

Love at Goon excerpt
By Deborah Blum

LOVE LESSONS

New insights into the biology and chemistry of connection show that love is the foundation of health, happiness and life itself.

In the early spring light, the Henry Vilas Zoological Park remains almost colorless, a place of black branch and pale ground.

The upper Midwest shakes off winter slowly. ~~This is a small zoo, and~~ In the chill, one can be grateful that this is a small zoo; a visitor walking fast can travel from reptile house to primate house in a bare five minutes

I'm a primate junkie myself. My footsteps, hollow-sounding on the cold ground, inevitably carry me to this building. I will stand admiring the plummy-tailed colobus and the stone-faced ancient, powerful orangutans ~~—almost weightless in their grace—~~ until my children drag me away.

The psychologist Harry Harlow—the man who literally brought love from the province of the poets and straight into the laboratory—began his work here. Harry Harlow himself died some twenty years ago, but he forever changed the way we think about human relationships. He believed that human affection could be studied, even measured. His experiments on primates were sometimes beautiful and sometimes profoundly troubling,

but in the end they proved the power of love, of connection—and how the lack of either could derail an entire life. Who can forget the startling images of little monkeys clinging to artificially warmed, wire and cloth “mothers”?

Harlow’s experiments showed us that being touched and held was critical, a need that was hardwired into our bodies and souls. Before his famous parenting studies, leading psychologists argued that love was detrimental in raising children, that affection would make youngsters weak. Harlow’s experiments completely countered those arguments. He found that baby monkeys bonded to a mother who provided “contact comfort”. The infants raised with a soft, cuddly mother were far more well-adjusted and secure. The baby monkeys raised with a mother that didn’t offer touch or comfort – such as the wire mother – would visibly despair, huddling into a ball. Harlow deliberately and provocatively titled his results “The Nature of Love.”[Need 1-3 sentence summary of his monkey work from author] A slight, sardonic man, a workaholic more involved with science than with his children, Harlow was in some ways an unlikely crusader for love. He admitted once that he had been a lonely child; he struggled himself with relationships. And yet he taught us irrefutable truths: that love alone is the foundation upon which we build our lives—or it should be.

I wonder about ~~that fundamental lesson~~ his lessons as I stand inside the primate house, shutting the glass doors on the slow thaw outside. The orangutans at the Viliams zoo have a new baby. The mother holds it, heart to heart, as if letting go would violate all the natural laws of life. Perhaps science is finally catching up with common sense, as Harry liked to say. Perhaps the answer is as simple as the view through the glass: mother and child so close together that you might imagine the two hearts ts beating as one.

WHY BABIES FALL IN LOVE

No scientist has ever found an object in the universe that a baby would rather see than a mother's smiling face. A mother's face is always beautiful. Harry Harlow ~~came to believe that, and~~ once said, "A mother's face that will stop a clock will not stop a baby." He couldn't design a mother's face that would turn a baby away, not even cloth mom with her red stare and her flat green smile. She could have a blank face, a bug face, any face—as long as it was mom's face. In the look of her mother, the infant saw the gorgeous appearance of security, the commitment of just being there.

 Perhaps there's a carryover effect; beyond mom, babies love to look at faces, period. Psychologists have come to marvel at how

passionate babies are about nature's assembly of eyes, nose and mouth. Curve of lips, arch of brow, narrowing of eyes—there are countless meanings in this human canvas. A baby will peer intently and try to decipher those flickering expressions. In systematic tests where infants are shown pictures of people with varying expressions, researchers find direct evidence that the infants deftly interpret facial meaning. Very young humans stare happily at a beaming smile, look somberly back at a frown.

