhere about the subject of play. I got a lot of great stuff, and was very excited about this.

I was in a little cabin overlooking what is now Silicon Valley. The Jesuits had given me this little retreat cottage at the edge of the great redwoods next to a beautiful vineyard to finish working on *Magical Child*. It was a marvelous place; I only had lantern light, as there was no electricity. So I spread all my research out in stacks. I knew it was coming to



a head—I would find what play is all about. But in spite of this new information that had come in, I couldn't quite crack the egg on play. And this went on until finally, long after midnight, totally exhausted, I leaned back, head in hand, and burst out with this very genuine prayer: "Oh God, what is the issue of play in our life?"

Some of you may have heard this tale. It's not a fairy tale; it was true. This great bolt of energy hit the soles of my feet and I found myself falling through the whole universe, stars and galaxies and everything else—this incredible, ec-

static joy filling me. It went on and on and on. In fact I could hear myself calling out, "God is playing with me!" Finally it began to fade, and little by little I came back to my ordinary self. And I wept. I literally wept the rest of the night with this huge, joyful gratitude of what I'd been given.

It was such an ecstatic experience. But that's where my issue of play in *Magical Child* ended up. I never got exactly what I wanted in that section on play but I knew one thing: Play is the whole purpose of life. It is the message of the heart. As long as we play fully and completely, everything will work as it is supposed to.

The issue of play led me into all sorts of interesting things. Through an incredible out-of-body, semi-mystic experience, I met an Indian meditation teacher by the name of Muktananda. He introduced himself, among other ways, by blowing up my nostrils! And when he did, I went into that same spin I had gone into in play. Then he sent me his book, called *Play of Consciousness*. I learned that the way the teacher gave power to initiates was by blowing up their nostrils! That pretty much confirmed it; I said to my wife, "Wherever this Muktananda is, we're going."

To make a long story short, we spent 10 marvelous winters and two summers in Muktananda's ashram in India, where all of the attention was on the heart. Everything was about the heart. We did these great, long, 30-day retreats in a darkened hall, meditating on the heart. Now let me tell you, if you spend that much attention even on the big toe you'd get results. But boy, with the heart it was fireworks!

*This remarkable talk at the 2010 Pathways to Family Wellness Summit was given by Joseph Chilton Pearce, who passed away in August. Joseph was a man who spent his entire life searching for the innate potential in mankind—which he found, as all great adventurers do, residing in the heart. This heart, a universal heart, was the focus of Joseph's work, and it was illuminated when, in a Jesuit cabin house devoid of electricity and in the depths of despair trying to understand and complete his book *Magical Child*, he discovered that play is the purpose of life. We were born here to play! This is connected with the idea that before we enter into a mode of consciousness befitting our inner humanity, we must first become as children.*

We see, so obviously, that a child's entire being is in rapid growth. We cherish it in such a way that it never gets old to exclaim to a child, "You're growing up so fast!" To be like children is to be in this mode of uninhibited growth. And from here we can understand the value of playfulness and how it is such a key to all this. Play provides the stage for growth to happen!

I imagine asking a seasoned scientist what it feels like to discover something new, or to be a part of a research endeavor such as the one undertaken by Stephen Porges in the discovery of the polyvagal theory or Pasko Rakic in his photographing of the neural tube. I imagine them saying it feels like being "on a mission" or like "being a messenger for the whole of humanity." What playful concepts these are, and how similar they sound to the child who says, "I'm on a mission to save the world!"

Play fosters growth for the mind, and if we could only see that all our chances—to draw from within, to perceive what others before us have seen, and to dance across the threshold—rely on our willingness to play, we would do just that. —From the Editors. A special thanks to Chuck and Karen Robison at whatifitreallyworks.com.

In the 10th century, a mediating monk named Abhinavagupta, in Kashmir, India, explained everything about the heart in a clear but astonishing proposal. He said, "There's only one heart in the whole universe. The heart is universal." Muktananda had said to me the same thing: "The heart beating in me is the same one in you."

There is new information that's been found with the electron microscope—pictures of the neural tube. Now this might be old hat to some of you, but the neural tube is the first thing to form in the mother's womb. It's actually like a little bent tube. We're talking about microscopic stuff here. So, as the neural tube forms itself, something almost like a little spine forms behind it, and immediately out from it a little protuberance—like a sac—which becomes the heart.

That sac begins to produce loads and loads of heart cells. Now, what these photos showed was that very early on in that neural tube, this sac that forms from the spine starts creating neurons, or brain cells. All these neurons pour out of this new heart and are transported up to the high part of the neural tube where they will eventually form a brain. Truly magnificent! The neurons of the brain are first formed in the heart.

Now, the neural tube is the seat of self. Self is indigenous to the human being. I think my friend George Leonard was probably right; the soul we have to create, educate, and take darn good care of if we want it to grow. But not the sense of self. Sense of self gives rise to the heart, the brain, and life as we know it.

What we find right off the bat is that self divides into self as a heart and self as a brain. The whole drama of human experience is this divided self between the heart and the brain and how perfectly they function. Now, why does the heart create the brain? To do its work for it.

The work of Roger Sperry pointed out how mind is an emergent property of the brain. Brain produces mind, just like heart produces brain—

it's the same thing, just once more removed. Roger said that around age 12 or 13, mind begins to emerge out of brain; the adolescent doesn't settle down until about age 21, because he must find and deal with this new equation going on of mind keeping its attachment, you could say, to the brain, until it can stand on its own feet. This part of the brain we call intellect, and it can spin out whole worlds of creation, discover, and play.

But the intelligence, which is different than intellect, remains in the heart. It is the heart. And what is that self in the heart designed to do? Maintain balance and coherence and unity of all the actions that happen in intellect.

So, the connection between the two, the universal in the heart and the individual in the head, is the key to everything in our lives. What I've been involved with over the last 35 to 40 years is how that connection is severely compromised.

This happens, first of all, in the neural tube right after conception. It's interesting to see that newborn infants, those that have been loved and nurtured in utero, are born with an open palm. Their hand is immediately exploring the open world, taking note of the information and making contact. But if they've had a rough time in utero, which means the mama has been unhappy, they're born into the world with a clenched fist, and their learning is very slow because they've got to protect what they have and they can't open to new learning.

I love the difference between the clenched fist and the open palm. How many of us go through life with a clenched fist? My friend Robert Sardello says, "The future always

wants to flow into the present, but when we have a clenched fist the future can only come in as a replication of the past." We wonder why it is that every knight in shining armor that rushes down to clean up the mess in Washington turns out, for some reason or other, to be the mess in Washington. The system simply replicates itself. The culture that represents danger, disaster, and being on the alert cannot be changed because it cannot let new information in. It has lost its faculty for that. Just like how the individual who's been cut off from his heart can't open himself up to love. Neither can afford the luxury of relaxing his defenses long enough.

A Dominican theologian called Meister Eckhart came along in the 13th and 14th centuries. Eckhart was a great meditation monk in charge of a huge plot of land in northern France and northern Germany; he walked long distances from one of his parishes to the next. Writing about it, he called these walks "a series of wondering joy" because he knew: He was the perfect balance between head and heart—between the active intellect and the universal intelligence within. The heart moves only for well-being, and he talked about the great joy in this relationship with the heart. The connection between the mind and the heart was the critical thing, and Eckhart made that clear.

**HE WAS THE PERFECT BALANCE BETWEEN HEAD AND HEART—
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People get into all sorts of trouble as they begin to run all of their intellectual processes and great creations without reference to the heart. Take science, for instance. Science became our god for the whole 20th century, and believe me, it's a jealous god and it brooks no interference.

For instance, Mircea Eliade—a great anthropologist who spent many years with the lamas of Tibet before Tibet was destroyed—found that Tibetan monks, after their years and years of training, could completely reverse the ontological constructs of our world. Now, ontology is an explanation of how creation takes place, how our world forms around us. The ontological constructs are the ways in which we as a species have concluded that everything holds together. In Tibet they could reverse these ontological constructs. For instance, part of their graduation was an exercise to thaw frozen wet sheets in the middle of a frozen lake. If they couldn't thaw these sheets by dawn, the initiate had to go back to school. But if he could, he'd go to the next test: He'd have to prove that he could reverse the ontological constructs of fire on flesh and not be bothered.

Back in 1956 I came across studies of the people in Sri Lanka. Leonard Feinberg, an exchange professor in the University of Chicago, spent several years in Sri Lanka.



At that period there was a temple there dedicated to the god Kataragama. Eighty to 100 people would volunteer to take part in a fire walk, and they would spend 3 weeks in fasting and prayer in the temple. Every day they were sprinkled with holy water as they prepared to walk the fire. By the end of the three weeks the priests opened the gates of the temple and from the courtyard they went down into a pit 20 feet long, 6 feet wide, and 6 feet deep. It was a bed of coals they had been preparing for days. The fire melted aluminum on contact. Wads of thrown paper burst into flame 5 feet away. Onlookers couldn't stand closer than 20 feet away without being burnt. For the walkers, however, the fire did not exist. They had reversed that ontological construct. They all wore long cotton togas that dragged across the coals, and even their togas didn't burst into flame! The women grabbed great handfuls of the white-hot coals and poured them down over their head. Their hair was never singed. And yet for about 3 percent of the walkers, their faith breaks in the middle of the walk. Immediately their togas go up in flame, and in one great big flash they're done for.

This is similar to people like Michael Sky, who had 40-foot fire walks. People there were going through total

metanoia—they were never the same again. They discovered that ontological constructs by which the world formed could be reversed in the human being.

But here's this extraordinarily jealous god called Science, and it's going to disprove this at all cost. It's been trying to ever since.

Another of these interferences with ontological constructs had to do with fasting. Here I found that the body didn't really have to eat. It has survived for remarkable periods of time without food. Lots of people have been discovering that they can live without food. I talked with Rita Fischer, my friend and neighbor, and she said that "the sense of freedom is so incredible from knowing that you are not subject to the intake of food." My last little book of mine talked about mitochondria—one of the great mysteries of the world—and the role they play in this. It's a case in which the mitochondria can be bypassed and not even employed. One of my favorite poets, Dylan Thomas, once wrote, "The force that through the green fuse drives the flower drives my green age." It is the same force. It is power.

Paul MacLean, one of our greatest neuroscientists, says that the brain doesn't operate by putting together bits of



YOU CAN PLAY IN THE WORLD RATHER THAN HAVING TO FIT IN, WORRYING ABOUT IT, AND SO ON. YOU CAN JUST PLAY.

information. The brain functions by resonance. Things that are resonant with each other gather together. We call that neural structure. Back in the '70s, Karl Pribram, who called himself a neuropsychologist, said that the brain feeds on fields of information that are frequencies coming from a frequency realm that is not in time or space at all. And I can tell you he's been proven true, just like Paul MacLean. They've gotten lots of scientific evidence now. (Notice how I use the words "scientific evidence" like a stamped approval from God, it must be true!) It really was much more than just scientific evidence—it was the evidence of life itself.

In 1974, when I was finishing up my work on *Magical Child* and that great force hit me and I had that experience, then I knew. And what I knew could never be gained from anything other than that experience itself. There are knowings that can never be spoken of, and certainly can never

be written down and analyzed. These are forces. They are powers. They are the things that drive the universe.

The physicist David Bohm—what a great man—said, "A true dialogue happens when one person addresses another without any agenda at all." He said this can be practiced in a discussion. You can pick up a certain subject, then at a certain point, if you drop your agenda and give yourself to the other person, a third force comes in. This force is not the sum total of the two intelligences, but it is a third force entirely. It will breathe you and move you, as they say in Zen.

The Zen Buddhists were the ones who understood this probably better than anyone else. Once discovering this, you can play in the world rather than having to fit in, worrying about it, and so on. You can just play. There is the source of pure play. That's been one of the things I've been fascinated with for many years.



The human being, from his spiritual aspect, is capable of anything. Man's mind is a mirror of a universe that mirrors man's mind. Each gives rise to the other. People say, "Ahh yes, we create our reality." And I say nonsense! We don't create our reality. We enter into the creation of reality. And there's a huge difference. One is a massive arrogance on the part of the human being, and the other is the recognition that there is this huge universal intelligence.

The heart is the key to the whole thing. We will straighten out the intellectual mess we have made only by a return to the intelligence of the heart—a total, radical, absolute, surrender to the heart. It's a lot harder than you might think. But there's been a breakdown between the brain and the heart. And as a result, intellect has now run amok. I even think it enters into the way we've destroyed all cultures that represent the immediate connection with the heart.

Robert Wolf, a Dutch psychologist working for the Malaysian government, was born in Malaysia and lived there most of his life. He became totally identified with the Malaysian people. It was his job to get them to agree to let the government chop down all their trees and their jungles and build rubber plantations, and it was also his job to talk them into coming and working the rubber plantations after their whole way of life had been destroyed. In that

process Robert Wolf underwent a tremendous metanoia, a conversion of his own, after which he met the very elusive, mysterious Signoi people. They came to him at the edge of the forest and took him up and he would move with them. He found that they operated on an entirely different frame of reference. Their ontology was totally different. Most of the teaching they offered Robert Wolf was silent communication—telepathy. Most of their communication with each other was silent and telepathic. They had incredible power and capacity and lived in those forests in absolute seclusion. You couldn't find them. They were just a myth to most people.

Robert Wolf, in his old, old age, said to my friend Tom Hartmann, "You have no idea what we have lost." And everyone has this sense inside them—that we've lost something.

As a child I often felt homesick. My older sisters would say, "What do you mean homesick, you goof? You're in the house where you were born." But this great longing would come up, and I discovered that by striking a single note in the middle register of our piano and listening for the waves, I would feel

that they carried me, that I'd dissolve into them and become one with them. That was what I was homesick about.

I really would like to live long enough to do one more book, and that's on the spiritual experience of very early life. And I think that the average child, up to the age of 3 or 4, has a great many more spiritual experiences than are recognized, or even allowed.

Dr. Burton White, in his marvelous work, *The First Three Years of Life*, explains how he and his staff at Harvard had looked at the American child population to see about what percentage of them could be considered brilliant and happy. They came to the conclusion that it was maybe 3 percent of the American population. But the most outstanding feature of these brilliant, happy children was that they spent an unordinary amount of their time in blank, open-eyed stares, doing nothing at all.

And I thought of what would happen today if a child spent a great deal of time in an open-eyed stare, doing nothing at all. We would have every psychiatrist and therapist and social worker and everything else breathing down both the child's neck and the parents'. "Don't just stand there, do something!" We all heard that when we were children.

So that is just a little clue about one of the many aspects of how the human mind gets shut down and cut off. I think that's what happens with our so-called spiritual experience. Without any outlet for it, without any recognition for it, we tend to let those things wither away to a great extent, I believe.

I bet if you start examining and writing about your own early childhood, you will find that you were nothing less than a little mystic running around. If we could just retain that enormous intelligence we had as children, we'd have an entire species of geniuses. 🌀



"Everyone should read Pathways every day!...It is the best on the market, by far." Joseph Chilton Pearce, who passed away in August, was the author of many books, including the national bestsellers *The Crack in the Cosmic Egg* and *Magical Child*, as well as *Evolution's*

End, The Biology of Transcendence, The Death of Religion and the Rebirth of Spirit, and, most recently, Strange Loops and Gestures of Creation. For more than 30 years, Pearce wrote and lectured internationally on human development and the changing needs of children. Doing so, Pearce pushed the boundaries of human development far beyond mechanistic models. His quest: to understand our "amazing capacities and self-inflicted limitations." We are the body and more. We are emotions and more. We are mind and more. In his life and works, Pearce wove this miraculous tapestry into integrated wholeness. View article resources and author information here: pathwaystofamilywellness.org/references.html.

The Social Vagus

By John Edwards, D.C.

People in stressful situations bargain and negotiate. Then they get frustrated and angry. Then they shut down.

In November 2014, at the ICPA Freedom for Family Wellness Summit in Washington, D.C., I saw something that changed my life.

Honestly, it actually saved my life. As a chiropractor I've always taught my patients there are two parts to your autonomic, or "automatic" nerve system. The one most people recognize is nicknamed the "fight or flight" system, and that system puts blood flow into your muscles and away from your organs.

The older part of our autonomic system, from an evolutionary perspective, exits outside, or *para*, to the sympathetic—hence the name *parasympathetic nerve system*. The parasympathetic struggles for a catchy nickname, because "rest and digest," or "feed and breed" both undersell how important this system is to our physiology.

The parasympathetic system regulates our most basic functions, including moving everything that enters and leaves the body. Back when planet Earth was filled with single-celled organisms sitting around in a soup of food, the only things a microbe needed to worry about was attracting nutrients in and pushing waste out. Our evolutionary extensions of that—exhalation, sweating, menses, etc.—are all functions dominated by this system. Opening blood vessels, flushing of the skin, and digestion happen because of this system. So do birth, growth, and healing.

Once we grew limbs and needed to run after our food (or recognized that we were the food something else was chasing!), the sympathetic nerve system developed to take the reserves of blood flow and metabolism away from our survival organs and put them into our muscles to move.

Stress puts people into the sympathetic, fight-or-flight state. We weren't meant to live there, though—we either escape the tiger or vanquish it, and the moment is over. Except now we live with mental tigers—jobs we hate,

relationships that are breaking down, a constant media barrage of terrorism and impending doom from disease. I've tried to get my patients to understand the importance of keeping out of the sympathetic state. I thought I was doing them a favor by emphasizing the "opposite," the parasympathetic system. But it turned out I was wrong.

I heard evidence at the Summit that doctors in cardiac rehabilitation learned a secret to keeping their patients from being repeat customers after surgery. They knew that high-stress lifestyles caused the sympathetic system to antagonize the heart to beat faster and harder until that nerve signal eventually wore out. In relaxing the body, however, they discovered that the underlying tone of the parasympathetic system also eventually wore out, and the tone responsible for keeping the vital organs functioning began to fade.

So here I was, thinking if the parasympathetic were dominant everything would be nice and easy in the body. I never considered the consequence of only firing on this set of cylinders: that the body would approach shutdown and death. Single-celled organisms actually used this as a survival mechanism. If they were threatened, they would feign death. The human parasympathetic adaptation to extreme stress is the same: We cry, then scream for attention, and if no one listens then we see if playing dead will get us what we want. Sometimes the playing goes a little too far, and we damage ourselves in the process.

The secret those cardiac rehab folks figured out was to get the patient to renew friendships.

What some neuroscientists are calling the "social nerve system" is a development of polyvagal theory, developed by Stephen Porges, Ph.D. Porges describes the social nerve system as the part of our brain that uses voice, facial expressions, and eye contact to stimulate responses in another person. Infants were pretty much worthless at using existing systems to protect their small, fragile bodies, so Porges suggested that the brain adapted and developed



ways to make other adults in the species care for and protect them via the social nerve system.

All three of these nerve systems—social, sympathetic, and parasympathetic—are used to cope with stress. If the social strategy doesn't work, say in a newborn infant, and he can't bargain with the parents to meet his needs, the baby goes into fight-or-flight mode and angry crying. If that is allowed to keep going and nothing changes, the baby then drops into the parasympathetic strategy and plays dead. The success of any of these strategies is cemented into our subconscious and becomes the predominant way we deal with stress as an adult.

I had been attempting to juggle the responsibilities of my office, prepare for several major speaking engagements around the country, deal with having to move out of our rental house into a new place, and watch my wife struggle with depression as month after month we failed to conceive—and then, because of my emotional distance, I heard her tell me she wanted a break from our marriage. That was during what I'll look back on as my "November from hell." I'd run out of adrenaline by the time the Pathways Summit arrived, and could feel myself, in the midst of what should have been my biggest professional triumph, struggling against both physical and emotional shutdown. Hours before listening to the stories of the heart patients, I had cried with a complete stranger during a communication workshop, as both of us admitted we had no idea if our marriages were going to survive the weekend. I had passed sympathetic shutdown, and was well into the parasympathetic spiral.

Then I heard some speakers reference this third system, and my world began to make sense. The way the nerve system, and in a larger sense the entire mind and body, prefers to function is in communication and harmony with the community around it. I was in that place, very familiar to many people, of holding on to a lifeline in a storm. I was looking for people to empathize and share with, because innately my body knew it was important for its very survival.

IF YOU DON'T HAVE SOCIAL OUTLETS FOR STRESS, SUCH AS A COMMUNITY OF FRIENDS OR FAMILY THAT YOU CAN REGULARLY AND HONESTLY COMMUNICATE WITH AND GET YOUR NEEDS FROM, THEN THE BODY RETAINS A FIGHT-FLIGHT PHYSIOLOGY.

The reason I had gotten myself into this mess in the first place was that I had become socially isolated. I set my neurology up for a fight it could not win. My body was internally screaming for attention, and when that didn't work it started to play dead. You can see people in these three stages everywhere around you. When you start to understand this, it's as if a veil has been lifted.

One Summit presenter, Joe Dispenza, focused on the frequencies that the brain and body give off. A baby exhibits a brain-wave pattern that scientists designate as the subconscious mind. All of the keys to survival are written into this subconscious mind by a specialized set of nerve cells called mirror neurons. These mirror neurons help us to write the program for what to do later in life when we encounter a threatening situation.

In early childhood the brain waves shift into a creative pattern. This level of activity is responsible for turning a broomstick into a horse, or a passing shadow into a monster hiding in the closet. In adulthood we revisit this creative wave pattern in the early stages of sleep, right around the time we wake up, or during deep meditation. Amazingly, it's close enough to the subconscious level that we have the power to reprogram our neurological patterns by visiting this state.



THIS IS QUITE POSSIBLY THE BIGGEST REVELATION IN NEUROSCIENCE SINCE PSYCHONEUROIMMUNOLOGY— THE UNDERSTANDING THAT THE NERVE, ENDOCRINE, AND IMMUNE SYSTEMS ARE ALL TIED TOGETHER WITH MENTAL PROCESSES.

The final brain-wave pattern is the signal of rational thought. This mature pattern begins around 10 years of age and continues into adulthood. It is this pattern that can discern differences, for instance, between the broomstick and the imaginary horse. However, it's also the pattern responsible for rationalizing things, such as my procrastination on dealing with my emotions. This wave pattern had allowed me to “think” myself sick.

So now we have these two concepts: The three nerve systems, and the levels of brain-wave patterns that record our responses to stress. I mentioned how we can tell the way adults were programmed as little children based on the strategies that worked the best for them.

This is quite possibly the biggest revelation in neuroscience since psychoneuroimmunology—the understanding that the nerve, endocrine, and immune systems are all tied together with mental processes.

It's really quite simple. If you don't have social outlets for stress, such as a community of friends or family that you can regularly and honestly communicate with and get your needs from, then the body retains a fight-flight physiology. This isn't a sustainable state, and if you do not transition back out of it then your body and mind begin to shut down. The manner and degree to which we choose to interact with other people, then, dictates a very important part of our health.

It takes more than merely spending 15 minutes in the morning doing affirmations or 30 minutes with a yoga DVD at your house. Understanding the purpose of the third nerve system brings you to a realization that there is an

important reason for spending a Sunday morning creating spiritual community, or for actually attending a yoga class in person, that has little to do with the activity itself. The reason is in the people around you. It allows your pattern of brain waves to enter into a calmer, larger field that offers protection. The more you practice, the more your neurons acquire this pattern—“Neurons that fire together, wire together.” Can you imagine the impact a group of people with a peaceful and blissful brain-wave pattern has on other people they meet in the community? The interaction between one another's social neurology can be a powerful agent for change. 



Dr. John Edwards owns Mama's Chiropractic Clinic in southwestern Florida, which provides care for expecting mothers and children. A Palmer graduate, he designed Mama's to help contribute to the body of research on pregnancy and subluxation. In his free time, Doc enjoys exploring Florida's waterways and traveling with his wife, Erica.

Visit him online at mamaschiropractic.com. View article resources and author information here: pathwaystofamilywellness.org/references.html.

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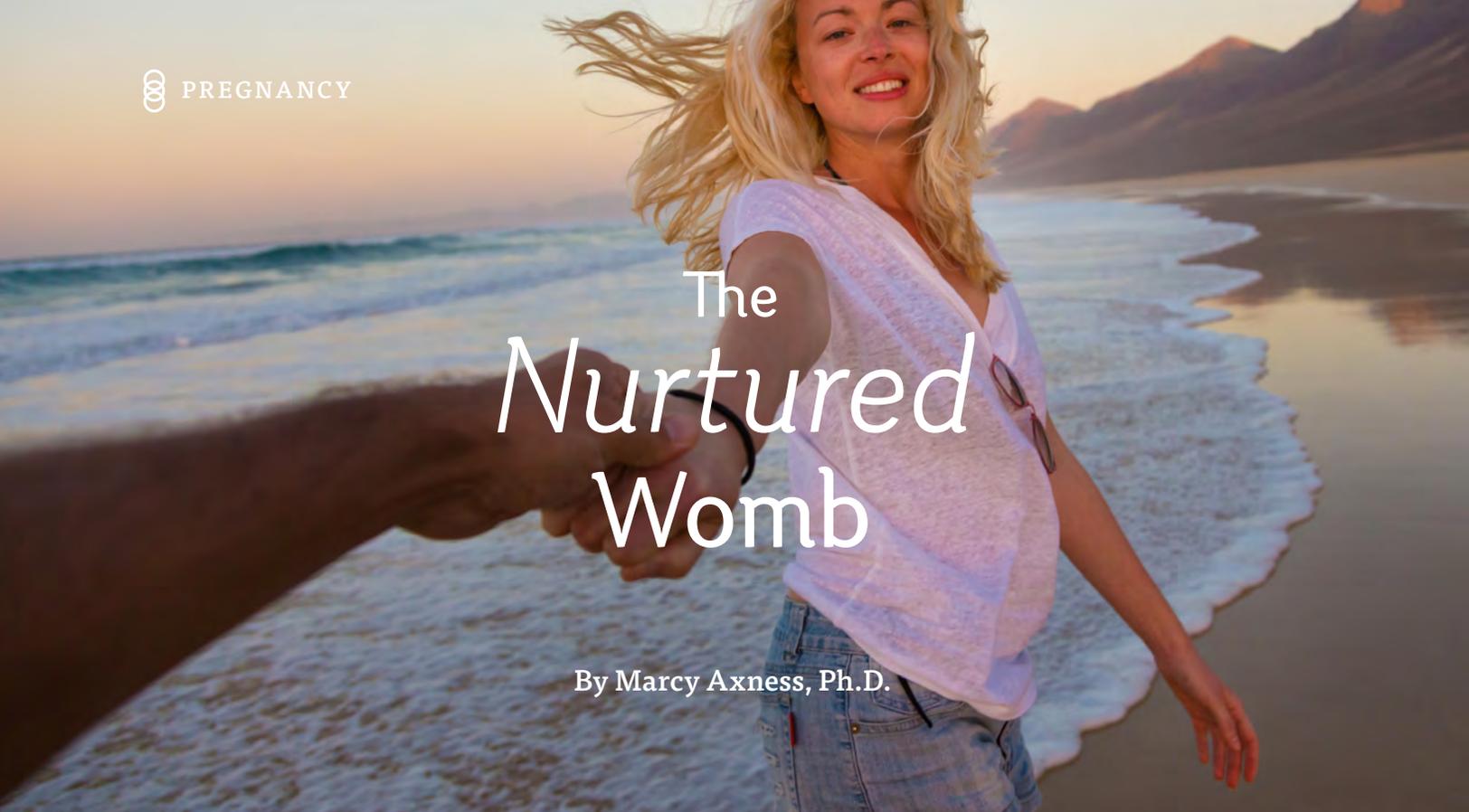
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The Nurtured Womb

By Marcy Axness, Ph.D.

“In every phenomenon, the beginning remains always the most notable moment.” —THOMAS CARLYLE

Some are the days when we could consider pregnancy a nine-month grace period before the job of parenting begins. Mounting research tells us that lifelong well-being, including mental health, begins in the womb, and everything parents do—beginning even before conception—shapes their children in critical, life-altering ways.

Pretty wild idea, yes? Indeed, when we consider conception within the conventional Cartesian worldview—in which the size of something is directly related to its importance and significance—there is the tendency to wonder how anything could have a lasting impact so very early, when there are just one or two or twelve cells. But human beings are dynamic systems whose workings can be illustrated by chaos theory. Consider chaos theory’s central tenet of “sensitive dependence on initial conditions.” With a small but quantum shift in how we look at it, wouldn’t it make sense that the influence of a very positive, or very negative, environmental message would bear a pervasive influence upon a tiny, emerging system at its very beginning, considering that each cell division will replicate that cell’s knowledge again and again?

The power of beginnings applies to virtually everything, from baking a pie to building a company to developing a human. The beginning contains within it the seeds of the project’s ultimate success...or its downfall.

Scientists are finding that our health throughout life is greatly determined by the prenatal circumstances in which

we develop. This “fetal programming” is different from what happens in conditions such as fetal alcohol syndrome, for instance, in which the toxic effects of the womb environment are noticeable at birth or early in life. The new findings refer to conditions programmed during fetal development which may not show up until an individual is in his or her 40s or 50s! For example, there are now strong links between low birth weight and heart disease, poor nutrition in early pregnancy and diabetes, and high birth weight and breast cancer in women.

The practical effect of this research shouldn’t be for pregnant parents to panic, but rather, for them to be vigilant about following the nutritional guidelines provided by their doctor or midwife, such as getting enough folate prior to conception, eating enough extra calories—of the proper foods—during pregnancy, and gaining the recommended amount of weight. This ensures a healthy baby’s body.

The Mind Is Shaped in the Womb

However, there is far more to an individual than a physical body, and scientists now recognize that lifelong mental well-being begins in the womb as well. This supports findings from the field of prenatal and perinatal psychology that have long suggested that circumstances surrounding conception, pregnancy, labor, birth, and the postpartum period have profound influences on lifelong emotional health and well-being. There are countless fascinating case histories in the literature to support the connection between experiences in



utero and certain compulsions, repetitive behaviors, fears, and fascinations in later life.

The hot scientific topic these days is brain development. (Indeed, my book *Parenting for Peace* is designed as a road-map for fostering the healthiest possible brain development, beginning in the womb.) Data from rigorous studies point to the likelihood that a pregnant mother's chronic stress has long-term negative effects upon the developing fetal brain. This includes an increased risk of depression and lower tolerance for stress later in life. While we're in the womb, our brain develops in direct response to our mother's experience of the world. Scientists now know that a pregnant woman's moods have a significant impact upon the brain development of her baby.

If a mother is consistently filled with anxiety or stress during her pregnancy, the message communicated to her baby (via stress hormones) is that they are in an unsafe environment—regardless of whether or not this is actually true. The baby's brain will actually adapt to prepare for the unsafe environment it perceives it will be born into! Chronic stress in pregnancy tends to sculpt a brain suited to survive in dangerous environments: quick to react, reduced impulse control, and a dampened capacity to feel calm and content. This isn't the mental health foundation we want for a generation of peacemakers.

Chronic joy, by contrast, allows for optimal development of each organ, the brain in particular, predisposing the baby to greater health, serenity, and intelligence. Such traits constitute the foundations of lifelong personality.

Here, it seems, we see "science and spirit" intersecting. "Hard" research from the field of neuroscience is now

CHRONIC JOY ALLOWS FOR OPTIMAL DEVELOPMENT OF EACH ORGAN, THE BRAIN IN PARTICULAR, PREDISPOSING THE BABY TO GREATER HEALTH, SERENITY, AND INTELLIGENCE.

giving empirical credence to what many sacred ancient teachings have been saying through the ages: that during the time when we are being knit together in the womb, we are wired with lifelong lessons about who we are and how we fit into the world.

Stress and Pregnancy

What affects babies in the womb is not a random stressful moment here or there, once in a while. But if a pregnant mother's thoughts and emotions are persistently negative, or if she is under unrelenting stress, the internal message her hormones deliver to the developing baby is, "It's a dangerous world out there." The fetal brain is then wired to thrive in a dangerous world.

That kind of brain is reactive and impulsive, and short on attention. Some scientists posit that regulation disorders such as ADD/ADHD and OCD may have their beginnings in the womb, when the brain's basic regulatory wiring is laid down. Although the origins of autism remain



a mystery, one important clue is certain zones of “malfunctioning circuitry” in brains of autistic people, such as in the area that normally processes faces. Why is this? One place to look (although few people have) is the developmental stages occurring during and after birth. This is a period of rapid reorganization of brain development mediated by many hormones, most notably oxytocin, the so-called “hormone of love.” Several studies have found that autistic children show abnormalities in their oxytocin system.

Critical early development of the orbitofrontal cortex—our social-emotional “success center”—occurs just after birth. This is when a complex hormonal cocktail orchestrates intricate exchanges between the mother and her newborn child, all organized around their face-to-face engagement with one another. In spite of much scientific data attesting to the neurobiological havoc that ensues for a newborn separated from its mother after birth, hospital protocols typically disturb the first hours of life. Too many newborns end up receiving a “faulty imprint” (connecting with things, not faces), which can prevent healthy synaptic formation in the areas of the brain that process faces—as well as human rapport.

What’s a Mother-to-Be to Do?

This may sound hopeless. But sometimes getting a different perspective on stress in general—and stress in pregnancy—can be very helpful. And parents who know a few basics of fetal development hold an important key to their child’s lifelong emotional health and well-being. They can be mindful of the unceasing question being asked by the baby in the womb, and continually answered chemically and energetically via the mother’s thoughts, feelings and behaviors: *What kind of world am I coming into, Mommy?* If they understand that this basic question—and its nine months’ worth of answers—is what essentially drives fundamental aspects of their baby’s brain development, they can begin to understand how important it is for the pregnant mother to feel supported, loved, and safe, so their baby can arrive ready to love and learn, not struggle and fight.

Author and teacher Laura Huxley, late widow of visionary author Aldous Huxley, offered this practical suggestion in her gorgeous book, *The Child of Your Dreams*:

...if you can take even five minutes a day to think good thoughts, listen to your favorite music, or nourish yourself in any way you want, your kindness will be multiplied a thousandfold and become an organic part of a person’s being for years to come. Five minutes of care is worth years of well-being.

U.C. Berkeley biology professor Marian Diamond points out that the Japanese have said this for more than 2,000 years, with the word *tykio*, which means, “think pleasant thoughts.”

And fathers are in the mix, too. One of the best ways that a “pregnant father” can contribute to his baby’s optimal development in the womb is to love, support, celebrate, and cherish his baby’s mother. Also, he should dream of the great and noble qualities he wishes for his coming child. His perception of life will strongly influence his baby’s mother, who will relish his strength, creativity, and sense of hope at this momentous time.

There are researchers who suggest that one of the best ways that you can support your baby’s psychological development in the womb is to embrace pregnancy as an honor and to greet your baby as an aware being, registering everything you do and say. This conscious approach to prenatal parenting leads to advances in healthy child development, cultivates early loving relationships toward the unborn child, and strengthens parental and family bonding. 



Marcy Axness, Ph.D., is an early development specialist, parent coach, and author of Parenting for Peace: Raising the Next Generation of Peacemakers. An authority on adoption, prenatal development, and Waldorf education, Dr. Axness is a popular international speaker and has a private practice counseling parents-in-progress. She considers as her most important credential being mother to Ian and Eve, both in their twenties. Marcy is offering PATHWAYS readers a free copy of her “7-Step Guide: Helping Your Child Release Stuck Behaviors” ebooklet, a powerful mind-body tool for parents to use with children of all ages. Grab it at ParentingForPeace.com/unique-7-step-parenting-tool. View article resources and author information here: pathwaystofamilywellness.org/references.html.

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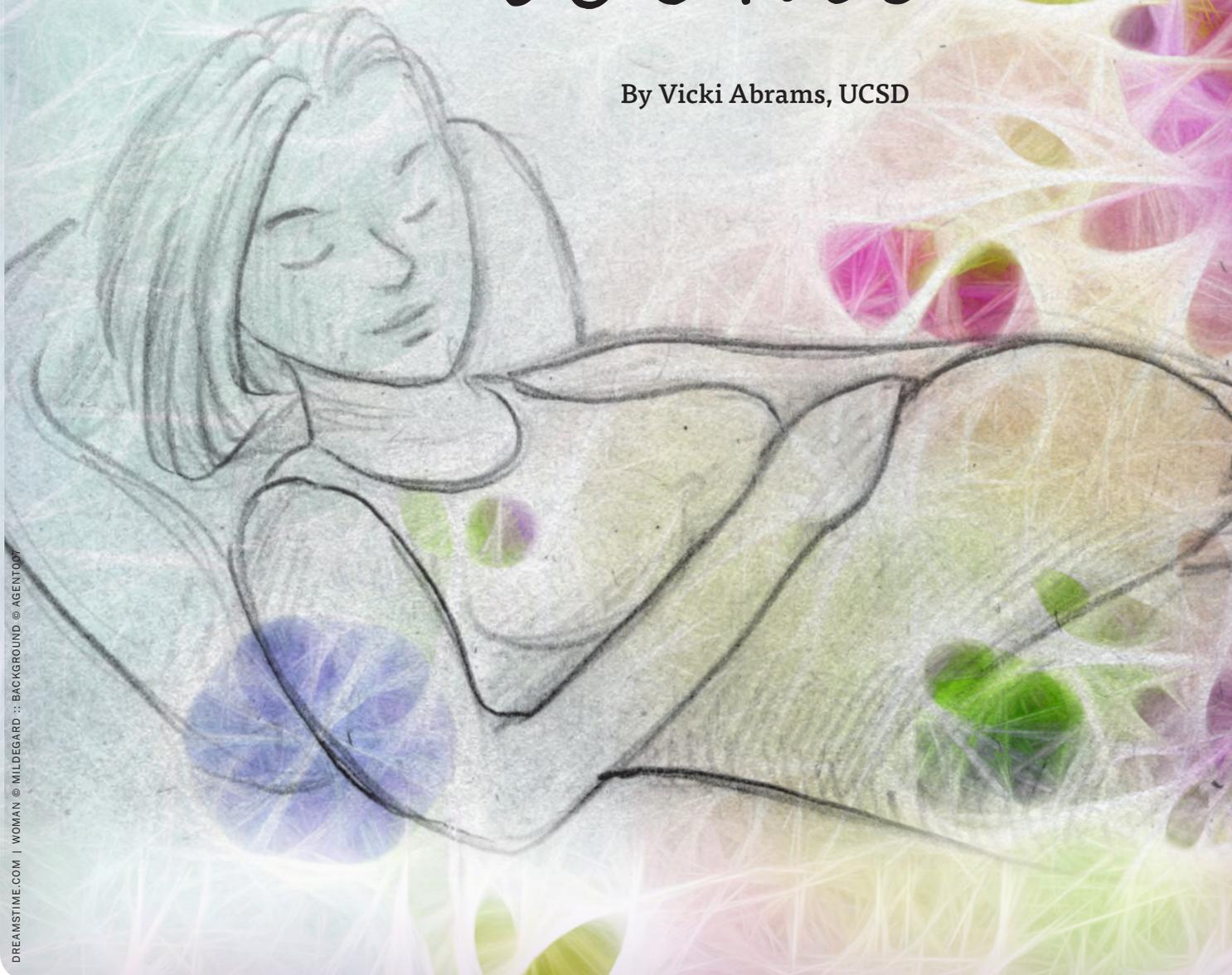
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The Environment of the Womb

By Vicki Abrams, UCSD



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The environment of your womb is rich with sounds and sensations, and your impressions of the world continually filter through to your baby.

Each sensation—pleasurable or uncomfortable, imaginary or real—releases chemicals through your body which have an effect on you and your baby.

Ultrasound monitoring has shown that minutes after a pregnant woman experiences a stressful event, her baby responds with an accelerated heart rate or a strong kick.

When the environment is peaceful, a mother's unborn baby is peaceful as well, and able to play and grow in his own natural rhythm, without needing to fight against imposed stress by his mother.

By four to five months' gestation, a baby in utero has similar awareness and feelings to a newborn. By holding your baby in your awareness each day, as you sing and talk to her, dream about and welcome her, sensations of love flow through you, enabling her to grow into an amazing human being.

When the input you receive through your five senses is soothing, your body releases health-promoting chemicals. It's been demonstrated that adrenaline, noradrenaline, oxytocin, serotonin, and most other messenger molecules are transported across the placenta.

By bringing awareness to the sensations you imbibe through your five senses, you create a nurturing, positive environment in which your baby can thrive.

The following practices can support you in experiencing and deepening this connection every day.

Connect. Several times during the day, tenderly place your hands on your belly. Imagine yourself holding your baby as she sleeps or kicks inside your womb. Gently caress your belly while speaking softly to her. Loving or therapeutic touch sends relaxation and healing to you and your unborn baby. Spend time connecting with your baby through the sense of touch, even before she is in your arms.

Soak. Draw yourself a luxurious bath, lighting candles and diffusing a soothing aroma, such as

lavender, neroli, or orange to create a relaxing atmosphere. As you feel yourself and your baby floating together in the warm water, affirm that you are both loved, at peace, and completely supported.

Speak Sounds of Love. The soothing timbre of your own voice is perhaps the single most nourishing sound that you can share with your baby. Take some time each day to sing, coo, read to, and talk to your baby, knowing that he or she is listening.

Pregnancy is not just something that is happening to you; it is a miraculous unfolding that you are co-creating. For nine months, you are your unborn baby's environment; your baby is affected by each one of your experiences.

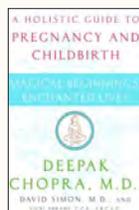
Pregnancy is a journey that will take you beyond your mind and body. It will enliven your compassion and reveal the most intimate truths of your soul.

Be in the experience, and cherish every moment. It will be gone before you know it: the big belly, the movements felt from inside, the pregnant waddle, the wonderful looks from passersby, and the sensations of having your baby growing inside your body.

Pregnancy offers a unique opportunity to become deeply connected with your body, your growing baby, and, ultimately, the creation of life itself.

You and your baby are one. 🍷

This article is adapted from the book *Magical Beginnings. Enchanted Lives*, co-authored by Vicki Abrams, Deepak Chopra, and David Simon, M.D.



Vicki Abrams, UCSD, is the director of childbirth programs at the Chopra Center. Abrams is an international board-certified lactation consultant and childbirth educator, as well as a prenatal yoga instructor. She co-authored the book *Magical Beginnings and Enchanted Lives* with Deepak Chopra, M.D., and David Simon,

M.D. You can visit her website at journeyintobirth.com.

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Healing Birth

By Jeanne Ohm, D.C.

During our first home birth, I can remember reaching a state I had never been in before. In spite of the many intense experiences I'd had in my life up to that time, this experience brought me to a new edge. I looked over to my husband, Tom, for assurance. I was entering into the transition stage of labor, the stage that necessitates letting go. My fear of the unknown made me clench onto control even harder. I blurted out, "I don't know if I can do this!"

For Tom, the decision to birth at home was a logical conclusion that respected normal physiology. For me it was a desire to own that confidence, coupled with a fear of the hospital, a lack of trust in their interventions, and an intellectual pinch of downright rebellion against needing their system to accomplish a normal body function like birth.

In theory I respected the body's ability to function. In reality, unlike Tom, my upbringing and previous experiences were being challenged. For me, this first home birth was a paradigm shift.

In his usual matter-of-fact way, Tom said, "Of course you can do this. You're in a woman's body and that's what they're designed for. You're doing just fine!"

I retorted, "How do you know I'm doing fine? You've never been to a birth before!"

In response, he put his hand on my shoulder, and looked me in the eyes. "Yeah," he said, "but I know you, and you are being you, and that means you are doing just fine."