Babies scan faces, it seems, for answers to their most important questions. Am I doing the right thing? Am I making you happy? Are you paying attention to me? Am I safe? Am I loved enough to matter? In one classic experiment, called the “visual cliff test,” researchers put infants on a raised platform, a clear panel set in the middle. A baby crawling along the platform, looking down, would suddenly see a drop to the floor through the thick Plexiglas. The panel was as sturdy as the rest of the platform, but they didn't know that. Children would tremble there, fingers still gripping the opaque boards of the platform, staring down that steep virtual cliff.

The children in this study were ten months old. If their mothers smiled and nodded, most of the babies went on over. If their moms looked fearful or doubtful, the babies would slowly back away. In psychology, the cliff experiment is justly famous. It

stands as a stunning example of how much children look to their parents for answers—and receive them—without a word spoken.

The test is also a rare example of faith in another person. How many people in our lives trust us so much that if we nod and smile, they will chance a tumble down a cliff? At this moment in their lives, infants give absolute trust.

“Clearly, the emotional state of others is of fundamental importance to the infant’s emotional state,” says Harvard child psychiatrist Edward Tronick. His choice of the word others rather than mothers is deliberate. Children form many important relationships with adults. A “mother” may be biological, adoptive, guardian, foster, grandparent, relative, friend. In recognizing the full range of emotional connection and intimacy, our society has begun to embrace a closer role for fathers as well. Infants may also scan a dad’s face for comfort and for the kind of unconditional love that used to be seen as a mother’s specialty.

Babies send their parents nonverbal messages, too. Infants smile when they are pleased; cling when they need contact; follow with their eyes when they are worried that we may leave. Back in 1983, Ed Tronick ~~at Harvard~~ began to consider the power of this interaction between parent and child. It occurred to him that the I-smile-you-smile-back kind of relationship could be the basis of an interesting experiment. It wasn’t the physical smile that

interested him so much. It was what it represented—the give and give back between mother and child.

WHEN FACES GO SILENT

What if nothing a baby does elicits a response? What if an infant could coo and call and coax and find that he has nothing in the box of social skills that will get him a response? It was in those questions that Tronick thought he saw a way to tug at the mother-child bond. He came up with what he called the Face-to-Face Still-Face Paradigm. He and a colleague, Jeffrey Cohn, asked the mothers of three-month-olds simply to go blank for a few minutes while looking at their children. The “still face” test demanded only that—a total lack of response. No anger or threat, no humor or love. The all-important facial map would show nothing but emotionally empty terrain.

“The effect on the infant is dramatic,” Tronick wrote in an early publication, echoing his own initial astonishment at the power of that still face. “Infants almost immediately detect the change and attempt to solicit the mother’s attention.” When a mother still refused to respond, babies tried self-comfort. They sucked their thumbs. They looked away. Then the babies tried again. They reached for their best tools to engage their mothers, smiling, gurgling. And as ordered, the mothers would return

nothing. The babies would comfort themselves again, and try again. And again. Babies know this matters. They're stubborn about it. But after a while, confronted with only that blank face, each child stopped trying.

"I remember when I first did the still-face paradigm," says Tronick, who today heads the pediatric research division at Harvard Medical School. He is a tall, elegant man with silver hair, brilliant blue eyes, and a habit of saying very precisely what he thinks. "I said to people, look, it's like the monkeys in Harlow's study. Look at this emotional reaction." Yet the psychologists he showed the pictures to thought that what they saw couldn't represent emotion. It seemed to Tronick that his colleagues were almost personally uncomfortable with the idea that the connection between mother and child could be so strong, that relationships could matter that much. "People don't want to believe that a child could be so hurt—or that we could be so hurtful."

TOUCH: THE CHEMISTRY OF CONTENTMENT

There is a singularly comforting body chemistry to being hugged by a parent who loves you. ~~Scientists have learned ways to measure that internal biology.~~ If a mother monkey scoops a baby close against her chest, heart rates drop; if scientists measure stress hormones, they can chart them dropping away.

An identical reaction can be seen in human children. A child tucked against his mother's shoulder seems lulled into that easy chemistry of contentment.