Those reassuring words soothed my anxiety. A physiological state of ease ensued. My intellect loosened its tight grip to the intelligence of the heart. Labor progressed normally, and Justin was born shortly after.

Such resounding trust in normal, natural physiology does not always come easy, but it comes with experience. Tom had grown up in a family who trusted in the body's ability to function. This was in stark contrast to my upbringing. I had undergone three major surgeries by the time I was 6 years old. The traumas of separation and estrangement that followed hammered home in me the belief that healing happened with medicine and surgery.

Together we had been introduced to the chiropractic principle that life expresses intelligence, and that our

body's own innate intelligence knew what the body needed at every given moment. Chiropractors recognize that the nervous system is the conduit for this intelligence, and that a nervous system free of interference leads to the expression of normal physiology. Chiropractic was the beginning of the biggest paradigm shift in my life—moving away from learned fears into inherent trust and respect.

So when we decided to have our unattended home births, in theory it seemed consistent with this philosophy. But as Joseph Chilton Pearce so nicely implies, theory is not real or worth talking about unless it has been experienced.

Back then I really knew very little about birth and did not realize the major impact birthing has on the future of human potential. My experiences of all six of our home births taught me it is all about the baby. My continuous observation of perinatal women has proven that the greatest, most effective evidence-based science is that of normal physiology. Thirty-five years working with pregnant moms in preparation for birth has shown me that perinatal chiropractic care leads to safer, easier births for both mothers and babies. And most important, I now know that if we are to heal the world (and heal our species), we must first heal birth.

All About the Baby

Our pregnancy and birthing choices were made from the perspective that it's all about the baby. We knew that the baby would be exposed to all of my chemical input, so I knew to avoid all toxic substances. Additionally, I knew that procedures like epidurals may appear to help the mother, but would have potential side effects for my baby—so they were not an option. When I was first offered ultrasound in my fourth pregnancy, my antennas immediately went up. There was no convincing information that said it wasn't harmful, and for me to make an informed choice on this matter depended on that information. So I stuck with the tried-and-true, non-invasive fetoscope and measuring tape for all of my pregnancies. To "see" my baby, I simply got quiet, closed my eyes, and connected.

I was also very cognizant that this baby inside of me was aware of my emotional state, although this thinking was not promoted at the time. Without knowing the actual



hormonal exchanges that were happening, I knew that this little one was a living, conscious being sharing all of my experiences. Talking with my baby in utero and avoiding stress were two ways of acknowledging his sensitivities. I had read Ina May Gaskin's book, *Spiritual Midwifery*, and it was clear to me that a mother's emotions in labor had a profound impact on its progress. I figured the same was true in pregnancy.

Normal Physiology is the Greatest Science

The science of chiropractic emphasizes that it's crucial to respect normal physiology. This translated easily to pregnancy and birth. Of course the intelligence that Guyton's *Physiology* refers to as "that mysterious something" knew just what my baby and I needed at any given moment. I optimized my body's function with regular chiropractic adjustments. I ditched the due-date theory after my first pregnancy. Although I had feelings similar to all women at the end of pregnancy—"Are we there yet?"—I also knew that any interference to the baby's timeline in coming out could negatively affect my birth and baby. Induction in any form, even the "natural" suggestions like castor oil, were a violation of normal physiology, and therefore a potential harm to my baby.

Labor proceeded with me calling the shots—or, rather, me listening to my body's cues. This was different for each of my six labors. My positions, and my need for nourishment, rest, or movement, were all personalized to each particular birth. There were no schedules to adhere to, no threatening policies, no prodding strangers to tolerate, and no negative energy. There was a caring family, close friends, and sometimes an amazing midwife. Always supportive, always confident, and all loving.

Until recently, there was not too much knowledge about the hormones of birth. Pioneers in the natural birthing world like Michel Odent, M.D., and Kerstin Uvnäs-Moberg, Ph.D., have introduced us to the powerful hormone, oxytocin, and how the medicalization of birth may be altering the expression of human potential, individually and as a

THERE WERE NO SCHEDULES TO ADHERE TO, NO THREATENING POLICIES, NO PRODDING STRANGERS TO TOLERATE, AND NO NEGATIVE ENERGY. THERE WAS A CARING FAMILY, CLOSE FRIENDS, AND SOMETIMES AN AMAZING MIDWIFE. ALWAYS SUPPORTIVE, ALWAYS CONFIDENT, AND ALL LOVING.

species. In other words, the technocratic procedures that mothers are told will make birth safer actually impede its natural process. Rushing to the hospital, vaginal exams in labor, fasting, insensitive or disempowering phrases by hospital staff—all put mothers into a fear-based, sympathetic fight-or-flight mode, which is counterintuitive to the progression of labor. Add mandatory fetal monitoring, restrictive and forced positions, induction or augmentation of labor, and epidurals and other invasive chemicals, and we radically alter normal physiology and hormonal production. What is sacrificed? The release of oxytocin and a safer, easier birth for both mother and child.

Chiropractic in Pregnancy for Safer, Easier Births

Upon my introduction to chiropractic in 1976, I heard that women under chiropractic care had easier and faster births than most. When I became an instructor for the ICPA Diplomate program in 1999, teaching the module Perinatal Care, I wanted an explanation of what I, too, had found in practice with pregnant moms for almost 20 years. In those years I observed that there were three causes of neurological upset that lead to dystocia (difficult labor): physiological/neuro-biomechanical causes, emotional causes, and technocratic/medical causes. I sought to discover the potential relationship between the chiropractic adjustment and the prevention of these three causes. Here is what I found:

Physiological and Neuro-Biomechanical

Causes: Williams Obstetrics lists three components as causes for dystocia: power (inadequate nerve function); passage (unbalanced, misaligned pelvic bones); and passenger (suboptimal baby positioning). Simply put, this is how the adjustment relates to these three causes:

POWER: The chiropractic adjustment reduces interference to the nervous system allowing for greater physiological function and performance.

PASSAGE: The adjustment creates balance in the pelvic bones, muscles and ligaments.

PASSENGER: This balanced pelvis contributes to optimal baby positioning in birth.

Emotional Causes: Fear is the greatest enemy of a mother in labor. Understanding the autonomic nervous system (ANS), we realize that if we can establish a state of ease and overcome sympathetic override (fight-or-flight) in pregnancy and labor, the production and effects of oxytocin are maximized. Chiropractic adjustments affect the ANS via the vagus nerve. By impacting the ANS, we are building resilience to sympathetic override and strengthening the function of the ANS's social branch. Additionally, the vagus nerve is responsible for oxytocin release. Care up to and during birth may have a significant effect in the release of this important hormone.

What's more, when a pregnant mother is surrounded with the hope and ease offered by the chiropractic philosophy ("Life expresses intelligence"), her social vagus is further activated, and she approaches birth in a stable, assured, trusting manner.

Technocratic Causes: The typical technological birth comes from the premise that pregnancy and birth are a disorder to be monitored and controlled. Somehow we



WHEN A PREGNANT MOTHER IS SURROUNDED WITH THE HOPE AND EASE OFFERED BY THE CHIROPRACTIC PHILOSOPHY, HER SOCIAL VAGUS IS FURTHER ACTIVATED, AND SHE APPROACHES BIRTH IN A STABLE, ASSURED, TRUSTING MANNER.

have allowed the mystique of technology to overcome our practical understanding of normal physiology. Technological intervention can be lifesaving at times. However, when every pregnancy and birth is approached from the fear-based premise of what can go wrong, we create problems that do not even exist. It then becomes easy to justify needless and invasive interventions, which have been shown to lead to further intervention. Although a woman may be led to believe that these interventions are better for her and her baby, she is frequently unaware of the potential harm these interventions can create.

Chiropractors have been a steady support for informed, conscious choice for over 100 years. Their greatest desire is that parents make evidence-informed decisions on all of their family's healthcare needs. This means reading all

evidence of interventions, and not depending solely on the one-sided, popular, technocratic perspective. I have known many chiropractors who are more knowledgeable of peer-reviewed literature on birth practices than many birth practitioners. And let's remember that chiropractors deduce from the greatest evidence-informed practice there is: the science of normal physiology.

To Heal the Earth, We Must First Heal Birth

The virtue of humility appears to be devolving. If you burden yourself with watching the news, if you are on any social media pages, or if you are simply observant, you may notice the hostility and aberrant behaviors so prevalent today. Where is the love? Why is it so hard for us to show respect and consideration to each other, or even to ourselves?

As my esteemed colleague Chris Kent, D.C., says, "Everything we experience is processed through our nervous system. If our nervous system is not functioning to its optimal level, our perception of the world is distorted and our ability to respond appropriately is compromised. This not only affects our physical health, but also our emotional and psychological function as well."

I propose that our nervous systems are being reprogrammed throughout pregnancy and especially at birth due to physiological, emotional, and technocratic causes. Modern lifestyle habits and technocratic birthing procedures have contributed to a deficit of our neurological function. The physical and emotional traumas to both the mother and baby in these widely accepted birthing practices have a direct effect on the healthy development of the infant's social vagal branch. As stated before, this nerve is responsible for the release of oxytocin, the "hormone of love." By depriving children of the proper development of this nerve function from birth, we are directly affecting the social well-being of generations to come. The consequences of this may impact the human potential in an immeasurable and insidious way.

Imagine during pregnancy, instead of relying on ultrasound to "see" our babies, we learn to be still and feel our babies' presence as they communicate with us. Imagine gently talking with them, conscious that they hear our words and feel our attention. Now imagine this quiet communication evolving into a powerful trust so strong that ordinary "hunches" emerge as vivid signals pointing us directly to our best course of action in birth.

Now feel how wonderful it would be to experience encouragement, respect, and support in pregnancy while approaching labor. Imagine the nervous system being strengthened and building resilience to the sympathetic overload we are exposed to daily. As we approach the time for birth, we allow labor to initiate on its own. We choose our birthing place based on comfort and safety—parameters that we choose from confidence, not fear. Instead of an

atmosphere of procedures or interventions, there is an ambiance of support and trust. The mother's choice for movement or rest is respected. Since there are no artificial chemicals interfering with natural hormonal production, the body's hormones are performing their amazing feats, and labor progresses just as it should.

When the baby's head appears, no physical force is applied to the baby's fragile neck and spine. There are no cuts to the mother's perineum, and so both mom and baby are in a state of awe. They are given as much time as desired to look into each other's eyes, activating the social vagus and priming it for its important lifelong role of loving, human expression. With no rush to whisk the baby away, to cut the cord, examine or weigh her, we take a birth pause, and in that moment silently celebrate a new, unique human life.

Then, when we are both ready, following each other's cues, we bring our little treasure to our breast and together, from inside ourselves, with ease and assurance, we relax into the most comfortable position and continue the nurturing of our babies that happened so effortlessly in the womb. Mom is purring, baby is making those sweet suckling sighs. The vagus is communicating. Oxytocin is surging.

I will leave you with these wise words by Christiane Northrup, from the documentary *Giving Birth*:

The way babies are meant to be is with their mothers, skin to skin, between their breasts, the outer womb. They've just been in the inner womb for nine months, but we think somehow we have evolved technologically where we are beyond that, and so we lose instinctual wisdom.

Birth is a magical time of bringing a new human consciousness into the world. The baby's brain is ripe for the first impressions of what it's like to be on earth. How it's done affects that baby for the rest of its life. A child needs to be greeted with gentleness, with calmness, with love, and with a sense of, "It's OK, you can relax now. You're here." 🌱



Jeanne Ohm, D.C., is an instructor, author, and innovator. Her passions include training chiropractors for wellness care in pregnancy, birth, and infancy; forming alliances for chiropractors with like-spirited practitioners; empowering mothers to make informed, conscious choices; and developing pertinent educational materials. View article resources and author information here: pathwaystofamilywellness.org/references.html.

Oxytocin

Finding the Love of Birth

By Sarah Buckley, M.D.

Perhaps the best-known birth hormone is oxytocin, the hormone of love, which is secreted during sexual activity, male and female orgasm, birth, and breastfeeding. Oxytocin engenders feelings of love and altruism; as Michel Odent says, “Whatever the facet of love we consider, oxytocin is involved.”

Oxytocin is made in the hypothalamus, deep inside the mammalian brain, and stored in the posterior section of the pituitary gland—the “master gland” of the endocrine (hormonal) system—which releases it in pulses. It is a crucial hormone in reproduction, and mediates what have been called the ejection reflexes: the sperm ejection reflex with male orgasm (and the corresponding sperm introjection reflex with female orgasm); the fetal ejection reflex at birth (a phrase coined by Odent for the powerful contractions at the end of an undisturbed labor, which birth the baby quickly and easily); and, postpartum, the placental ejection reflex, and the milk ejection or let-down reflex in breastfeeding.

As well as reaching peak levels in each of these situations, oxytocin is secreted in extra amounts during pregnancy, when it acts to enhance nutrient absorption, reduce stress, and conserve energy by making us more sleepy. Oxytocin also causes the rhythmic uterine contractions of labor; oxytocin levels peak at birth through stimulation of stretch receptors in a woman’s lower vagina as the baby descends.

High maternal oxytocin levels during labor and birth also benefit the baby. Research has found that maternal oxytocin crosses the placenta and enters the fetal brain during labor, when it acts to protect brain cells by switching them off, allowing low oxygen consumption at a time when fetal oxygen levels may be naturally low.

High maternal oxytocin levels continue after birth, culminating with the birth of the placenta, and are enhanced by the baby’s pre-breastfeeding and breastfeeding behaviors. Elevated maternal levels of oxytocin will protect against postpartum hemorrhage at this crucial time by ensuring efficient uterine contractions.

The baby also has been producing oxytocin during labor, perhaps even contributing to the processes of labor. So, in the minutes after birth, both mother and baby are bathed in an ecstatic cocktail of hormones. At this time, ongoing

newborn oxytocin production is enhanced by skin-to-skin and eye-to-eye contact. Newborn levels begin to subside during the first hour after birth, but remain above normal for at least four days. Infant oxytocin levels are also elevated during and following breastfeeding, through activation of the vagal nerve.

During breastfeeding, oxytocin mediates the let-down reflex, and is released in pulses as the baby suckles. During the months and years of lactation, oxytocin continues to act to keep the mother relaxed and well-nourished. One researcher calls it “a very efficient anti-stress situation which prevents a lot of disease later on.” In her study, mothers who breastfed for more than seven weeks were calmer when their babies were 6 months old than mothers who did not breastfeed.

Outside of its role in reproduction, oxytocin is secreted in other situations of love and altruism (for example, when sharing a meal). Researchers have implicated malfunctions of the oxytocin system in conditions such as schizophrenia, autism, cardiovascular disease, and drug dependency, and have suggested that oxytocin may mediate the antidepressant effect of drugs such as Prozac. More recent research has implicated oxytocin in trusting interactions between individuals, which may reflect its role in lowering activity in the amygdala, a brain structure that processes fearful emotions. 📌



Dr. Sarah Buckley is a family physician, author of the best-selling book *Gentle Birth, Gentle Mothering*, and mother of four home-born children. She has a special interest in the hormones of labor and birth, and her 2002 article, “Ecstatic Birth, Nature’s Hormonal Blueprint for Labour,” was one of the most popular ever published by *Mothering* magazine. Her 2015 report, “Hormonal Physiology of Childbearing,” has been described as “one of the most revolutionary and influential publications on maternity and newborn care ever issued.” Sarah is a Ph.D. candidate at the University of Queensland as well as a writer and lecturer on pregnancy, birth, and parenting. Visit Sarah at sarahbuckley.com and at her membership site, gentlenaturalbirth.com. View article resources and author information here: pathwaystofamilywellness.org/references.html.





Build confidence in your body's superb design. Have peace-of-mind about what's happening for you and what lies ahead.

Love your pregnancy & birth with Dr Sarah Buckley



HEAR MY CRY

Why “cry it out” may be one of the most misguided parenting philosophies of our generation

By John Edwards, D.C.

Babies cry. Then they angry cry. Then they stop. Imagine you’re hanging out by a riverbank with some co-gatherers a couple million years ago, looking for some fish, and you hear a low and menacing growl behind you. To your right, the net-mender’s little baby has dropped her straw doll into the water and starts crying. You look over your shoulder and emerging from the distant cypress grove is the hairiest, toothiest, meanest-looking beast you’ve ever seen. He glistens with drool in anticipation of making you his dinner.

This is a stressful situation. On one hand, it would make complete, logical sense to toss the beast an appetizer in the form of a screaming baby and make your getaway. If you think about the common sense of it, that would be the best route for self-preservation. Yet everyone reading this is thinking, “Are you insane?” The frontal cortex and other relationship centers in the brain have evolved not for personal benefit, but for the benefit of the community.

We wouldn’t have gotten very far as a species if it weren’t for a couple of rather amazing developments. For one, the round shape of a baby’s head and face, and the disproportionate size of their eyes with the rest of the face, is something we find absolutely adorable.

Second—and this is something I teach to all of my new parents—babies have developed a set of sounds that tell their caretakers exactly what they need. Priscilla Dunstan has an echoic memory, which means she has perfect recall of sounds. She’s been a violinist in several world-renowned orchestras. Priscilla has used her talent for good. When her son was born she noticed he kept making the same five noises before he’d start to cry. When she went out with her new “mom” ears, she started noticing every other baby

made essentially the same sounds, regardless of language or ethnic background. Brown University researchers came to Australia to test out what she was claiming, and credited her with discovering pre-cry, a set of noises that were expressions of need, which if left unmet would predictably lead to crying.

So now we have evidence of structural and behavioral adaptations that let an adult know when an infant has a stress response. These come packaged with a baby for a reason.

In my article “The Social Vagus” [page 14], I discussed the programming we incur at an early age. The reason “cry it out” may be one of the most misguided parenting philosophies in our generation is because of this social aspect of our nerve system. As adults, we are designed in part to



help babies survive. The programming that happens during that first year of life tells the infant's brain which aspect of the nerve system needs to be active during times of stress in order to adapt to the environment—the preferred system being the one that gets your needs met. As a tired baby, you try communicating the sound “owwww” to your parents to tell them you're tired (social nerve system). They either respond to your cue, in which case this communication strategy seems to work, or you go further down the evolutionary aspect of the nerve system to the sympathetic nerve system.

What does sympathetic, or fight-or-flight, look like in a baby? It's an angry cry. It looks pretty much like the personification of a hornet's nest. The baby's arms are shaking, the fists are clenched, face is flushed, eyes are squeezed shut with tears coming out. And holy Moses, did you ever know your child had that kind of lung capacity?

Reptiles have the most ancient brains of the vertebrates, and their initial response to my dog discovering them is to freeze and be still. This parasympathetic response to stress is the first resort of the lizard and the last resort of the frustrated baby. If the sympathetic response of yelling for attention doesn't work, the baby will think that maybe this simply isn't an environment where needs are met. The body shuts down the emergency response and begins to focus on conservation and survival.

A cell can only have one of two states: growth or protection. Why waste the fuel on growth? Who needs higher brain functions or has time for concepts like fairness, compassion, and cooperation when the message being programmed is to adapt to the harshness of this world?

A healthy, mature frontal cortex not only allows these positive behaviors to manifest, it also actively suppresses the nerve system's fight-or-flight survival mode. If the frontal cortex isn't being properly stimulated, the brain operates from the temporal lobes and the personality becomes aggressive, selfish, and primitive. After all, it evolved for survival using limited environmental resources. Cooperative play-dates with other children and playing with tangible natural materials does double-duty in toddlers as their brains mature, because spatial awareness and social interaction work the frontal cortex in a way that video games don't. Our A-V culture hyper-stimulates the temporal lobes and the occipital part of the brain, where the auditory and visual centers reside.

There is so much intersection between the three autonomic states, and with the sensory overload in our society it makes sense to build the dominance of the frontal cortex as early as possible, through development of the social nerve system.

I've cared for hundreds of infants of stressed-to-tears parents, and I've yet to meet one baby that was crying to be annoying or a jerk. I'm usually told by the parent of a colicky child that the pediatrician said he'd grow out of it. Well, the crying may stop, true, but the neurological programming will persist. It breaks my heart to see parents so pushed to the brink by their baby that they'd consider doing him or her harm. I always wonder if the outcome would have been different if someone recommended pediatric chiropractic to those parents—if the crying would have reduced or stopped enough to give that mom or dad the ability to pause and listen to a healthier natural instinct.

The three aspects of the autonomic nerve systems have a purpose. Having the functional capacity to glide between the three as appropriate is a great marker of a robust nerve system. For more than 100 years, chiropractors have discussed how mental stress can create subluxation, or interference in how the brain and body communicate. The neuroscience is now starting to show the connection between stimulating certain tracts of nerves in the spine and the two-part relay system between the cerebellum and the frontal cortex. Activating these pathways helps mature

or repair the brain structures that house the social nerve system. So not only do we know that stress can create interference in the nerve system, but we know that adjustments can build our neurological defenses to stress!

If we're attempting to enhance our children's

resilience to our environment, it would make sense for us to introduce balance to those three systems—to encourage healthy input physically through activities and adjustments, mentally and emotionally by recognizing a child's needs, and socially by helping them engage the part of the brain that distinguishes us as a special kind of mammal. What would happen if we programmed a generation with a subconscious wave pattern that says “your needs will be met if you simply communicate them”? Could you imagine if we addressed this a step earlier, by regulating the autonomic tone of the mother as the child develops within her womb? It's certainly a concept worth exploring. 🌀

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Dr. John Edwards owns Mama's Chiropractic Clinic in southwestern Florida, which provides care for expecting mothers and children. A Palmer graduate, he designed Mama's to help contribute to the body of research on pregnancy and subluxation. In his free time, Doc enjoys exploring Florida's waterways and traveling with his wife, Erica. Visit him online at mamaschiropractic.com. View article resources and author information here: pathwaystofamilywellness.org/references.html.

VIVA VAGUS!

What happens in the vagus nerve affects every aspect of our lives

By Susan Bennett

The vagus nerve is the longest of 12 pairs of nerves that originate in the brain, serving as the brain's central command in the fight against stress, inflammation, and toxicity. The vagus helps regulate our "fight or flight" response, digestion, detoxification, various aspects of heart rate, and blood pressure. Recent research indicates it also regulates our immune system and provides us with a neurological infrastructure that determines many of our emotional responses, enabling us to empathize with, bond with, communicate with, and relate to others.

Called "the wandering nerve," the vagus is the longest nerve in the body. It begins at the brainstem, located near the base of the skull, and has branches that extend throughout the head and two branches that travel down each side of the neck and extend throughout the body. It actually consists of nerve pairs: One nerve sends information, and the other nerve receives. An underactive or underdeveloped vagus nerve is now thought to be one of the major contributors to symptoms of autism. The vagus nerve is part of what is called the autonomic nerve system, which automatically regulates the functions our mind does not consciously control.

Working independently of our conscious mind, the autonomic nerve system controls functions essential to survival. It consists of two components: the parasympathetic and sympathetic nerve systems. The parasympathetic system is responsible for stimulation that occurs when the body is at rest, especially after

eating—including sexual arousal, salivation, tears, and digestion. The sympathetic nerve system is responsible for stimulating activities associated with the fight-or-flight response to perceived danger. The vagus nerve is part of the parasympathetic nerve system and inhibits the flight-or-flight response. It contains 80 to 90 percent of the body's sensory neurons (also called afferent neurons), which provide information to the central nerve system and brain from organs and other parts of the body.

The Polyvagal Theory of Autopilot

University of Illinois researcher Stephen Porges proposed a polyvagal theory that explains how our autonomic nerve system actually consists of three overlapping nerve systems that can independently control autonomic functions, which evolutionarily developed over millions of years.

Porges identifies our three nerve systems as:

Myelinated vagus. When we are not threatened, we use our most evolved mammalian nerve system, which Porges refers to as the myelinated vagus. This system evolved to inhibit the more primitive nerve systems and enable high-functioning mammals to support social behavior. This social behavior includes determining friend from foe, evaluating whether the environment is safe, and communicating with a social group. The vagus nerve is part of what is also called the parasympathetic nerve system.

The sympathetic nerve system. When we are in a life-threatening situation that the parasympathetic system cannot address, the body automatically overrides it and uses the sympathetic nerve system to trigger adrenal glands to secrete the hormone cortisol, which causes the classic flight-or-flight response to a scary situation.

The non-myelinated vagus. If we cannot escape the threat, the body triggers the most primitive nerve system, which Porges refers to as the non-myelinated vagus. The non-myelinated vagus is theorized to come from a turtle-like ancestor, and causes us literally to be paralyzed with fear and possibly faint, just as a turtle's head and limbs contract into its shell when it is threatened, or when an opossum plays dead.

In sensory processing disorders (SPD) like autism, the vagus nerve does not strongly enough signal the body to perform autonomic functions. If it does not do its job, then the more primitive parasympathetic nerve system dominates, resulting in a chronic flight-or-flight response by the body. This has many consequences, and can result in symptoms, behaviors, and health issues frequently associated with SPD.

For more primitive non-mammalian animals, such as reptiles, Dr. Porges proposes that they do not experience emotions such as empathy and love. These emotions are what enables social animals to live in social groups, to pay attention to social cues, to communicate, to bond, to work together, and to nurture and raise offspring. The vagus nerve provides the neurological support

The Vagus Nerve System

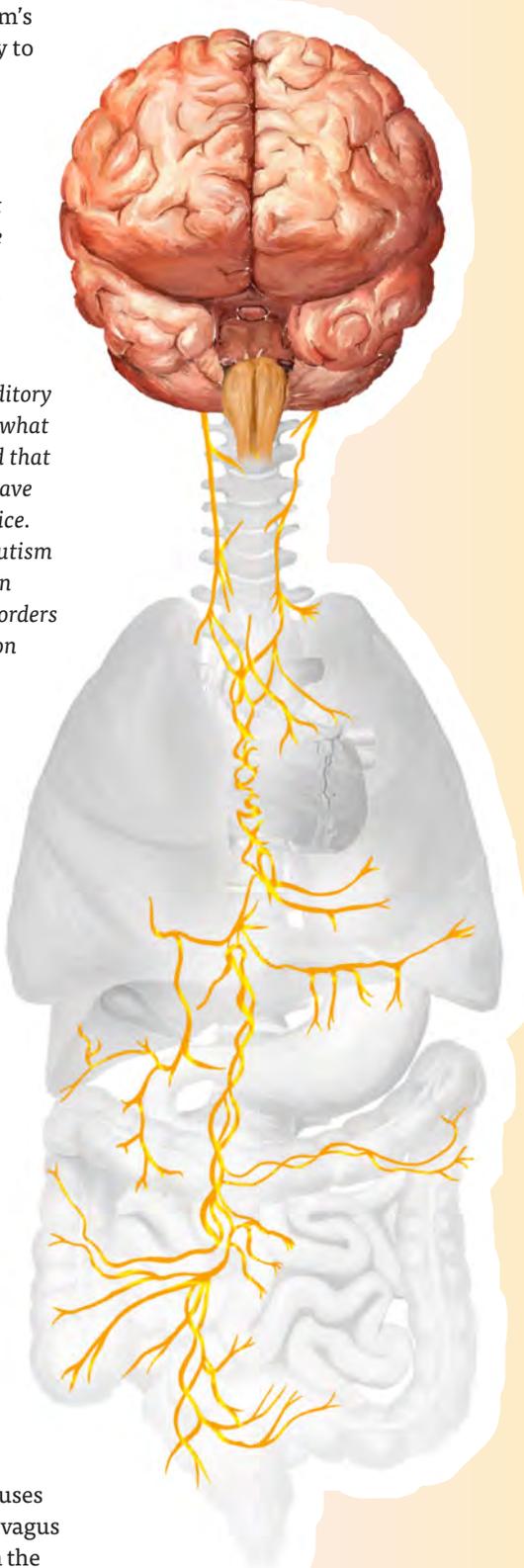
needed for living in a social group. It also regulates breathing, heart rate, and digestive activity when the body is in a relaxed state. The vagus nerve overrides the sympathetic nerve system's propensity to flee from close proximity to other creatures.

Porges says:

If you study trauma you realize that people who are traumatized often don't like to be in public places because noise or sounds bother them and they have great difficulty extracting human voice from background activity. Well, that's the same thing with autism. Over 60 percent of autistic individuals have auditory hyper-sensitivity. And they suffer from what is often viewed as another paradox, and that is they're hypersensitive to sound but have great difficulty in extracting human voice. And this becomes explained between autism and trauma. You'll see the same thing in depression, schizophrenia; all these disorders have both an underlying state regulation disorder, an underlying flatness of affective tone on the face, an underlying lack of proximity in their voice—and they also tend to be represented in a different autonomic state, meaning they tend to have higher heart rates and less vagal activity.

In the head, the vagus nerve affects how well we hear. The auricular branch of the vagus interacts with the ear, and the pharyngeal branch interacts with the ear, larynx, and palate of the mouth, carrying sensory and motor information. It also controls how eyes focus and attend to other people and works in conjunction with oxytocin receptors in the brain, which stimulate feelings of bonding, attraction, and love.

The vagus regulates heartbeat, lung expansion, and digestion, and stimulates the production of digestive and anti-stress enzymes and hormones (such as acetylcholine, vasopressin, and oxytocin). Interestingly, the vagus nerve uses the neurotransmitter acetylcholine. The vagus nerve manages the complex processes in the digestive tract, including signaling muscles in the stomach to contract and push food into the small



movement
sensory processing
thought
bonding
attraction
love
sight
hearing

heartbeat regulation
lung expansion

digestion
anti-stress enzymes
hormones

intestine and to secrete substances that properly digest food, including pepsin and intrinsic factor.

Connecting with the Cerebellum and Higher Brain

Signals from the human body are delivered from the initial receptors of touch, sight, smell, pressure sense, and balance to the spinal nerve roots and on to the spinal cord, where they are delivered to the lower part of the brain, called the cerebellum. These important signals feed the brain and develop its response to the environment based on the information they convey.

The cerebellum coordinates movement and controls all impulses, including thought. The signals are transmitted to the brain cortex (the outer layer of neural tissue in humans), which increases the frequency of firing, keeping the brain viable and healthy. Without this stimulation the brain loses its ability to actively control basic functions, regulating everything from breathing to pain.

It is a malfunctioning brainstem, where the vagus nerve originates, which causes many symptoms of sensory processing disorder. When the cortex receives insufficient input from the cerebellum, it becomes incapable of properly controlling the brainstem functions. When the vagus nerve is underactive, it results in an uncontrolled overactive midbrain, which creates imbalances in cranial nerve function. These imbalances in turn can cause sensory distortions such as photophobia (sensitivity to light), dizziness, inner ear pressure and sound distortion, problems with sleep, digestion difficulties, heart arrhythmias, and systemic pain and fatigue. The vagus nerve inhibits overexcitement; when it is not functioning properly, the midbrain over-fires. Also, mercury poisoning can block the action of acetylcholine, which the vagus nerve uses to transmit signals to other parts of the body.



Frequently Asked Questions

Why do individuals with autism spin? Spinning stimulates the vagus nerve, which helps regulate balance. It can actually be therapeutic and help someone with autism to become better oriented. Spinning can help to mature the balance system, which is the master integrator for all other senses in the body.

Why do individuals with autism flap their hands? This activity also stimulates and regulates the vagus nerve. The sensory feedback we receive from our extremities helps to orient us in space and tells us where our body ends and the rest of the world begins. In autism, individuals who do not receive enough sensory feedback from their extremities (proprioceptive feedback) have difficulty with their sense of identity and how they are oriented in space. It's the reason mothers intuitively tightly swaddle their infants in blankets—the vagus nerve system is not mature, and the gentle pressure helps to stimulate the vagus nerve, which triggers the release of calming neurotransmitters, putting the child at ease.

Why do individuals with autism have difficulty understanding language and language delays? Listening is actually a motor act and involves tensing muscles in the middle ear. The middle ear muscles are regulated by the facial nerve, a nerve that also regulates eyelid lifting. When you are interested in what someone is saying, you lift your eyelids and simultaneously your middle ear muscles tense. Now you are prepared to hear their voice, even in noisy environments. In some individuals on the spectrum, the muscle tone in the ear is not sufficient to block out background noises, making it both hard to hear and look at someone. Also, recent research indicates that there is a time lag in auditory processing in some individuals with autism so the sounds come in after the visual images, and the person speaking appears to be out of sync, with the words not matching what they see.

Why do individuals with autism have difficulty making eye contact? The neural system controlling spontaneous eye gaze is turned off. This newer, social-engagement system can only be expressed when the nerve system detects the environment as safe. You can't make eye contact in flight-or-fight mode.

Why do some autistic individuals speak with unusual modulation of the voice and enunciation? The vagus helps to modulate the larynx and muscles used for speech.

Why do individuals on the spectrum often lack animation in their faces, especially the level of the nose and above? The vagus nerve triggers animation in the facial muscles.

Why does auditory integration training work so well for many individuals on the spectrum? Auditory integration

THE VAGUS NERVE PRODUCES CALM AND FEELINGS OF WELL-BEING—THE OPPOSITE OF THE SYMPATHETIC FIGHT-OR-FLIGHT RESPONSE.



training stimulates the vagus nerve through the ear, increasing muscle tone that is normally stimulated directly through the vagus nerve.

What helps stimulate the vagus nerve to function more optimally? Deep breathing exercises, meditation, aerobic exercise (brisk walking, bicycling, running jogging), martial arts training, tap dancing, auditory integration training, interactive metronome therapy, drumming, oxygen therapies (hyperbaric oxygen), spinning, cranial sacral massage, and chiropractic adjustments. Relaxed, positive social interactions with friendly people who like the person and whom the person trusts also help.

Why do half of autistic individuals improve in level of functioning when they have a fever? The mechanism that spikes a fever switches on metabolic systems in the body normally switched on by a fully functional vagus nerve.

Why is the immune system frequently depressed in individuals with autism, subjecting them to many infections? The vagus nerve stimulates the immune system to fight off infections.

Why do individuals with autism often have high levels of toxins and heavy metals? The vagus nerve stimulates the body to detoxify.

Why is there a deficiency in B-12 in most individuals within the autism spectrum? The vagus nerve stimulates the production of intrinsic factor in the small intestine, which the body needs to make B-12.

What nutritional support can help protect and repair the vagus nerve? Viruses tend to activate when exposed to excessive levels of sugar and carbohydrates. Foods and supplements that support neurological repair, such as coconut oil and milk, sunflower lecithin, phosphatidyl serine, and choline, may also help.

What can I do to calm an overactive sympathetic nerve system that's keeping my child in fight-or-flight mode? Reduce external stressors, provide a calm, safe environment, and use humor to address potentially stressful situations. There are also supplements that can lower levels of cortisol. Taking steps to identify and rid the body of infections will also help to calm down the parasympathetic nerve system.

Why do meditation and relaxation techniques help? Deep breathing stimulates the vagus nerve connections in the lung area. So, for example, if you regularly and deeply

breathe in through your nose and expand your lungs, then hold in your breath for two seconds and release it through your mouth, you can immediately lower your blood pressure. The vagus nerve produces calm and feelings of well-being—the opposite of the sympathetic fight-or-flight response. Vagal tone is measured by tracking how the heart rate speeds up and slows down during breathing. Increased vagal tone stimulates better social feelings, which in turn stimulates better vagal tone in a virtuous cycle. In one study, meditators had increased vagal tone after nine weeks, which correlated with positive emotions.

Are there mainstream therapies being developed to improve the function of the vagus nerve? Pharmaceutical companies are currently sinking millions of dollars into research in this area to develop both drugs and devices to help stimulate the vagus nerve. Preliminary studies have indicated that vagal nerve stimulation (VNS) therapy currently used to reduce pharmacoresistant seizures in epilepsy may improve neurocognitive performance in individuals with autism, as well as alleviate depression in individuals with untreatable depression. The therapy is a surgical solution, in which a pacemaker-like device is implanted in the body to continually stimulate the vagus nerve. In the journal *Epilepsy Behavior*, researcher Y.D. Park reported a study with 59 autistic patients and six with Landau-Kleffner syndrome (epileptic aphasia). Improvements were reported in all areas of quality of life monitored, particularly alertness (76 percent at 12 months). But better standardized and long-term studies are required to assess the results better.

I'm personally not recommending an invasive surgery, but the concept of stimulating the vagus shows great promise. 🗣️



Susan Bennett is the founder of autismcoach.com, one of the oldest information and nutritional supplement websites for autism, which has been offering support to the autism community since 2000. The parent of an autistic child, Susan has devoted more than two decades to researching the underlying biomedical causes and treatments for autism. Her son, now 24, is on the honor roll at a 4-year college and is a professional pianist and composer who performs regularly throughout southeast Michigan. View article resources and author information here: pathwaystofamilywellness.org/references.html.

SENSORY SENSITIVITIES and Chiropractic Care

By Janaiah von Hassel

There are times when it seems that we over-label and under-respond to the many challenges of childhood. As a mother of two young boys who have each been diagnosed with sensory processing disorder (SPD) at one time, I've experienced this firsthand.

While the DSM does not report SPD as a stand-alone disorder, many therapists and parents are finding cause to explore its significant effects on adolescents. Toddlerhood itself is a world of learning how to process senses, and labeling those whose sensitivities or tolerances do not fit the norm as having a "disorder" is hardly helpful. However, for many children, an inability to properly integrate sensory intake can range from mildly annoying to downright devastating.

When my son was diagnosed at 2 with both autism and sensory processing disorder, his world was sent into a

tailspin over how his nervous system interpreted the world around him. I remember one day in particular when I was at a loss for how to help him. He had fallen and gotten hurt, and he ran to me crying with his arms outstretched, begging to be held in the security of his mother's arms. When I hugged him, he recoiled in utter dismay at the impact of my touch. He pulled away and curled up like a ball on the ground. He would reach for me, but pull away the moment I touched him. It was as if my touch were like needles on his skin. I sat next to him and together we cried.

My son would easily gag from certain textures of food. He was always pulling off clothing, and he screamed through his diaper changes. His world was a hostile environment, and there was no escaping it. He would wake up crying and shaking as his body tried to adjust to its surroundings. Any change in temperature was upsetting to him. Loud noises were bothersome, bright lights intolerable, and he became self-injurious in his attempts to escape what he interpreted as an overwhelming and painful world.

He didn't like to touch sand or Play-Doh, or to play in the grass or snow. While other children embraced the excitement of sensory-rich environments, my son tried to avoid them at all cost.

Sensory processing disorder is an impairment in detecting, modulating, or responding to sensory stimuli. In other words, the nerve system (brain, spinal cord, and nerves) is not working properly. Misalignments of the spine, called subluxations, can cause this malfunction in how the brain interprets sensory intake. That's exactly what was happening with my son.

For any parent dealing with a sensory sensitive child, the idea of chiropractic care can seem unfathomable. You might wonder how a child who can hardly bear to be touched could tolerate a chiropractic adjustment, and yet of every way we attempted to help my son with his sensory issues, chiropractic was the least invasive and by far the most effective.

When my son began receiving regular chiropractic care, I immediately saw an improvement in his ability to process his senses. Our chiropractor explained that my son had been in a chronic state of fight-or-flight.

Fight-or-flight is a psychological reaction to perceived





AFTER MY SON'S FIRST WEEK OF REGULAR CHIROPRACTIC CARE, WE WERE ALREADY SEEING A CALM COME OVER HIM. AFTER THREE MONTHS OF CARE, HIS ABILITY TO DETERMINE THE THREAT OF HIS SURROUNDINGS BASED ON HIS SENSORY INTAKE WAS COMPLETELY REHABILITATED.

harm. It is a stress response, and when the body is in this state, the function is to shut down everything that draws energy from the body so that it is free to escape the harmful situation. If you're being chased by a bear, the fight-or-flight response is nature's way of saving you. The problem occurs when it becomes constant. In this state, the brain is not working at full capacity and both the digestive and immune systems are shut down to allow more energy for the body's emergency functions.

After my son's first week of regular chiropractic care, we were already seeing a calm come over him. After three months of care, his ability to determine the threat of his surroundings based on his sensory intake was completely rehabilitated.

My son became a better eater, and a lover of playing in the dirt. He was happy to jump in mud puddles, and we could get him dressed with ease and comfort. It felt like my son was given the world, and I was given back my son, who now cuddles with joy and ease.

To say that he has never struggled with any sensory sensitivities since then would be a lie, but with regular chiropractic care what was once a debilitating disorder has now become a tolerable nuisance for which we've found care.

The Journal of Pediatric Maternal and Family Health reports that chiropractic care improves SPD, and hundreds of case studies support its claims. Not all children react the same way to sensory integration issues. My son's nerve system was over-reactive. For others, it may be under-reactive. Some children experience a mix of both extremes, but this

is often the body's response to spinal misalignment, and can easily be improved under chiropractic care.

I have since encouraged many of my friends whose children suffered from SPD to seek chiropractic care, and I have seen time and time again the body's power to adjust and adapt to its surroundings when interference is removed.

Our minds and bodies are incredible, and when functioning properly our nerve systems interpret thousands of messages every second. When that system is out of balance, it's easy to imagine that the messages can get distorted. 🗣️

To learn more about sensory processing disorder and what can be done to improve it, please visit: pathwaystofamilywellness.org.



Janaiah von Hassel, CEO of Kiro Kidz, is a proud mother of two young boys, Landon and Corbin, whom she happily nurtures alongside her husband, Matthew. Janaiah turned to chiropractic after receiving her son's autism diagnosis and, in doing so, discovered that her entire family benefited from care. In her desire to spread the word, she has found great fulfillment in her work with Dr. Todd Defayette on the creation and development of Kiro Kidz. View article resources and author information here: pathwaystofamilywellness.org/references.html.



Chiropractic FOR Social Well-Being

By Michael W. Hall, D.C.

From very early in our lives—actually in utero—one of the first reflexes that can be observed is that of withdrawal. Withdrawal is a whole-body reaction that is seen in response to a stimulus that is in some way adverse to the developing fetus, such as touch, noise, a shift in position, or an alarm of some sort. Withdrawal affords protection, removing oneself from harm or danger. Reflexes play an important part of our lives both during early development and as we grow into adults. Reflexes are often classified as primitive (also called equibrilial) and postural.

As the brain develops there is an order to its formation. First the brainstem, or lower brain, develops to encompass our vital centers for breathing, regulating heartbeat and blood pressure, and reflexive movements to begin our orientation to our new world. Once we are born, we spend much of our first year trying to eventually stand on two legs and begin walking on our own. During this first year many of the primitive reflexes are gradually dampened or inhibited by our developing cortex, the newer brain. As we begin to interpret our environment, we make our own impressions about whether stimuli are harmful or helpful to us. During this developmental period, primitive reflexes are extinguished as postural reflexes begin to dominate.

This is when the vagus nerve, an inexplicably complex nerve with functions that we are just starting to recognize and appreciate, enters the picture. Many in the health sciences will have no doubt learned about cranial nerves that primarily emerge from our brainstem to supply nerves to our eyes, ears, and mouth, which let us relate and express ourselves on a daily basis. Most of these nerves are taught and explained by their outgoing function. I'd like to share with you a bit about the vagus nerve from the incoming perspective.

Many scientists consider the vagus to be the nerve which gives a “braking” type innervation to the heart and lungs—in other words, it slows things down. The vagus nerve also innervates our larynx and pharynx for speaking and swallowing, and innervates our gut for digestion. It has been touted as being the longest cranial nerve; there's a precarious understanding of it being the “wandering” cranial nerve (hence its name: *vagus* and *vagabond* have



ADJUSTING PHOTOS COURTESY OF THE AUTHOR



the same Latin root), in that it is composed primarily of afferent nerve fibers, fibers which carry information into the nerve system.