One of the scientists who has done the first and best work on the chemistry of touch is Saul Schanberg of the department of pharmacology at Duke University. Schanberg suggested that our intense response to touch is a primitive survival mechanism. "Because mammals depend on maternal care for survival in their early weeks or months," says Schanberg, "the prolonged absence of a mother's touch triggers a slowing of the infant's metabolism." That allows the infant to survive a longer separation from the mother. Once she returns, her touch reverses the process. Premature babies who are stroked for fifteen minutes, three times a day, grow 50 percent faster than standard, isolated preemies. The baby who huddles into his crib, or the little monkey who curls up at the edge of her cage, appear hopeless. But we should be aware that some of this huddling is actually conservation. As they hunker down, the babies are waiting for their mothers to come home and for everything to be all right. The bottom line is that touch is good for your health, your immune system, your sleep, your anxiety level, your life.

LIFE AS TEAM SPORT

Sally Mendoza, ~~chair~~ of the psychology department at the University of California Davis, (she's stepped down as chair since the book was published) has long insisted ~~believed~~ that the way we connect is absolutely, fundamentally important in understanding ourselves. She believes that we rarely act in isolation, and that social connections influence many of our behaviors and decisions. Mendoza is convinced that our social interactions actually change our internal physiology and chemistry. Behind her idea lies a provocative theory: that our individual body chemistry is not so individual at all, that each of us is designed, in part, just to respond to the other people in our lives.

If so, then the lyric insistence of the seventeenth-century poet John Donne that “no man is an island” takes on a scientific literalness. We become inseparable from the fine fragile fabric of our relationships. “Without social support,” says Mendoza, “you are in real trouble. We spend a huge amount of time in relationships. That should tell us that it’s inordinately important, that relationships are critical to biology.”

Our bodies know this. Our brains recognize it subconsciously, even if we cannot accept it intellectually. Or so Mendoza suggests. We spend many of our limited waking minutes on each other. Parents with demanding jobs still huddle over

homework with their children, cheer them at soccer games, fall asleep reading to them at night. Even office life thrives on gossip, jokes and friendships. Often the very best minutes of our days are the connected ones. If you think of the nature of love as a multifaceted gem of an idea, then our need to belong is a major facet.

Mendoza and her colleagues have been trying to better define the brain anatomy and neurochemistry that helps sustain those bonds. She has looked at the intricate squirrel monkey society as an example. If she takes a squirrel out of his group, she can measure a sudden spike in the animal's stress hormones. The rise isn't only in the separated individual. The hormone blazes across the group, even in monkeys who rarely spent time with the missing animal. Everyone registers that someone is missing. She suspects that humans respond similarly to minor relationship changes.

"One person may go to a single relationship for everything they need. I rely on a rich network of friends," Mendoza says. We can and do extend our family circle with friendship. If one fails us, there are still others to keep the net stretched beneath us. There may be phases of our lives when friendships or partnerships seem more powerful than our original families. But our ability to

forge those later relationships may well depend on what each child gets from his or her parents.

American culture, however, often argues against that weight of commitment. Meredith Small, professor of anthropology at Cornell University and author of Our Babies, Ourselves, notes that our culture is “built on individual achievement. You’re told to be independent, self-reliant, get through life on your own. And that’s in direct conflict with how humans are designed. We’re not like a bunch of wildebeests on the savanna. We’re supposed to be dependent on each other.”

Researchers such as Small worry that our culture tends to push us away from healthy dependency, that our lifestyle – a blur of financially-stressed parents, frantic schedules and fragmented families – often makes such commitment an inconvenience.

~~[Transition needed from author about society these days, working parents, busy schedules, fragmented families, etc]~~ In 1947, just 12 percent of mothers with children under the age of six worked outside the home. In 1997, that number had risen to 64 percent.