This is where things begin to get interesting. Science has now uncovered that the vagus nerve is really “three” nerves in one, i.e. polyvagal. There is a myelinated (or insulated) portion of the nerve that is above the diaphragm and innervates the heart and lungs. This is often called the “smart” vagus, as it is intimately related to how we see and respond to people and things around us.

It helps us differentiate friend from foe, or something beneficial from something harmful. Our heartbeat and breathing rate are also influenced by this portion of the vagus.

The unmyelinated part of the vagus nerve provides the innervation to our

THE STATE OF OUR “SOCIAL” VAGUS IS TREMENDOUSLY IMPORTANT TO OUR HEALTH AND WELL-BEING, SINCE A CONSTANT STATE OF ALARM CAN LEAD TO A TENDENCY TOWARD CHRONIC ILLNESS.

gut so it can secrete digestive enzymes and break down our food for nutritional intake. It also detects injury to our stomach lining. When people complain of indigestion or heartburn, they often have a decrease in function or irritability of this aspect of the nerve.

Best of all is the third part of the vagus nerve, what has fondly been referred to as the “social” vagus. This sends information to the central nerve system and our higher centers. While the other two parts primarily send information to our heart, lungs, and gut, this third part of the nerve is concerned with taking information to our higher brain. This function is what helps us to interpret our environment. Are we in a friendly place? Are we comforted and supported by people who genuinely care about us? Can we truly relax and know that we are not in danger?

For example, say you take your children to the park, and while the kids are playing you turn to visit with a friend. When you check on your kids a few moments later, you immediately notice that you can’t see your youngest boy. What is your first thought? Most likely, it’s a negative scenario, one in which the child has been abducted or harmed in some way. This is the start of a physiological response from your brain to engage you to quickly find your kid. Your heart races, your respiration increases, your muscles tighten—your systems are on high alert and nothing will deter you until you find your child. You are in an

“alarm” response. This is good for the scenario at hand, and necessary. Now, after you call your son’s name, you see him come from behind a bush carrying a tennis ball that he found. All is suddenly well. Your child is safe, and your system begins the process of coming out of the “alarm” state. Gradually, your heart rate and breathing come down and you begin to feel well again.

That scenario is easy for all of us as parents to imagine. But how many times a day do you find yourself questioning someone else’s statements, facial expressions, etc.? Do you sometimes not believe someone—not because of their words but rather because of their facial movements, or their actions? In other words, what you see and what you hear don’t match up very well in your mind. Do you ever feel a little edgy when that happens, or a little on guard? This is your social vagus at work with your higher brain. It is working with your higher brain’s process of perception to determine if your social scenario warrants an alarm response or if you can relax and be at ease. As you can suppose, this is a very important function of the nerve system. Consider the social connotations in our lives: social media, television and radio streams, texting and e-mail, etc. Do you feel your life more relaxed or in a constant state of go? The state of our “social” vagus is tremendously important to our health and well-being, since a constant state of alarm can lead to a tendency toward chronic illness.



CHIROPRACTIC ADJUSTMENT SERVES TO REMOVE SUBLUXATIONS AND REDUCE ANY INTERFERENCE IN FUNCTION TO THE NERVE SYSTEM, THUS ALLOWING OPTIMAL EXPRESSION OF HEALTH AND LIFE.

muscle tone, function, and ultimately how you perceive your environment. These subluxations can affect the development of higher centers of a child's brain, affecting the "alarm" response and vagal tone. This puts a child at risk of developmental delay, emotional outbursts, digestive difficulties, and oversized behavioral reactions. There may also be delayed milestone acquisition in gait, crawling, and language and motor skills.

In the newborn, even the smallest of misalignments and subluxations may have a tremendous impact on the developing nerve system. Research and scientific studies continue to show that subluxations, alterations in the cranium of the newborn, and strain of the small muscles that hold the head upon the spine can impact neurological development in both the motor and cognitive domains. Chiropractic adjustment serves to remove subluxations and reduce any interference in function to the nerve system, thus allowing optimal expression of health and life. Considering the birth process, anatomical location of the vagal nerve in the upper neck, and the developmental impact of the subluxation, one can easily understand the importance of having all newborns, infants, toddlers, and children evaluated for the presence of subluxation and failure to meet milestones.

Vagal tone and function has become increasingly important to our health as we learn of its implications in not only heart, lung, and gut health, but now also in our social well-being. The ability to feel safe and loved, comforted and content—to reduce our alarm responses to appropriate levels, to better develop coping skills, and most of all to understand that we are ultimately better together, is the primary function of the social vagus. This is key to newborn development and our well-being throughout the rest of our lives. 🧠

From an anatomical perspective, the vagus nerve courses through the front part of our neck primarily in a sheath that also contains the internal jugular vein and carotid artery. It is well housed and protected for the most part. However, it's vulnerable in the very uppermost area of our neck, the upper cervical area, where we have the ability to turn our heads from side to side. On occasion, due to chronic lifestyle habits, computer use, and poor posture, we may develop differences in muscle tone from one side to the other; these can make us prone for vertebral misalignments, or what chiropractors refer to as subluxations. Subluxations represent dysfunction in how joints and articulations should function. When a person has a tight or restricting muscle on one side of her neck it can cause a difference in how the spinal joints move and function, resulting in subluxation.

The converse is true as well. If a joint is subluxated, then the input from that joint to the nerve system is altered. Every joint sends information into the nerve system from a group of receptors. These receptors are located in the joints of the skull and spine and inform the nerve system where your head is in space at all times. Subluxations alter input from these receptors and give the nerve system a false sense of head position. This can result in further alterations of



Michael W. Hall, D.C., is passionate about his family, neurology, and pediatrics. He and his wife, Cara, also a chiropractor, practice in Coppell, Texas; he also directs the NeuroLife Institute at Life University in Georgia.

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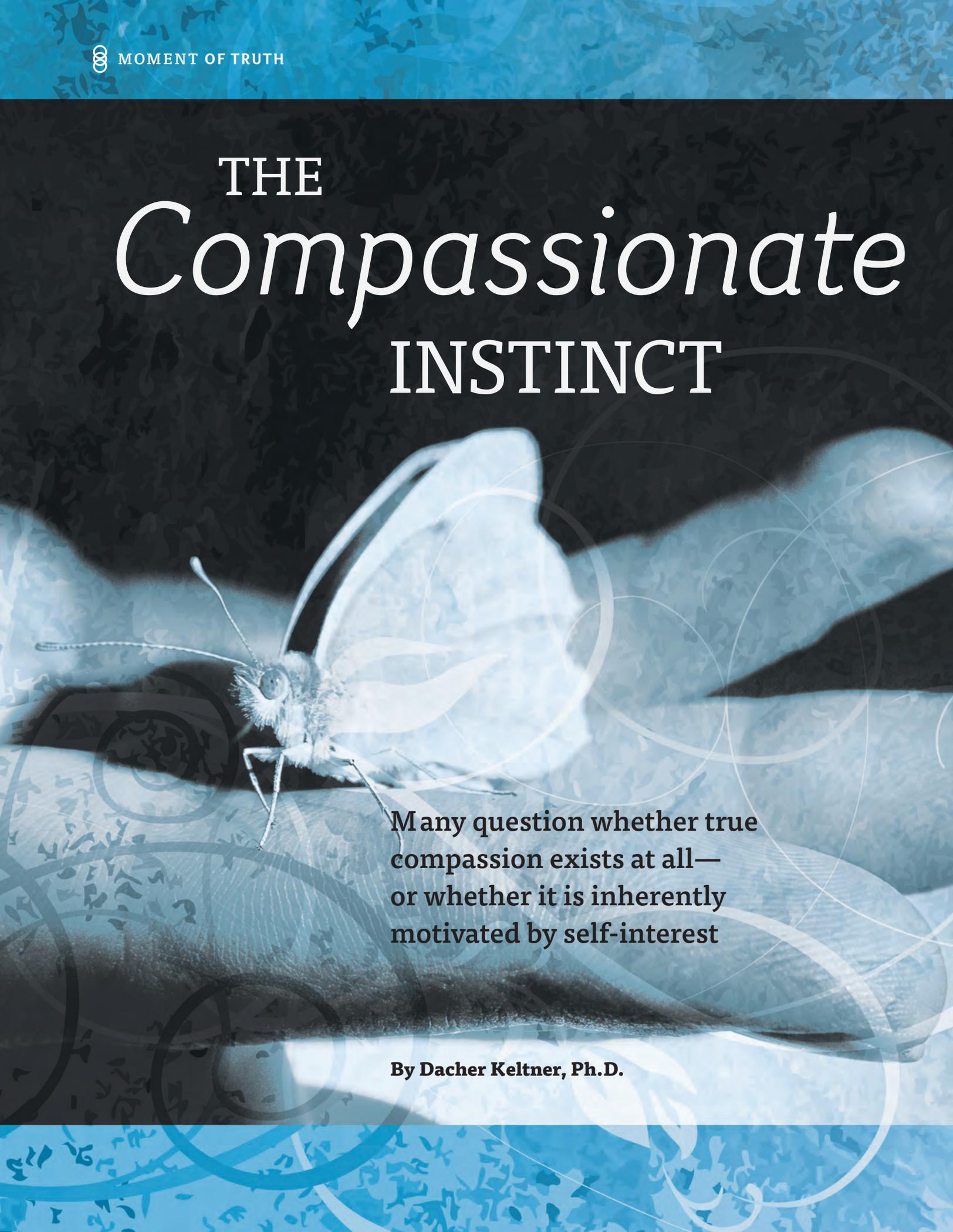


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MOMENT OF TRUTH

THE *Compassionate* INSTINCT



Many question whether true compassion exists at all—
or whether it is inherently
motivated by self-interest

By Dacher Keltner, Ph.D.

Recent studies of compassion argue persuasively for a different take on human nature, one that rejects the pre-eminence of self-interest. These studies support a view of the emotions as rational, functional, and adaptive—a view which has its origins in Darwin's *The Expression of Emotion in Man and Animals*. Compassion and benevolence, this research suggests, are an evolved part of human nature, rooted in our brain and biology, and ready to be cultivated for the greater good.

A Biological Basis

First consider the recent study of the biological basis of compassion. If such a basis exists, we should be wired, so to speak, to respond to others in need. Recent evidence supports this point convincingly. University of Wisconsin psychologist Jack Nitschke found in an experiment that when mothers looked at pictures of their babies, they not only reported feeling more compassionate love than when they saw other babies, but they also demonstrated unique activity in a region of their brains associated with the positive emotions. Nitschke's finding suggests that this region of the brain is attuned to the first objects of our compassion—our offspring.

But this compassionate instinct isn't limited to parents' brains. In a different set of studies, Joshua Greene and Jonathan Cohen of Princeton University found that when subjects contemplated harm being done to others, a similar network of regions in their brains lit up. Our children and victims of violence—two very different subjects, yet united by the similar neurological reactions they provoke. This consistency strongly suggests that compassion isn't simply a fickle or irrational emotion, but rather an innate human response embedded into the folds of our brains.

In other research by Emory University neuroscientists James Rilling and Gregory Berns, participants were given the chance to help someone else while their brain activity was recorded. Helping others triggered activity in the caudate nucleus and anterior cingulate, portions of the brain that turn on when people receive rewards or experience pleasure. This is a rather remarkable finding: Helping others brings the same pleasure we get from the gratification of personal desire.

The brain, then, seems wired to respond to others' suffering—indeed, it makes us feel good when we can alleviate that suffering. But do other parts of the body also suggest a biological basis for compassion?

It seems so. Take the loose association of glands, organs, and cardiovascular and respiratory systems known as the autonomic nervous system (ANS).

The ANS plays a primary role in regulating our blood flow and breathing patterns for different kinds of actions. For example, when we feel threatened, our heart and breathing rates usually increase, preparing us either to confront the threat or flee from it—the so-called “fight or flight” response. What is the ANS profile of compassion? As it turns out, when young children and adults feel compassion for others, this emotion is reflected in very real physiological changes: Their heart rate goes down from baseline levels, which prepares them not to fight or flee, but to approach and soothe.

Then there's oxytocin, a hormone that floats through the bloodstream. Research performed on the small, stocky rodents known as prairie voles indicates that oxytocin promotes long-term bonds and commitments, as well as the kind of nurturing behavior—like care for offspring—that lies at the heart of compassion. It may account for that overwhelming feeling of warmth and connection we feel toward our offspring or loved ones. Indeed, breastfeeding and massages elevate oxytocin levels in the blood (as does eating chocolate). In some recent studies I've conducted, we have found that when people perform behaviors associated with compassionate love—warm smiles, friendly hand gestures, affirmative forward leans—their bodies produce more oxytocin. This suggests compassion may be self-perpetuating: Being compassionate causes a chemical reaction in the body that motivates us to be even more compassionate.

Signs of Compassion

According to evolutionary theory, if compassion is truly vital to human survival, it would manifest itself through nonverbal signals. Such signals would serve many adaptive functions. Most important, a distinct signal of compassion would soothe others in distress, allow people to identify the good-natured individuals with whom they'd want long-term relationships, and help forge bonds between strangers and friends.

Research by Nancy Eisenberg, perhaps the world's expert on the development of compassion in children, has found that there is a particular facial expression of compassion, characterized by oblique eyebrows and a concerned gaze. When someone shows this expression, they are then more likely to help others. My work has examined another nonverbal cue: touch.

Previous research has already documented the important functions of touch. Primates such as great apes spend hours every day grooming



each other, even when there are no lice in their physical environment. They use grooming to resolve conflicts, to reward each other's generosity, and to form alliances. Human skin has special receptors that transform patterns of tactile stimulation—a mother's caress or a friend's pat on the back—into indelible sensations as lasting as childhood smells. Certain touches can trigger the release of oxytocin, bringing feelings of warmth and pleasure. The handling of neglected rat pups can reverse the effects of their previous social isolation, going as far as enhancing their immune systems.

My work set out to document, for the first time, whether compassion can be communicated via touch. Such a finding would have several important implications. It would show that we can communicate this positive emotion with nonverbal displays, whereas previous research has mostly documented the nonverbal expression of negative emotions such as anger and fear. This finding would also shed light on the social functions of compassion—how people might rely on touch to soothe, reward, and bond in daily life.

In my experiment, I put two strangers in a room where they were separated by a barrier. They could not see one another, but they could reach each other through a hole. One person touched the other on the forearm several times, each time trying to convey one of 12 emotions, including love, gratitude, and compassion. After each touch, the

HUMAN SKIN HAS SPECIAL RECEPTORS THAT TRANSFORM PATTERNS OF TACTILE STIMULATION—A MOTHER'S CARESS OR A FRIEND'S PAT ON THE BACK— INTO INDELIBLE SENSATIONS AS LASTING AS CHILDHOOD SMELLS.

person touched had to describe the emotion they thought the toucher was communicating.

Imagine yourself in this experiment. How do you suppose you might do? Remarkably, people in these experiments reliably identified compassion, as well as love and the other ten emotions, from the touches to their forearm. This strongly suggests that compassion is an evolved part of human nature—something we're universally capable of expressing and understanding.

Motivating Altruism

Feeling compassion is one thing; acting on it is another. We still must confront a vital question: Does compassion promote altruistic behavior? In an important line of research, Daniel Batson has made the persuasive case that it does. According to Batson, when we encounter people in need or distress, we often imagine what their experience is like. This is a great developmental milestone—to take the perspective of another. It is not only one of the most human of capacities, but it is also one of the most important aspects of our ability to make moral judgments and fulfill the social contract. When we take the other's perspective, we feel an empathic state of concern and are motivated to address that person's needs and enhance that person's welfare, sometimes even at our own expense.

In a compelling series of studies, Batson exposed participants to another's suffering. He then had some participants imagine that person's pain, but he allowed those participants to act in a self-serving fashion—for example, by leaving the experiment.

Within this series, one study had participants watch another person receive shocks when he failed a memory task. Then they were asked to take shocks on behalf of the participant, who, they were told, had experienced a shock trauma as a child. Those participants who had reported that they felt compassion for the other individual volunteered to take several shocks for that person, even when they were free to leave the experiment.

In another experiment, Batson and colleagues examined whether people feeling compassion would help someone in

distress, even when their acts were completely anonymous. In this study female participants exchanged written notes with another person, who quickly expressed feeling lonely and an interest in spending time with the participant. Those participants feeling compassion volunteered to spend significant time with the other person, even when no one else would know about their act of kindness.

Taken together, our strands of evidence suggest the following. Compassion is deeply rooted in human nature; it has a biological basis in the brain and body. Humans can communicate compassion through facial gesture and touch, and these displays of compassion can serve vital social functions, strongly suggesting an evolutionary basis of compassion. And when experienced, compassion overwhelms selfish concerns and motivates altruistic behavior.

Cultivating Compassion

We can thus see the great human propensity for compassion and the effects compassion can have on behavior. But can we actually cultivate compassion, or is it all determined by our genes?

Recent neuroscience studies suggest that positive emotions are less heritable—that is, less determined by our DNA—than the negative emotions. Other studies indicate that the brain structures involved in positive emotions like compassion are more “plastic”—subject to changes brought about by environmental input. So we might think about compassion as a biologically based skill or virtue, but not one that we either have or don’t have. Instead, it’s a trait that we can develop in an appropriate context. What might that context look like? For children, we are learning some answers.

Some researchers have observed a group of children as they grew up, looking for family dynamics that might make the children more empathetic, compassionate, or likely to help others. This research points to several key factors.

First, children securely attached to their parents, compared to insecurely attached children, tend to be sympathetic to their peers as early as age 3^{1/2}, according to the research of Everett Waters, Judith Wippman, and Alan Sroufe. In contrast, researchers Mary Main and Carol George found that abusive parents who resort to physical violence have less empathetic children.

Developmental psychologists have also been interested in comparing two specific parenting styles. Parents who rely on induction engage their children in reasoning when they have done harm, prompting their child to think about the consequences of their actions and how these actions have harmed others. Parents who rely on power assertion simply declare what is right and wrong, and resort more often to physical punishment or strong emotional responses of anger. Nancy Eisenberg, Richard Fabes, and Martin Hoffman have found that parents who use induction and reasoning raise children who are better adjusted and more likely to help their peers. This style of parenting seems to



nurture the basic tools of compassion: an appreciation of others’ suffering and a desire to remedy that suffering.

Parents can also teach compassion by example. A landmark study of altruism by Pearl and Samuel Oliner found that children who have compassionate parents tend to be more altruistic. In the Oliners’ study of Germans who helped rescue Jews during the Nazi Holocaust, one of the strongest predictors of this inspiring behavior was the individual’s memory of growing up in a family that prioritized compassion and altruism.

A More Compassionate World

Human communities are only as healthy as our conceptions of human nature. It has long been assumed that selfishness, greed, and competitiveness lie at the core of human behavior, the products of our evolution. It takes little imagination to see how these assumptions have guided most realms of human affairs, from policy making to media portrayals of social life.

But clearly, recent scientific findings forcefully challenge this view of human nature. We see that compassion is deeply rooted in our brains, our bodies, and in the most basic ways we communicate. What’s more, a sense of compassion fosters compassionate behavior and helps shape the lessons we teach our children. 🧠



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The Manager in My Home ...and the Five Words that Changed Everything

By Rachel Macy Stafford

Every couple of weeks I patiently untangle the knots of strawberry-blonde hair that sit at the base of my child's neck. As I sat on the corner of the tub the other night, gently loosening an especially stubborn clump while my daughter chattered about her day, I couldn't stop the tears.

Those wet tangles I held in my hand were signs of progress—tangible proof that letting go can happen even in the most problematic hearts. My wish is that by sharing where I once was and where I am now, others will feel hope they haven't felt in a while. Perhaps by reading about my messy tangles of progress, others will see their own. This is my story.

There was a time in my life when I barked orders more often than I spoke words of love. When I reacted to small, everyday inconveniences as if they were major catastrophes. When normal human habits and quirks raised my blood pressure to dangerous levels.

Rather than nurturing my family members, I took it upon myself to manage them until there was no room to bend or breathe.

My artistic, busybody, dream-chasing older daughter's desire to create multiple projects at once, try new recipes, and keep towering stacks of books and magazines by her bedside received disapproving looks on a daily basis.

My stop-and-smell-the-roses younger daughter's desire to buckle stuffed animals into the car before we departed, accessorize every part of her body before walking out the door, and move at a snail's pace drew exasperated breaths and annoyed frowns.

My fun-loving, laid-back husband's spontaneous approach to weekend plans and ability to totally chill out got the silent treatment more times than I could count.

The people I was supposed to love unconditionally possessed qualities that irritated, annoyed, and continually derailed my carefully planned agenda—an agenda that was all about efficiency, perfection, and control.

I was not acting as a mother or a wife or even a decent human being. I was acting as a surly manager who was intent on creating a toxic environment—a place where it was pretty hard to show up each and every day.

How do I know?

Because even I could barely stand myself. The impatient person I'd become woke up angry and irritated as I braced myself for another day of managing the unmanageable. Forget about living. Forget about smiling. Forget about counting the blessings. The Grumpy Manager didn't do that. And everyone in the home began following suit.



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“How would you do it?”

Hair brushing was a point of contention. Each morning my older daughter obediently allowed me to brush hastily as I pretended not to see her wincing. We were in a rush, after all. I hated to be late.

When it was my younger daughter’s turn she would always ask if she could brush her own hair today. My response alternated between, “We don’t have time today,” and “When you get a little bigger.”

On this particular morning my then 4-year-old child did not ask if she could brush her own hair. I was relieved. I could get this hair into a ponytail, prod her to get her shoes on quickly, and be out the door in less than the two minutes I calculated—because managers always calculate.

As I aggressively gathered Avery’s unruly curls into my palm, I happened to glance at my reflection. My brows were knotted together tightly. My mouth was set in a hard, thin line. I looked haggard, hopeless, and sad. I would have dismissed this disturbing sight had it not been for the fact that my child was staring at my reflection too.

If expressions could talk, my child’s face would have said this loud and clear: *Who are you? Where did my mama go?*

I felt my face grow hot. I felt tears wanting to come forth, but I blinked them back—because managers know there’s no time for tears.

But instead of continuing to brush with vigor, I suddenly stopped. With trembling hands, I held out the hairbrush to my child.

“How would you do it?” I asked quietly.

At first she looked shocked, as if I was offering her a hairy tarantula. But as I continued to hold out the brush, Avery eventually picked it up.

With small but agile hands, she stroked the sides of her hair from top to bottom until the hair was silky smooth. While lost in her joyful task, I think she forgot I was there. After a few minutes, she carefully brought the hair forward to drape softly over her shoulders. Then she smiled proudly at her reflection. The manager in me noticed she did not brush the back of her head, but I remained quiet.

My child met my eyes in the mirror. “Thank you, Mama. I always wanted to do that.”



“You matter.”

I prayed I would do something, anything with those significant words that were gifted to me.

For the next several weeks, we finished up breakfast a few minutes earlier so Avery could brush her own hair, and I could watch...and learn.

“Want me to show you how I do it?” my child said each morning as I held out the brush.

I never got tired of seeing the pure joy Avery received from doing it herself, her way, the back of the head optional.

“Take your time,” I forced myself to say every morning, until it felt like English coming from my lips rather than a foreign language.

Whenever I said those particular words, there was a noticeable reaction. Unlike any other words, these three words were especially meaningful to my child. The way her shoulders lifted and her smile widened, I deemed them *soul-building words* for this girl. I acknowledged that I would’ve never known the power of these words for Avery had I not stepped aside and surrendered control. I was motivated to take this powerful realization and apply it to other relationships. In what other ways could I make Hairbrush Offerings as a means of connecting with and lifting up others? It didn’t take long to see there were many opportunities for me to open my hands and ask, “How would you do it?”

The way my husband took care of the children, tidied his area of the bedroom, chose outfits for going out, put away the groceries, and paid the bills were not wrong—just different from the way I did them.



“Take your time.”

The way my older daughter packed her swim bag, emptied her swim bag, saved money, selected gifts, completed projects, did homework, and baked cookies were not wrong—just different from the way I did them.

The way the chatty clerk bagged my groceries. The way my colleague took ten extra steps to accomplish a task. The way my sister sipped coffee and read

the paper before starting our day together. These were not wrong—just different from the way I did them.

How would you do it? I commonly asked these five words of surrender when the control freak inside me began to get agitated. As I watched the people in my life do it their way—in their own time, with their own flair—I saw sparks of joy I had never seen before. And just like with Avery and the hairbrush, I learned how each person had specific soul-building words that fueled that spark.

Over time, the manager nametag peeled off my shirt, and I strived to be less of a dictator and more of a guiding, supportive, loving presence. I went to bed feeling lighter, freer, and happier knowing I did not have to be in control all the time. I woke up with the peaceful awareness that there were many ways to live, create, and accomplish tasks—and sometimes the other ways were better than my ways.

Avery is now 8 years old and quite the hairstylist. Not only does she do neat stuff with her own hair, but she can also make mine look great. Avery still doesn't pay too much attention to the back of her hair. This results in her handing me the comb and a bottle of conditioner and we share a little time together as the steam rises from the tub.

I relish the fact that even when presented with the messiest tangles, the ones that look like they might have to be cut away, there is hope. There is growth. There are new beginnings if I loosen my grip a little and keep on trying.

I leave with you what I've learned through the blessing of the tangles.

Building a Soul, One Word at a Time

“I will wait for you.”

“Take your time.”

“You make my day better.”

I say those words to my slow-moving, happy-go-lucky, noticer-of-life child. I watch as grateful eyes light up and tiny shoulders relax. Those words are Soul-Building Words to her.

“Mistakes mean you are learning.”

“It doesn't have to be perfect.”

“OK, you can have a few more minutes to work on your project.”

I say those words to my driven, contentious planner and pursuer-of-dreams child. I watch as pressure escapes from her chest and aspirations soar higher. Those words are Confidence-Boosting Words to her.

“I appreciate you.”

“I'm listening.”

“You matter.”

I say those words to my hard-working, often underappreciated love of my life. I watch as tensions loosen, eyes meet, and conversation comes easier. Those words are Affirming and Connective Words to him.

“It's good enough for today.”

“Be kind to yourself.”

“Today matters more than yesterday.”

I say those words to my own perfection-seeking, worrisome heart that tends to replay past mistakes. I watch as my clenched hands open and tears fall as scars come to the surface. Those are Healing, Hope-Filled Words to me.

The words “I love you” should never be underestimated, but every human being has a few words that make his or her soul come alive. Discover what those words are by standing back, letting go, watching, learning, and listening. What brings them a smile? What adds a spring to their step? Commit those words to memory and say them. Say them as often as you can so that one day they no longer need you there in order to hear them. 📌

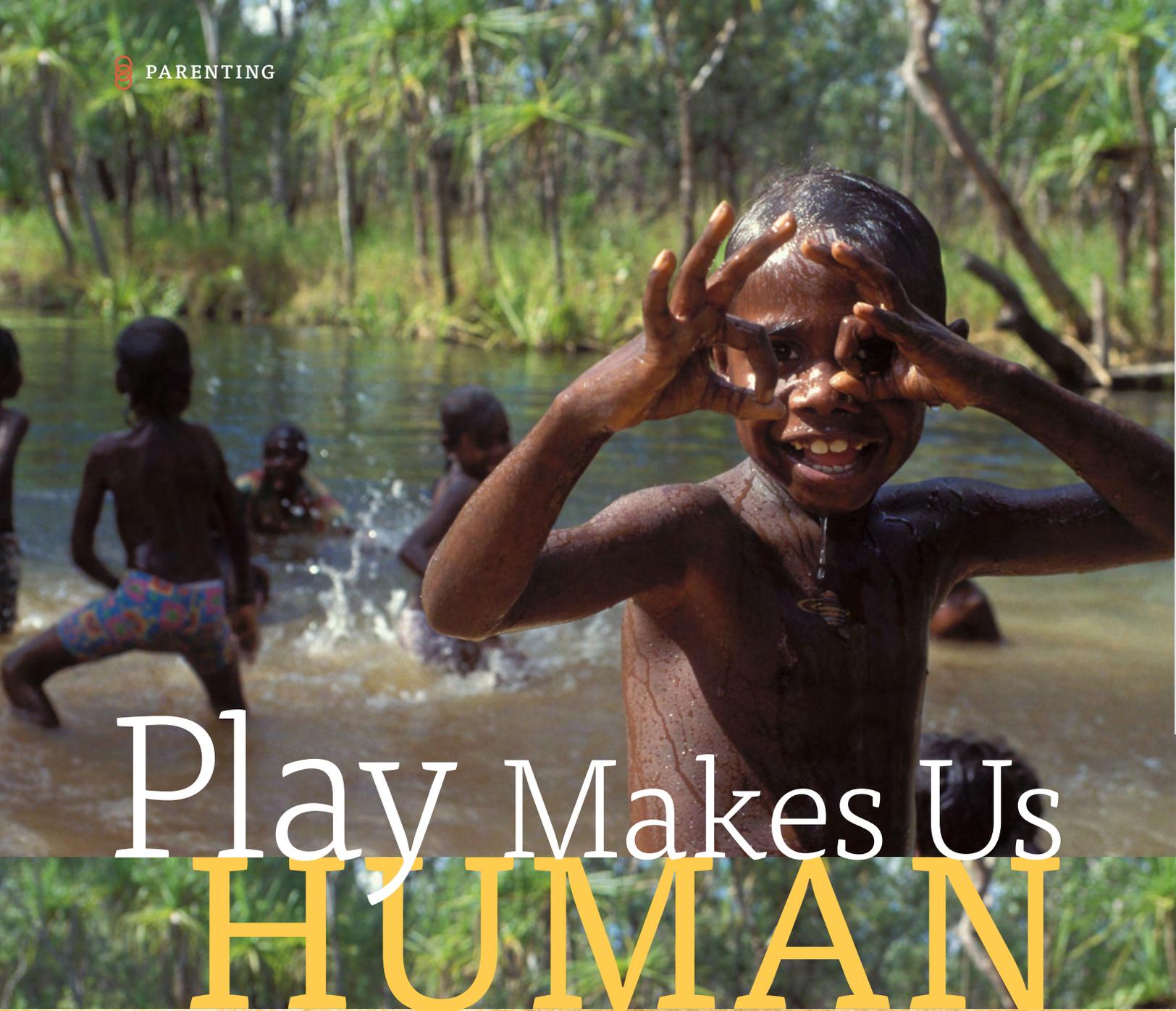


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Play Makes Us HUMAN

Hunter-gatherers' playful parenting

By Peter Gray, Ph.D.



LEFT: Aboriginal kids play in the Japidi Japin water hole in Arnhem Land, in Australia's Northern Territory. ABOVE: A group of Himba people perform traditional dance in a village in Namibia's Kaokoveld Desert.

Have you ever noticed how we, as a society, use agricultural metaphors to talk about parenting and education? We speak of raising children, just as we speak of raising tomatoes or chickens. We speak of training children, just as we speak of training horses. Our manner of talking and thinking about parenting suggests that we own our children, much like we might own domesticated plants and livestock, and that we control how they grow and behave. We train horses to do the tasks that we want them to do, and we train—or try to train—children to do the tasks that we think will be necessary for their future success. We do that whether or not the horse or child wants such training. Training requires suppression of the trainee's will, and hence of play. The agricultural approach to parenting is, therefore, not a playful one.

Our society's concepts of raising and training children assume a dominant/submissive relationship between parent and child. The parent—or teacher or other parent substitute—is in charge and is responsible for the child's actions. The child's primary duty, at least in theory, is to obey. This approach to parenting seems so natural to us that it may be hard to imagine an alternative. Yet, in the context of our

long history as a species, it is new. It came with agriculture, which first appeared about 10,000 years ago. Before that, we were all hunter-gatherers and we had no agricultural metaphors to guide our parenting practices.

In my series of essays, "Play Makes Us Human," I have described the social values and practices of hunter-gatherer societies. My thesis has been that an expansion of the primate play drive in our species enabled our ancestors to adopt a far more social and cooperative style of life than that manifested by other primates. Hunter-gatherers seem to use play and humor more or less deliberately to suppress tendencies toward dominance and to foster the sense of personal freedom and equality that was essential to their livelihood.

To give you a sense of hunter-gatherers' parenting philosophy, here is a sample of quotations from anthropologists and others who have lived in various hunter-gatherer societies and observed them closely:

- "Hunter-gatherers do not give orders to their children; for example, no adult announces bedtime. At night, children remain around adults until they feel tired and fall asleep.... Parakana adults do not interfere with their children's lives. They never beat, scold, or behave

aggressively with them, physically or verbally, nor do they offer praise or keep track of their development.”
—Yumi Gosso et al., “Play in Hunter-Gatherer Societies”

- “The idea that this is ‘my child’ or ‘your child’ does not exist [among the Yequana, of South America]. Deciding what another person should do, no matter what his age, is outside the Yequana vocabulary of behaviors. There is great interest in what everyone does, but no impulse to influence—let alone coerce—anyone. The child’s will is his motive force.” —Jean Liedloff, *The Continuum Concept*
- “Aborigine children are indulged to an extreme degree, and sometimes continue to suckle until they are 4 or 5 years old. Physical punishment for a child is almost unheard of.” —Richard A. Gould, *Yiwara: Foragers of the Australian Desert*
- “Infants and young children [among Inuit hunter-gatherers of the Hudson Bay area] are allowed to explore their environments to the limits of their physical capabilities and with minimal interference from adults. Thus if a child picks up a hazardous object, parents generally leave it to explore the dangers on its own. The child is presumed to know what it is doing.” —Lee Guemple, “Teaching Social Relations to Inuit Children”
- “Ju/’hoansi children [of Africa] very rarely cried, probably because they had little to cry about. No child was ever yelled at or slapped or physically punished, and few were even scolded. Most never heard a discouraging word until they were approaching adolescence, and even then the reprimand, if it really was a reprimand, was delivered in a soft voice.” —Elizabeth Marshall Thomas, *The Old Way*

You might think that such indulgence would lead to spoiled, demanding children, who would grow up to be spoiled, demanding adults. But according to the anthropologists who lived among them, nothing could be further from the truth. Here is what Thomas has to say about that: “We are sometimes told that children who are treated so kindly become spoiled, but this is because those who hold that opinion have no idea how successful such measures can be. Free from frustration or anxiety, sunny and cooperative, the children were every parent’s dream. No culture can ever have raised better, more intelligent, more likable, more confident children.”

Based on my reading of anthropologists’ writings about many hunter-gatherer cultures, I would characterize hunter-gatherer parenting in the following way:

1. Hunter-gatherers love their children as much as we love ours. They rejoice at births, grieve at children’s deaths, and enjoy their children as do we.

2. Hunter-gatherers protect young children from serious dangers, but are not overprotective. Hunter-gatherers recognize that they must arrange their environment in certain ways to protect infants and very young children. For example, those who hunt with poisoned arrows store the arrows high up, out of young children’s reach. Concerning less serious dangers, however, hunter-gatherers believe it is best to let young children explore as they wish rather than restrict their exploration. For example, it is not uncommon to see toddlers poking sticks into the campfire or playing with sharp knives. Hunter-gatherers’ experience is that toddlers rarely hurt themselves in these activities and that such risk is outweighed by the advantage of learning, early on, how to handle such objects. The adults believe, further, that by the time children begin to prefer the company of other children to that of adults (at about four years old), they have enough common sense to make their own decisions about what is safe or unsafe. Children of that age and older play in age-mixed groups, often some distance from adults.



A Ju/’hoansi baby playing under an animal skin.

PARENTS INDULGE THEIR CHILDREN'S DESIRES BECAUSE THEY TRUST CHILDREN'S INSTINCTS AND JUDGMENTS. THEY BELIEVE THAT CHILDREN KNOW BEST WHAT THEY NEED AND WHEN THEY NEED IT.



An Aboriginal woman and her child cuddle their pet baby kangaroo.

3. Hunter-gatherers trust their children. Anthropologists commonly use the term indulgence to characterize the hunter-gatherer style of parenting, but I think the more fundamental concept here is trust. Parents indulge their children's desires because they trust children's instincts and judgments. They believe that children know best what they need and when they need it, so there are no or few battles of will between adults and children. If an infant cries or shows even a lesser sign of distress, any adult or older child nearby responds immediately

to see what is the matter and to help solve the problem. The assumption is that the infant would not communicate a need for help unless it needed help.

Hunter-gatherers believe that the instinctive drives of children to explore are balanced by instinctive fears and by knowledge of their own abilities and limitations, which lead them to temper their explorations with appropriate caution. Four-year-olds will not, on their own, wander into unfamiliar territory without the company of an older child or an adult. Children of any age will not try to leap chasms that they are physically unable to leap. Children are constantly taking risks to expand the limits of what they can do, but the risks are small. Children are designed by nature (today we would say by natural selection) to do all this, so they will learn how to cope with serious dangers when they occur.

Concerning education, hunter-gatherers trust that children and adolescents will figure out what they need to learn and will learn it through their own drives to observe, explore, and play with all relevant aspects of their environment. They trust, further, that when young people are ready to start contributing in meaningful ways to the band's economy, they will do so gladly, without any need for coercion or coaxing.

Such trust, I think, becomes a self-fulfilling prophecy. People who are trusted from the very beginning usually become trustworthy. People treated in this way do not grow up to see life as a matter of trying to overpower, outsmart, or in other ways manipulate others. Rather, they grow up viewing life in terms of friendships—

that is, in terms of people willingly and joyfully helping each other to satisfy their needs and desires. That is the playful approach to life—the approach that brings out the best aspects of our humanity.

Play, as I have said repeatedly, requires individual freedom. Play is no longer play when one person attempts to dominate another and dictate what he or she does. If life is a grand game, then each player must be free to make his or her own moves, while still abiding by the general rules of the game—in this case by the larger rules of society, which apply to everyone. To interfere with the players' abilities to make choices is to destroy the game for them. Social interaction, learning, productive work, and religious practices become burdensome toil rather than joyful play when they are enforced and controlled by others. By refraining from using their greater physical strength or mental prowess to control children's (or anyone else's) behavior, hunter-gatherer adults refrain from destroying the sense of play in their children and in themselves.

Play requires a sense of equality, and hunter-gatherers are remarkably able to retain that sense even in their interactions with young children. Young children are clearly not as strong, skilled, or knowledgeable about the world as are older children or adults, but their needs and desires are equally legitimate, and nobody knows what a child needs or desires better than the child himself or herself. Hunter-gatherers seem to understand these truths better than do most people in our society today.

Why did the approach to parenting change with the advent of agriculture? It wasn't just that new metaphors became available. Rather, the goal of parenting changed—from that of fostering the child's will to that of suppressing the child's will—because the perceived needs of society changed. 



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Our Children Happier, More Self-Reliant, and Better Students for Life and the internationally acclaimed textbook Psychology (now in its 7th edition). For more of his writings on play, creativity, and education, see his blog at psychologytoday.com/blog/freedom-learn and join him on Facebook. View article resources and author information here: pathwaystofamilywellness.org/references.html.

Please, Thank You, I'm Sorry...

Trusting children to develop social skills and manners in time

By Lisa Sunbury Gerber, M.Ed.

"Say please." "Say thank you." "Say you're sorry." "Say hello." "Say goodbye." We can instruct our young children or insist that they parrot our words, but if we want them to develop true kindness, if we want them to develop social graces and true empathy, if we want them to develop the ability to feel and express true gratitude, if we want them to express true sorrow when they have hurt someone (even inadvertently), directly instructing them isn't the way to go.

Instead, I suggest trusting children and modeling for them the values and attitudes we want to instill. If young children are treated and talked to with respect, they will, in time, learn to talk to and treat others with kindness and respect, with no prompting or reminders needed. It's a beautiful thing to witness a young child acting from a genuine and authentic place, as opposed to hearing them issue a half-hearted and hasty "thank you" or "I'm sorry" that is prompted by an adult.

It can be hard to wait and trust, but make no mistake, your child is watching, listening, and absorbing your words, actions, and attitudes. Childcare coach Janet Lansbury says:

Trust, whenever and wherever it's possible, reasonable, and age-appropriate, is one of the most profound gifts we can give our children. Through trust we offer children opportunities to fully own their achievements and internalize the validating message: "I did it!" This, as opposed to the far less self-affirming one: "Finally, I did what my parents have been wanting me to do!" Believe me, children know the difference.

What a child experiences and lives is what a child eventually expresses in her own particular and unique way. How do we model for children? We can say please and thank you to our child when making requests. We can let them hear us saying a genuine "I'm sorry," when we have made a mistake. We can greet friends and loved ones warmly. We can say thank you on our child's behalf: "Thank you for coming

to help celebrate Julie's birthday and for the beautiful book you brought for her."

We often receive gifts in the mail from far-away friends, and since my child has been a young toddler, I've always made it a point to open the boxes with her, and to say, "Our friend Dee sent these gifts for you, because she loves you and thinks of you. We are so lucky to have friends who think of us. I want to write to Dee to say thank you."

Every child has their own time table.

For a child who is on the autism spectrum and who struggles with feeling comfortable with social interactions, asking them to follow social conventions is something that may be beyond their ability, and may cause more harm than it does good.

Raun K. Kaufman discusses this in his post on the Autism Treatment Center of America's Facebook page, "Why Forced Social Niceties Lead to Less Social Kids":

Do you ever make your child on the autism spectrum say "hello," shake someone's hand, pose for photos, or obey some similar Social Convention? I completely understand where the desire to do this comes from. And, because of this, I'm also aware that it might be hard to see how counterproductive it can be. Forcing our kids to obey these social niceties creates the opposite of a social child. Why? Here are three reasons: 1) It breaks trust and connection by forcing the child to do something against his/her will. 2) It creates a control battle, which actually causes our kids to dig in and resist more. 3) It takes the most important area of our kids' learning and growth (i.e., social interaction) and transforms it into a meaningless task that is completely divorced from real social connection.

Until my child was about 3½ years old, she never once uttered a please, a thank you, or an I'm sorry, and hellos and goodbyes were pretty hit or miss as well. She's a gentle, observant child who feels deeply and is quite verbal, but is a



little slow to warm in social situations. I trusted that if I was patient and continued to model for her, that one day, she would spontaneously begin to express her feelings in socially acceptable ways. Sure enough, she did. She now routinely greets friends with hugs and blows kisses goodbye, she shows concern and offers comfort when a friend is sad or has been injured, she says please and thank you regularly, and at the park the other day, she spontaneously offered to share her snack with a little girl who was eyeing her kale chips.

It began one day when our cat, Pandera, was ill, and Carmel, the woman who had fostered her, came to check on her and administer medicine. She also brought a book for my daughter which she thought she would enjoy (since my little one is obsessed with all things cat).

My daughter was quite worried about Pandera, and I told her that Carmel was going to come and check on her while she was at school that day. On the way home from school, my daughter asked about Pandera, and I told her Carmel had visited, and Pandera seemed to be feeling much better. I also mentioned that Carmel had left a book for her to read to Pandera. My daughter was relieved and excited, saying, "I'm so glad Pandera is feeling better, Mama." Then: "Mama, I want to write a card to say thank you to Carmel for helping Pandera, and for bringing me a book. Pandera is a special cat, and Carmel is special because she took care of Pandera, and she brought me a book to read to Pandera. Is that a good idea?" I said that I thought it was a fine idea.