[any newer figures available? Not that I have, this was from a 50 year comparison by NICHD] [transition needed, suggested: How does this impact our hearts and souls, as individuals and a culture? ok] In her book, Mother Nature, California anthropologist Sarah Blaffer Hrdy builds an image of a good mother very

different from the archetypal, 1950's lonely but devoted nurturer. The mother Hrdy has in mind is also fiercely protective of her child, but sometimes she is just plain fierce. Hrdy would have us get rid of that milky Madonna stereotype. She reminds us that mothers are still women with passion, and ambitions, and yes, interests beyond the child. And as long as we are getting rid of stereotypes, Hrdy points out, why shouldn't we connect in a more giving community of aunts or uncles or cousins or grandparents? Why should we cast our social support net so very narrowly?

Craig and Sharon Ramey, [both professors of psychology, y \(I.D. needed\)](#) at the University of Alabama, have tested super-intensity preschool programs for children, mostly children from disadvantaged families who are likely to have highly distracted parents. Consistently, the children in those programs thrive. Ramey suggests that his prototype day cares—one to three ratio, lots of hugging and touching—are designed to mimic the extended family nature of human evolution.

We might also, in these more modern times, consider further emphasizing the role of the father. As Harry Harlow's work showed all too clearly, and as some of us know all too well, there's no guarantee that you won't end up with a weird mother or a bored mother or even a monster mother. One of the risks of the one-on-one attachment is that you could end up with a "wire only"

mother and no one else to hold you. If you share in several caretakers, you may miss the advantage of getting the total attention of the world's best mother. But you are never as vulnerable to the worst.

~~Some of us are moving in that direction.~~ Bruce Perry, chief of child psychiatry at Houston's Baylor University, argues that our biology is designed for a more complex social world than even a good nuclear family may provide. "Our current living systems are disrespectful of the brain's potential," he says." Perry has worked with touch therapy, dance, art, storytelling and drama, as techniques to help neglected children. By conducting brain imagery studies, he's been able to see that such activities help strengthen specific parts of the brain. ~~The children who benefit the most from this, he says, are neglected children.~~ One of the most important improvements is in social skills.

Studies of neglected children find that often what they see is a still-face, no matter what the expression. Many of them lack basic face reading skills. Of course, this makes complete sense. Who would teach them to read a face? The mother who had no interest in them? The father who wasn't there? As Harry Harlow's studies—and the studies that have grown out of them—show, social isolation has devastating effects. "Many people still

do not appreciate how bad the effects are,” says psychologist Irwin Bernstein, [of the University of Georgia.](#) ~~(ID needed)~~.

We need not just to be loved, but to feel loved. What’s important is not that the mother—or any of us—gets it right every time. It’s fixing mistakes that matters—even just the willingness to try again. The requirement is just to stay in there. [Harry’s Harlow’s](#) research tells us that love is work. So do all the studies that follow. The nature of love is about paying attention to the people who matter, about still giving when you are too tired to give. Be a mother who listens, a father who cuddles, a friend who calls back, a helping neighbor, a loving child.

That emphasis on love in our everyday lives may be the best of that quiet revolution in psychology, the one that changed the way we think about love and relationship almost without our noticing that had happened. We take for granted now that parents should hug their children, that taking care of each other is part of the good life. It is such a good foundation that it’s almost astonishing to consider how recent it is. For that foundation we owe a debt to Harry Harlow and to all the scientists who believed and worked toward a psychology of the heart.

At the end, in [Harlow’s](#) handiwork, there’s nothing sentimental about love, no sunlit clouds and glory notes—it’s a substantial, earth-bound connection, grounded in effort, kindness

and decency. Learning to love, Harry liked to say, is really about learning to live. Perhaps everyday affection seems a small facet of love. Perhaps, though, it is the modest, steady responses that see us through day after day, that stretch into a life of close and loving relationships. Or, as Harry Harlow once wrote to a friend, “Perhaps one should always be modest when talking about love.”