Once we got home, after running to pet Pandera, my daughter asked me to help her find a card with a picture of a cat on it ("because Carmel likes cats like me"). And then my child, who has difficulty sitting still for more than two minutes at a time, sat at the kitchen table for half an hour as she painstakingly "wrote" and signed a thank-you note to Carmel. She then sealed it in an envelope, and insisted on "wrapping" it in a plastic baggie (because it was raining and she didn't want it to get wet), and she placed it by the door with instructions for me: "Please don't forget to give the card to Carmel when she comes tomorrow, because I want her to know how special she is."

My heart swelled. That, my friends, was a 3½-year-old child's genuine, heartfelt, and authentic expression of gratitude to another human being she felt a connection with, and it was so worth waiting for her to come to the point of wanting and being able to express it in her own way.

Trust. Model. Believe in the inherent goodness and intelligence of your child. Please, thank you, hello, goodbye, and I'm sorry will come in their own good time. 📌



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resources and author information here: pathwaystofamilywellness.org/references.html.

School ADD

Isn't

HOMESCHOOL



By Laura Grace Weldon

I hesitated at the heavy glass doors of my son's school. I'd cheerfully walked through these doors many times. I'd volunteered here, served on the PTA board, joked with the principal and teachers, and even helped start an annual all-school tradition called Art Day. But now I fought the urge to grab my son from his first-grade classroom, never to return.

I'd come in that morning hoping to discuss the angry outbursts my son's teacher had directed at several students, including my little boy. But I entered no ordinary meeting. It was an ambush. Sides had clearly been chosen. The principal, guidance counselor, and my son's teacher sat in a clump together along one side of the table. Feeling oddly hollow, I pulled out a chair and sat down. Since I lead conflict resolution workshops in my working life, I was confident that we could talk over any issues and come to an understanding.

I was wrong.

The counselor read aloud from a list of ADHD behavioral symptoms my son's teacher had been tracking over the past few weeks. My little boy's major transgressions were messy work, lack of organization, and distractibility. The teacher nodded with satisfaction and crossed her arms.

No one who had spent time with my son had ever mentioned ADHD before. I breathed deeply to calm myself. I knew it was best to repeat what I was hearing in order to clarify, but the counselor barreled ahead, saying they had a significant "ADHD population" in the school system who showed excellent results with medication.

After giving the teacher kudos for dealing with a classroom full of children and acknowledging the difficulty of meeting all their needs, I tried to stand up for my child; I felt like a mother bear defending her cub from nicely dressed predators. I said the behaviors she noted actually seemed normal for a 6-year-old boy. After all, children are in the process of maturing and are not naturally inclined to do paperwork. The teacher shook her head and whispered to the principal. The counselor said first-grade children have had ample time to adapt to classroom standards.

I asked if any of my son's behaviors had ever disrupted the class. The teacher didn't answer the question. Instead she sighed and said, looking at the principal, "I've been teaching for 15 years. This doesn't get better on its own. I'm telling you this child can be helped by medication."

When I asked about alternatives, such as modifying his diet, the teacher actually rolled her eyes, saying, "Plenty of parents believe there are all sorts of things they can do on their own. But students on restricted diets don't fit in too well in the lunchroom."

There was no real discussion. No chance to bring up her teaching style. No opportunity for better collaboration between home and school. A conclusion had been reached without consulting me, my husband, or a mental health professional. My son required one vital ingredient in order to flourish in school: pharmaceuticals.

As I stood at the door, my heart pounding in distress, I vowed to solve this problem rationally. I told myself such an approach would help my child and other misunderstood students. I made it all the way to the car without crying.

Over the next few weeks I took my child to all sorts of appointments. A psychologist diagnosed him with ADD (no H). Her report was tucked into a stack of handouts from a national nonprofit organization known for its ties

to the pharmaceutical industry. An allergist diagnosed our little boy with multiple food allergies, including allergies to almost every fruit and grain he liked to eat (my research showed that diet can indeed affect behavior, even for kids without allergies). A pediatric pulmonologist determined that his asthma was much worse than we'd known. In fact, his oxygen intake was so poor the doctor said it was likely our son would change position frequently, lift his arms to expand his lungs, and have trouble concentrating. Right away I started the process of eliminating allergens in his life and following other advice given me by these professionals.

I also read about learning. I began to see childhood learning in a wider way as I studied authors such as Joseph Chilton Pearce, David Elkind, and John Taylor Gatto. I talked to other parents who described managing ADHD using star charts, privilege restriction, close communication with teachers, and immediate consequences for behavior. Many told me their child's problems got worse during the teen years. Some described sons and daughters they'd "lost" to drug abuse, delinquency, chronic depression, and dangerous rage. One woman told me her 14-year-old son was caught dealing drugs. The boy sold amphetamines so strong they were regulated by the Controlled Substances Act—pills from his own prescription for ADHD.

And I spent a lot of time observing my son's behavior. Yes, he was disorganized with his schoolwork. His room was often a mess, too, but only because he had so many interests. I saw no lack of focus as he drew designs for imaginary vehicles, pored over diagrams in adult reference books, or created elaborate make-believe scenarios. I knew that he was easily frustrated by flash cards and timed math tests, methods that did little to advance his understanding. But I also knew that he used math easily for projects such as designing his own models out of scrap wood. And of course he was distractible: He resisted rote tasks, as most small children do. Their minds and bodies are naturally inclined toward more engaging ways to advance their natural gifts. Mostly I noticed how cooperative and cheerful he was. He didn't whine, easily waited for his own turn, and loved to help with chores. As a biased observer I found him to be a marvelous 6-year-old.

Resolutely I tried to make school workable. I let the teacher know how my son's allergies and asthma might impact his classroom abilities. I shared the psychologist's report. And I tried to explain my son's stressful home situation. In the past year our family had been victimized by crime, his father had been injured in a car accident and left unable to work, and several other loved ones had been hospitalized. His schoolwork may have reflected a life that suddenly seemed messy and disorganized.

The teacher, however, only told me what my son did wrong. She was particularly incensed that he rushed through his work or left it incomplete, only to spend time cleaning up scraps from the floor. She did not find his

efforts helpful. In clipped tones she said, “Each student is supposed to pick up only his or her scraps. Nothing more.”

My son’s backpack sagged each day with 10 or more preprinted and vaguely educational papers, all with fussy instructions. *Cut out the flower on the dotted lines, cut two slits here, color the flower, cut and paste this face on the flower, insert the flower in the two slots, write three sentences about the flower using at least five words from the “st” list.* I’d have been looking for scraps on the floor to clean up, too—anything to get away from a day filled with such assignments.

For almost two years I watched my child try to please his teachers and be himself in two different school systems that were, by necessity, not designed to handle individual differences. His schoolwork habits deteriorated except when the project at hand intrigued him. He appreciated the cheerful demeanor of his third-grade teacher, even though she told me she didn’t expect much from him until his Iowa Test results came back with overall scores at the 99th percentile. Then she deemed him an underachiever and pulled his desk next to hers, right in front of the whole class, to make sure he paid attention to his paperwork rather than look out the window or fiddle with odd and ends he’d found. That’s where he stayed.

When he was 8 years old I took him out of school forever, along with my other children.

Homeschooling didn’t “fix” everything for my son, at least right away. I made many of the same mistakes teachers made with him. I enthusiastically offered projects that meant nothing to him, expecting him to sit still and complete them. And I saw the same behaviors his teachers described. My son sat at the kitchen table, with a few pages to finish before we headed off to the park or some other adventure. But every day he dropped his pencil so he could climb under the table after it, erased holes in his paper, found a focal spot out the window for his daydreams, complained as if math problems were mental thumbscrews. I used to lie awake at night afraid that he’d never be able to do long division.

Yet every time I stepped back, allowing him to pursue his own interests, he picked up complicated concepts beautifully. I watched him design his own rockets. He figured out materials he needed, built them carefully, and cheerfully started over with his own carefully considered improvements when he made mistakes. I realized his “problem” was my insistence he learn as I had done—from a static page. Homeschooling showed me that children don’t fare well as passive recipients of education. They want to take part in meaningful activities relevant to their own lives. They develop greater skills by building on their gifts, not focusing on abilities they lack.

The more I stepped back, the more I saw how much my son accomplished when fueled by his own curiosity. This little boy played chess, took apart broken appliances, carefully observed nature, helped on our farm, checked out piles of books at the library each week, memorized the names of historic aircraft and the scientific principles explaining flight, and filled notebooks with cartoons and designs—learning every moment.

EVERY TIME I STEPPED BACK, ALLOWING HIM TO PURSUE HIS OWN INTERESTS, HE PICKED UP COMPLICATED CONCEPTS BEAUTIFULLY.

Gradually I recognized that he learned in a complex, deeply focused and, yes, apparently disorganized manner. It wasn’t the way I’d learned in school, but it was the way he learned best. His whole life taught him in ways magnificently and perfectly structured to suit him and him alone. As I relaxed in our homeschooling life, he flourished. Sometimes his intense interests fueled busy days. Sometimes it seemed he did very little—those were times that richer wells of understanding developed.

I sank back into worrying about academic topics during his last year at home before college. Although his homeschool years had been filled with a wealth of learning experiences, I suddenly worried that he’d done too little writing, not enough math, minimal formal science. My anxiety about his success in college wasn’t helpful, but by then his confidence in himself wasn’t swayed.

His greatest surprise in college has been how disinterested his fellow students are in learning. Now in his sophomore year, my Renaissance man has knowledge and abilities spanning many fields. Of his own volition, he’s writing a scholarly article for a science publication (staying up late tonight to interview a researcher in Chile by phone). Self-taught in acoustic design, he created an electronic component for amplifiers that he sells online. He also raises tarantulas, is restoring a vintage car, and plays the bagpipes. He’s still the wonderfully cooperative and cheerful boy I once knew, now with a delightfully dry wit.

My son taught me that distractible, messy, disorganized children are perfectly suited to learn in their own way. It was my mistake keeping him in school as long as we did. I’m glad we finally walked away from those doors to enjoy free-range learning. 



Laura Grace Weldon is a nonviolence educator who writes about sustainability, learning, and peace for a variety of publications. She’s the author of *Free Range Learning: How Homeschooling Changes Everything* and a poetry collection titled *Tending*. Her next book, *Growing Possibilities*, is due out in 2017. Connect with her at lauragraceweldon.com. View article resources and author information here: pathwaystofamilywellness.org/references.html.





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Be My Guest

By harnessing intrinsic motivation, unschooling reflects current cognitive research

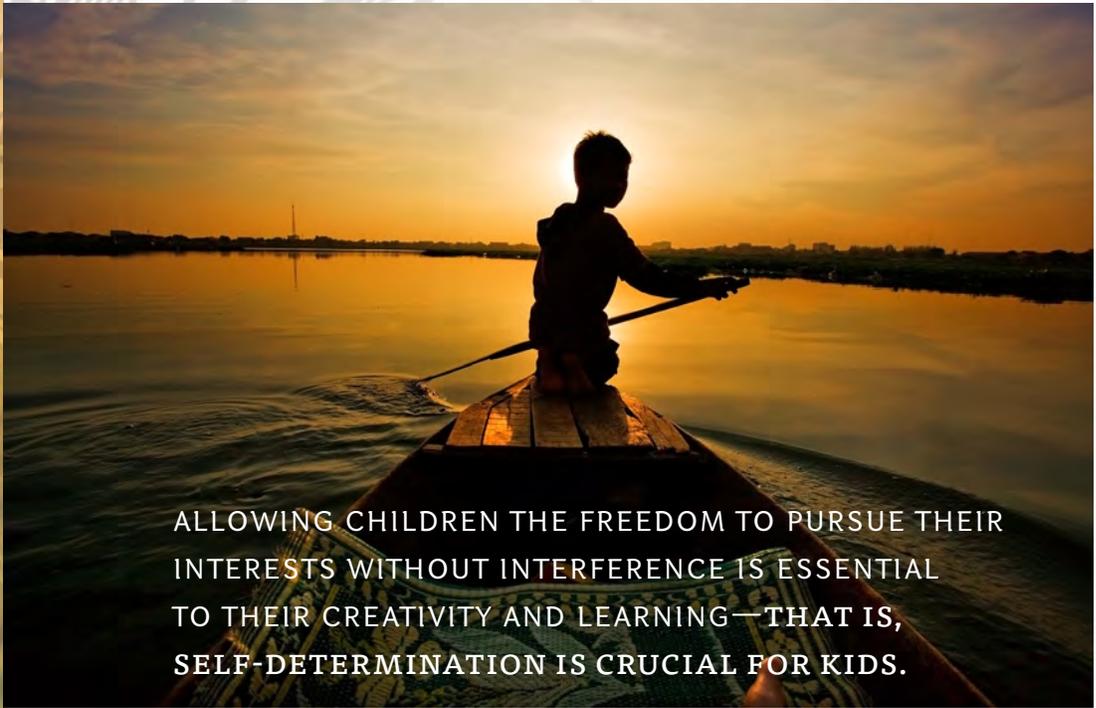
By Chris Mercogliano

As I wrote recently in *Life Learning Magazine*, unschooling is the way of the future, for all ages. So I'm always surprised that so many people think it is wrong, weird, or witless... or even anti-intellectual. In fact, it's just the opposite: Our education systems are based on outdated science, and unschooling reflects current cognitive research.

When schools were created, it was thought that learning was a sequential process that involved structure, uniformity, and memorization, and relied on extrinsic motivation and control—things like praise, rewards, and punishment. Now science knows differently: Modern cognitive research is demonstrating that learning is open-ended and spontaneous, and that people—including children—learn best when they are intrinsically motivated and can build on their everyday experiences.

There are different types of motivation, which researchers generally group into intrinsic and extrinsic. Intrinsic motivation is about free choice, pleasure, a sense of satisfaction, and the desire to fill a physical, intellectual, or emotional need. If we eat our dinner because we enjoy the food, the company, and our surroundings, and feel good afterwards, we're intrinsically motivated. We might research a topic on the Internet out of curiosity or for the fun of learning something new—that's intrinsic motivation, too.

If, on the other hand, we undertake that research in order to get a good mark on a term paper, we are extrinsically motivated. Likewise, when a father tells his daughter that she'll get ice cream if she finishes her peas, he is using extrinsic motivation to create the behavior he desires in her. (And we could safely assume that the little girl isn't intrinsically motivated to eat her peas!) Extrinsic motivation



ALLOWING CHILDREN THE FREEDOM TO PURSUE THEIR INTERESTS WITHOUT INTERFERENCE IS ESSENTIAL TO THEIR CREATIVITY AND LEARNING—THAT IS, SELF-DETERMINATION IS CRUCIAL FOR KIDS.

involves doing something in order to earn external rewards such as praise, money, or grades, or to avoid punishments.

They're not exact opposites, and are not necessarily exclusionary. Most of us need and benefit from extrinsic motivation from time to time. We might need the motivation of regular weigh-ins to keep on a diet, for instance. And even though we may be intrinsically motivated by the challenge of running a marathon, we sometimes will employ a dose of extrinsic motivation to keep us training through the long haul.

The Impetus to Learn

Intrinsic motivation leads to optimum learning, according to modern cognitive science. It's something most parents intuitively know. Just watch any infant and you'll have evidence that children are naturally curious and interested in learning, exploring, and mastering challenges. They don't need to be motivated to learn, nor taught how to do it.

Edward Deci and Richard Ryan, developmental psychologists at the University of Rochester, capped 30 years of research on the subject in 1985 by calling this "Self-Determination Theory." Their work confirms that children are born with an innate desire to explore their internal and external surroundings in an attempt to understand and master them. They believe that the impetus to learn comes from within and isn't separate from the activity itself. In fact, they say that allowing children the freedom to pursue their interests without interference is essential to their creativity and learning—that is, self-determination is crucial for kids.

There are other things beyond interest and self-determination that support intrinsic motivation. In a 2004 book titled *Learning Disabilities: The Interaction of Students and Their Environments*, Syracuse University psychologist Corinne Roth Smith says that interest isn't sufficient. "A sense of competence ('I can do this'), autonomy ('I am making the decision to do this'), and relatedness ('I feel secure and supported in doing this') supports this intrinsic motivation," she writes.

Thomas Malone, a professor at the MIT Sloan School of Management, and Mark R. Lepper, a professor at Stanford University, published a paper in 1987 entitled "Making Learning Fun: A Taxonomy of Intrinsic Motivation." They noticed that

most students find school boring and require extrinsic motivation to goad them into undertaking educational activities. Recognizing that video gaming is intrinsically motivating for kids and wondering how that differs from the school environment, they identified four major factors that lead to intrinsic motivation: challenge, curiosity, control, and fantasy.

In the words of Australian educational psychologist John B. Biggs, the intrinsic motivation resulting from these factors is "deep" learning, versus the shallower type that may be more about obedient memorization than real learning.

Rewards Can Sidetrack Learning

Researchers have discovered that offering external rewards for an already intrinsically rewarding activity can actually make the activity less rewarding. David G. Myers, a professor of psychology at Hope College in Michigan, says that unnecessary rewards can carry hidden costs to learning. "Most people think that offering tangible rewards will boost anyone's interest in an activity," he writes. Actually, promising children a reward for a task they already enjoy can backfire, according to the research. In experiments, children promised a payoff for playing with an interesting puzzle or toy later play with the toy less than do children who are not paid to play. It is as if the children think, 'If I have to be bribed into doing this, then it must not be worth doing for its own sake.'"

Richard A. Griggs, Professor Emeritus at the University of Florida, goes further, suggesting that many students will become suspicious when extrinsic motivation is used.



“The will to learn becomes a ‘problem’ only under specialized circumstances like those of a school, where a curriculum is set, students confined, and a path fixed. The problem exists not so much in learning itself, but in the fact that what the school imposes often fails to enlist the natural energies that sustain spontaneous learning.”

—JEROME BRUNER

In his text *Psychology: A Concise Introduction*, he writes, “With the addition of extrinsic reinforcement, the person may perceive the task as over-justified and then attempt to understand their true motivation (extrinsic versus intrinsic) for engaging in the activity.”

Some have even suggested outright that school as we know it inherently impedes learning. Educator and psychologist Jerome Bruner wrote in his 1966 book, *Toward a Theory of Instruction*, that “The will to learn becomes a ‘problem’ only under specialized circumstances like those of a school, where a curriculum is set, students confined, and a path fixed. The problem exists not so much in learning itself, but in the fact that what the school imposes often fails to enlist the natural energies that sustain spontaneous learning.”

Deci and Ryan concur. In a 2000 paper published in the journal *Contemporary Educational Psychology*, they wrote, “Because intrinsic motivation results in high-quality learning and creativity, it is especially important to detail the factors and forces that engender versus undermine it.” One of those negative forces, they say, is extrinsic rewards—along with threats, bribes, deadlines, directives, and imposed goals.

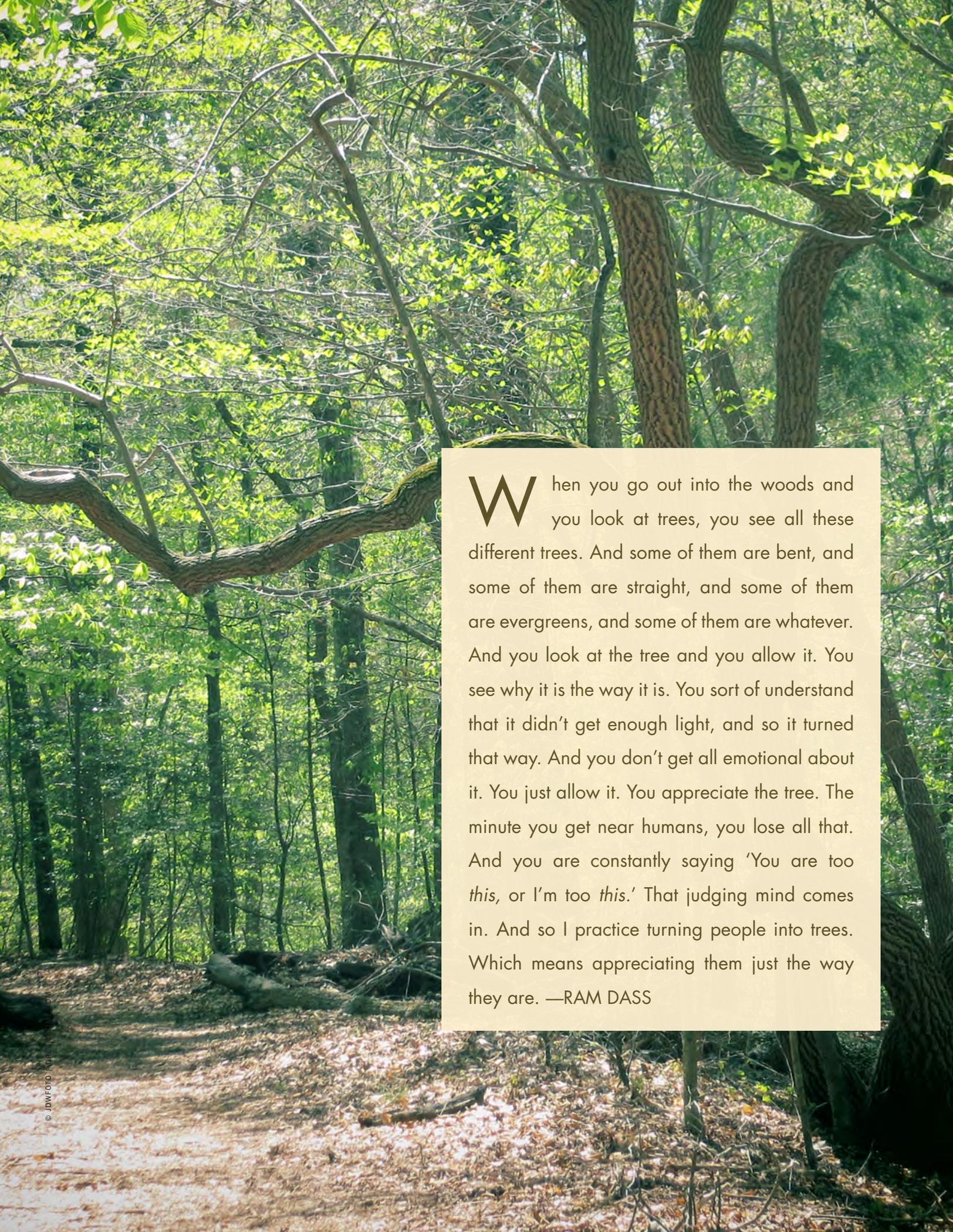
This is just a small and simplistic sampling of the new thinking that demonstrates why unschooling works, and why our current memorization-based education systems are in trouble, in spite (or because) of increased testing and competition. Science has moved past the thinking of Behaviorists like Edward Thorndike and B.F. Skinner, but most schools—and some homeschoolers—are still trying to educate kids via programmed instruction and the threat/reward mentality. And while some teachers try to use tools like Malone’s and Lepper’s principles of challenge, curiosity, self-control, and fantasy in their classrooms, they are restricted by the structure of schools and school systems.

Unschoolers, on the other hand—or “life learners” as I prefer to say today—can create an environment that is the perfect catalyst for children’s self-determination. In doing so, we are providing for our children and youth the opportunity to learn from activities that are based on their own interests and that satisfy their innate psychological needs for competence and autonomy. Many of us began allowing children to do what comes naturally to them long before science proved it was the best way for kids to learn. I hope science can somehow, eventually, trump the vested financial interests of the education industry so all children can learn as Nature intended. 🍌



Chris Mercogliano is the author of *Making It Up as We Go Along: The Story of the Albany Free School*; *Teaching the Restless: One School’s Remarkable No-Ritalin Approach to Helping Children Learn and Succeed*; *How to Grow a School: Starting and Sustaining*

Schools that Work; *In Defense of Childhood: Protecting Kids’ Inner Wildness*; and *A School Must Have a Heart*. View article resources and author information here: pathwaystofamilywellness.org/references.html.



When you go out into the woods and you look at trees, you see all these different trees. And some of them are bent, and some of them are straight, and some of them are evergreens, and some of them are whatever. And you look at the tree and you allow it. You see why it is the way it is. You sort of understand that it didn't get enough light, and so it turned that way. And you don't get all emotional about it. You just allow it. You appreciate the tree. The minute you get near humans, you lose all that. And you are constantly saying 'You are too *this*, or I'm too *this*.' That judging mind comes in. And so I practice turning people into trees. Which means appreciating them just the way they are. —RAM DASS

One day, while driving down a free-way, I looked up to see an empty sky where there had been mountaintops.

Dust was rising as massive earth graders rumbled across a now-blank plain. Seemingly overnight, they had sliced away the horizon. Later came rows of mini-mansions devoid of color or individuality or visual meaning, and shopping malls, one after another after another after another, with the same anchor stores, the same stucco, the same cars, the same dreamlessness.

Perhaps you've shared this feeling—this *solastalgia*, as Australian philosopher Glenn Albrecht calls it: a form of human psychic distress caused by the loss of nature.

The disappearance of that horizon serves as example and metaphor, a reflection of how our society is out of balance, often overwhelmed by technology. Every day, it seems, we're enervated by empty calories, empty suits, empty politics, empty financial institutions, empty architecture, empty schools, empty news—emptied land.

Do we live in the age of emptiness?

Shift the view just a bit, and the world fills with possibilities. By restoring our kinship with other species, we restore ourselves. Imagine nature-rich and nature-smart homes, neighborhoods, schools, parks, urban and rural farms, workplaces, whole cities. To build this kind of a world, we need more than conservation. We need a new nature movement, not one that urges us back to nature, but forward to nature.

The eco-theologian Thomas Berry, a man who knew the power of practical dreaming, said the “Great Work” of the 21st century would be to reconnect our humanity to the reality and spirit of nature, to the fullness of life. Instead of settling for an age of emptiness, we could be entering one of the most creative periods in human history.
It's a choice.

THE Age of EMPTINESS or the Coming Creativity?

By Richard Louv

You're part of the new nature movement if...

- You want to **reconnect with real life** in a virtual age.
- You're a student who's decided to **build a career connecting people to nature**.
- You're an entrepreneur who wants to **build a business connecting people to nature**.
- You're a parent, child, or therapist who **believes that the family that plays in nature** together stays together.
- You're a biologist, landscape architect, or policymaker dedicated to **transforming cities into engines of biodiversity** and human health.
- You're someone who understands that **all spiritual life begins with a sense of wonder**, and that nature is a window into that wonder.
- You **hunger for authenticity**; you believe in nature's power to create a deeper sense of personal and regional identity.
- You can be of any race or culture, you can live in an inner city, suburb, or small town, and **you see your connection to nature as a birthright**.
- You're a **biophilic architect** on the cutting edge of green design.
- You're a **nature-smart developer** who creates or rebuilds neighborhoods that connect people to nature.
- You're an urban planner or public health official who believes that **creating more nearby nature builds better health**, tighter social bonds, and a smarter workforce.
- You're an employer using **biophilic design** to create a more productive workplace.
- You're a **nature-smart homeowner** determined to create a healthier, happier, restorative home, yard, and garden.
- You're a pediatrician or other healthcare professional who **prescribes nature for your young patients** and their families.
- You're helping a hospital, children's mental health center, nursing home, or other health facility **encourage healing through nature**.
- You're an ecopsychologist, wilderness therapy professional, nature therapist, camp counselor, docent, or park ranger working as a **"park health paraprofessional."**
- You're a **"new agrarian"**—an organic farmer or rancher or urban gardener.
- You're a **locavore**, dedicated to consuming locally grown food.
- You want to **reignite all your senses**.
- You're a nature-smart teacher who takes your students outside because **you understand the power of nature to help them learn**.
- You're an artist, writer, photographer, or musician who knows the **power of nature to stimulate creativity**, and you use your talents to reconnect people to nature.
- You're an outdoor recreationist who **restores nature**.
- You're a **citizen naturalist**.
- You care about the **human relationship with nature**, whether you're liberal, conservative...or other.
- You're a law enforcement official who believes **nature can play a role in crime prevention and prison recidivism**.
- You're an attorney who **protects the forgotten human right to our connection to nature** and the responsibilities that come with that right.
- You're a mayor or county official or business leader looking for a **new way to envision your region's future**.
- You're done with despair; you want to **create a newer world**.
- **You're**

This is a partial list, based on *The Nature Principle*. Where do you see yourself? 📍



Richard Louv is a cofounder and chairman emeritus of the Children & Nature Network (childrenandnature.org), an organization supporting the international movement to connect children, their families, and their communities to the natural world. He is the author of nine books, including *Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder* and *The Nature Principle*. His newest book, *Vitamin N*, offers 500 ways to build a nature-rich life. In 2008, he was awarded the Audubon Medal. Visit childrenandnature.org/vitaminn to see the Vitamin N Challenge and take direct action. View article resources and author information here: pathwaystofamilywellness.org/references.html.

By Roderic Gorney, M.D., Ph.D.

HOPE *for* HUMANKIND

People everywhere recognize that our species is in danger. Since most threats to our survival are of human origin, they can be understood by human minds and overcome with human effort. By far the most ominous threat of all is not nuclear weapons, overpopulation, or even poverty. At the risk of seeming romantic, I must tell you at the outset that the critical menace is deficient love.

What Is Love?

The first cell, presumably ancestral to all later life, established the root of love and survived to reproduce because it shared with all its components essentials such as water, oxygen, and amino acids.

Not the usual omelette of sentimentality, sensuality, and sexuality, love is not a feeling but a deed. Love is the conferring, through demonstrative acts, of survival benefits upon another in a creatively enlarging manner. Survival benefits consist of all those encouragements, supports, and stimulations needed for the loved person to reach fulfillment.

Given what we now know of the psycho-neurobiology of health, if we could, by some miracle, suddenly assure to every baby and child sufficient love, we could within one generation substantially turn present peril into potential paradise. But what determines whether or not we will understand the need and make the essential effort? Character.

Character is the pervasive set of reactions and responses to challenges and opportunities that is the most crucial distinction between people. Although biology



also influences character, the major influence upon it is the outside world as mediated through parenting. Once formed, character is relatively stable and sometimes resistant, but it can be reshaped gradually to become more loving, even into advanced age.

What people do to surmount dangers (presuming equal resources) depends on the interaction with their widely varying parents, cultures, and societies on the one hand, and interior resources and tendencies on the other. Predominant exterior and interior influences today too often shape character toward painful frustration by fostering inner and outer conflict rather than reconciliation. Predominant influences, both interior and exterior, in extended future days—if any—will need to be those that instead shape character toward loving fulfillment by fostering inner and outer harmony.

Does a culture or a society's level of harmony depend mainly on its material wealth? No. Although extreme poverty is a major hazard to well-being of any kind, the harmony of a culture or a society—and therefore its ability to foster love—is determined within a wide range of material sufficiencies by the degree to which it accords with or violates the structure of the innate values with which we are born. These values impel the new person to become loved and loving.

"Innate values" are neither airy abstractions nor rigid instincts, but the fundamental behavioral propensities

crucial to survival which evolution has established in life across 3 billion years, and which have been especially refined in humans during our 3 million years. Since they are only "capacities," however, they must be transformed into actual *abilities* by the pedagogy of learning.

A baby's first cry, after the painful journey of birth, is not, as sometimes alleged, a scream of innate aggression; it is the ultimate plea for the succor of love. But because we humans have no rigid biological instincts precisely directing a mother's response to the baby's rudimentary signal, she must learn how to understand and respond lovingly. If her character is generally nurturant, and not too blinded by inhibiting learned conflicts, the baby will quickly teach her how to fulfill his or her needs. And at the same time, simultaneously and by the same act, the baby will fulfill hers.

Fulfilling Needs

From the moment of birth, love is a two-way street. The baby is equipped not only to receive survival benefits but to confer them upon the mother. If put to the breast right after birth, the baby will receive the survival benefits of vital nourishment and, by its suckling, stimulate reflexes in the mother's uterus which confer upon her the survival benefits of helping to eject the placenta and stop her uterine bleeding. In this beautiful example is to be found a model of all later exchanges of survival benefits between lover and beloved.

The new baby's built-in potential includes capacities for many other sociable behaviors, which will be expressed if learned. For example, all normal human babies have the capacity for speech as they grow, but will never speak unless spoken to. The new baby also has innate potential to become both lover and killer; whether either of these is realized will depend upon the learning experiences that form his or her character—mainly the pervasive fulfillments or frustrations of daily life.

If we, in turn, teach the new person to expect love through consistent, tender satisfaction of needs, he or she tends to reciprocate with love. If we teach the new person to expect hate through consistent, hostile rejection or failure to meet her or his needs, this tiny dependent individual tends more to reciprocate with hate. As we have learned across more than a century of psychodynamic investigation and treatment, these loving and hating reciprocations tend to be directed both outward against others and inward against one's self. Our mental hospitals and prisons and our world at large are filled with tragic examples of inner and outer directed hate.

Cultures and Societies

Cultures and societies—like parents—are not all equal in their ability to provide and receive love. Those that are the most and least favorable for healthy, loving character development show several identifiable trends. One is the prevalence or absence of imposed inequalities, such as those which discriminate between individuals for the purpose of exploitation. Another is the degree to which the individual can serve both his or her own needs and those of the group simultaneously and by the same act—paralleling the mutuality of the baby-mother interaction.

For most of human evolution, communities consisted of small nomadic bands of a few dozen hunter-gatherer foragers who lived in relative material scarcity because they could not generate, preserve, or even carry extensive surpluses. So, in such a band, you shared meager resources with neighbors who were your only social security. No more ethical than we, such people were just being practical. After all, a well-fed hyena was no asset to your survival, but a well-fed human friend might be inclined and able to return your favor another day when you might be in trouble. Such sharing satisfied both individual needs and those



“If we want to know what we are born for, we must first know what we are born as: the virtuoso nurturers of the planet who are fundamentally designed to live as though to live and love are one.” —ASHLEY MONTAGU

of the group simultaneously and, by the same act, built on the harmony-generating situation of a baby suckling at the mother’s breast.

Twelve thousand years ago, probably in the Middle East, clever people invented agriculture and animal husbandry—the technologies that have most portentously changed human life. For the first time it became possible for a tiny nomadic band of cooperative foragers who gathered and hunted together to settle with others in a fixed village of maybe 600 or more people by generating, preserving, and storing surpluses. These accumulations of property could help that larger group survive the inevitable natural catastrophes, such as fire, flood, and earthquake. But at the same time, they shifted peoples’ concern from having good neighbors to having neighbors’ goods.

The crucial point is that now the hunger of a neighbor—or maybe a stranger from the other side of town was no longer a liability but a valuable resource that could transform that person into a commodity you very much needed: cheap labor. By not sharing gratis—by letting that person go hungry—you could not only smoke, freeze, or dry and store the leftovers for your own later use, but you could increase that person’s eagerness to work for you for low wages. You could thereby further enrich yourself and impoverish him or her. Moreover, very soon, you could also use that person as a soldier to protect your surpluses from outside marauders.

Here was the beginning of organized warfare. During the subsequent 12 millennia, such unloving circumstances have brought us to the present decline in human relationships, in which it is less and less likely for the needs of the individual and the group to be satisfied simultaneously by the same act.

Instead, we have increasingly come to accept as normal that we must take advantage of, rather than take care of, each other. It is these unloving—and decidedly abnormal—deeds which have brought about the poverty, pollution, and violence of our current world reality. And because 12,000 years seems to us like forever, most of us have no awareness that only 500 generations ago our human relationships were so much more loving.

Solutions

Based on all this, if we are determined to cure our troubles, what must we do? First, we must relinquish our much-prized despair—the excuse for not risking the possible disappointment of trying and failing.

Second, we must give up the wholly erroneous (though comforting) rationalization for our brutality: that it is the legacy of our primate forebears. They were no doubt generally at least as egalitarian, peaceable, and loving toward one another as are present-day apes—as was our own species until 12 millennia ago, when our mismanagement of agrarian surpluses set us on our present destructive course.



effective way to change behavior and that soothing touch is one of the most effective.

It would mean acknowledging the proof that people can change profoundly all their lives, and then doing all we know how to do to help them change healthfully. It would mean working consistently toward caring for other peoples and other species—as well as the inanimate world—as family, recognizing the validity of the biblical injunction that we are all indeed each other’s “keepers.” It would mean dealing with everything on earth in cognizance that, as Lewis Thomas says, it is part of the life of a single cell. And it would mean living with delight and dedication to be

Third, in Ashley Montagu’s words, “If we want to know what we are born for, we must first know what we are born as: the virtuoso nurturers of the planet who are fundamentally designed to live as though to live and love are one.” (Which indeed they are.)

And finally, we must make the suitable adjustments in our society to satisfy not only all of our basic biological needs, but our underlying behavioral needs, as well—our need for curiosity, experimentation, sound thought; for speech, song, dance; for the encouragements, stimulations, and supports of being both lover and beloved.

Specific Results

What would it mean specifically? It would mean (barring unlikely contraindications) putting each baby to the breast of his or her mother at the moment of birth and doing everything else possible to strengthen the mother’s and baby’s joy in each other and, in that way, launching healthy character development that will continue throughout life.

It would mean teaching children around the world how to think soundly rather than what to think mechanically. It would mean teaching them to test for themselves the proposition that evolution has prepared us not for acquisitive violence but with the innate value to become sharing, warm, loving persons—and that, if we don’t do so, nothing else much matters.

It would mean putting into practice the wisdom that human survival requires access by all people to such full and free realization of their wholesome potentialities.

It would mean applying the insight that most of the people in prisons—and many of those in mental hospitals—are there because of the unstable, unloving conditions of their early lives. It would mean putting to use the extensively documented evidence that punishment is the least

contributing to the betterment of all.

But as we all know, nearly everywhere there is crushing poverty, religious and ethnic enmity, and exploitation of people, other species, and the earth. Sometimes it may even seem that we have passed the point of no return—that we cannot limit population, harmonize differences, and decontaminate the planet in time.

But in a time of crisis, the only philosophically tenable position for a pessimist is optimism. So, all we need to do now is to learn to live again with the loving values of our prehistoric forebears—but amid the material sufficiency possible today.

Now, is that a problem? 🍷

AUTHOR’S NOTE: This article was written and delivered by me at Professor Ashley Montagu’s request as his response to his selection as 1995 Humanist of the Year by the American Humanist Association. It was deliberately crafted to include many of Montagu’s (and others’) own words about evolution, anthropology and history as well as elements from my study, teaching, and practice of psychiatry and psychoanalysis. It also was published in the 1996 January/February issue of *The Humanist Magazine* and it appears in an earlier version on the website of the Ashley Montagu Institute. The text above has been updated and edited a bit for ease of reading and comprehension, and shortened by PATHWAYS by 260 words.



Roderic Gorney, M.D., Ph.D., is a professor of psychiatry at UCLA and of psychoanalysis at the New Center for Psychoanalysis. A certified specialist, he has become also a widely recognized generalist on humankind. View article resources and author information here: pathwaystofamilywellness.org/references.html.

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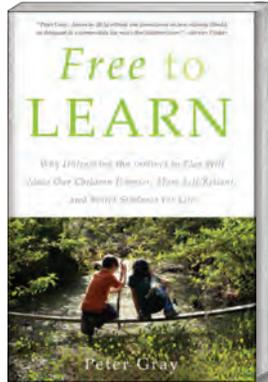
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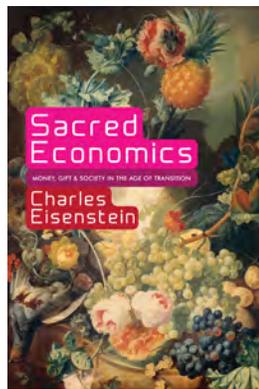
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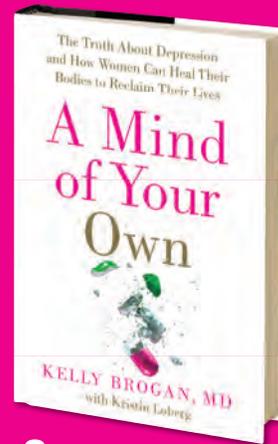
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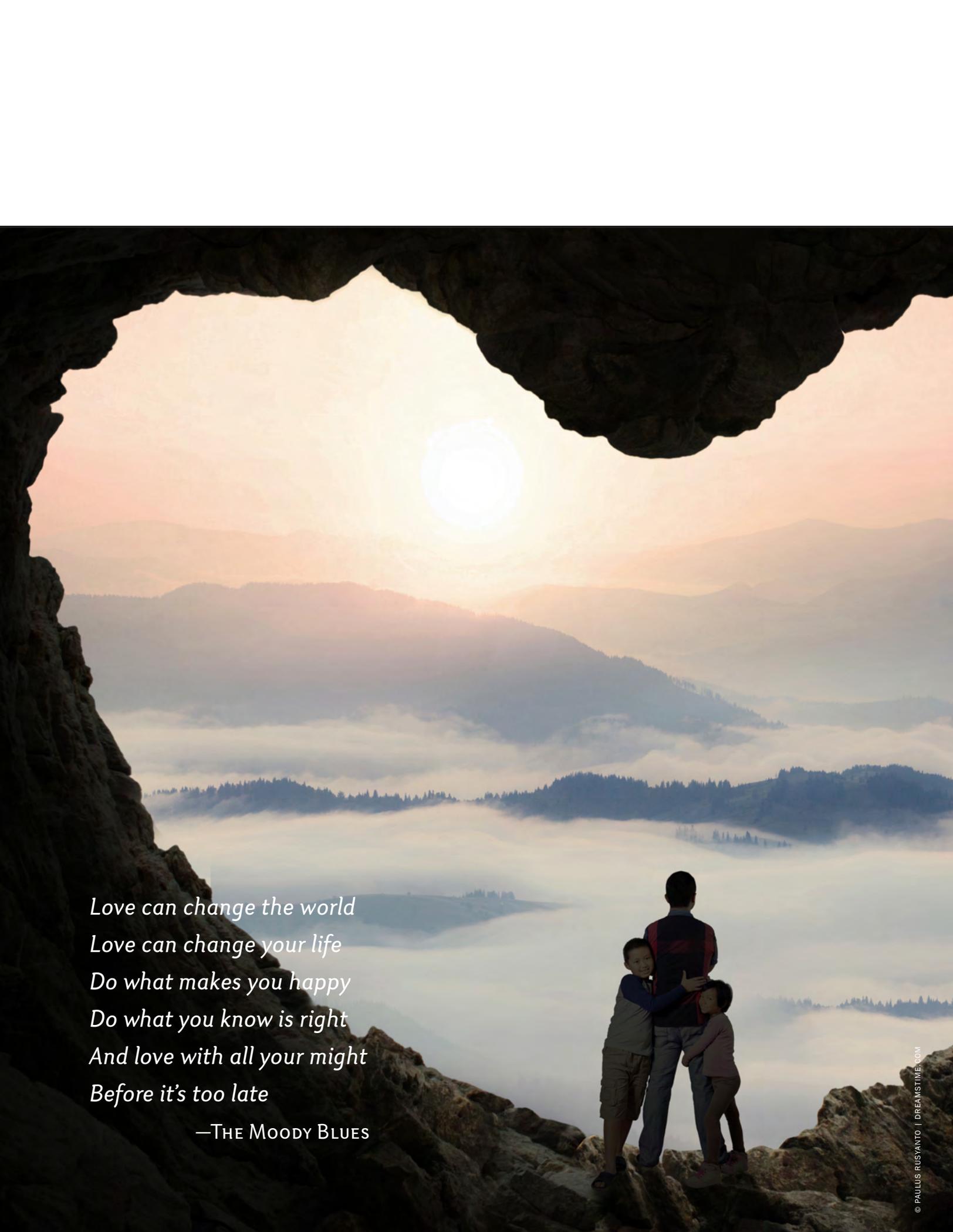
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