

By Maggie Scarf

The difference between
FALLING IN
LOVE *and*
BEING IN
LOVE



We had been picnicking with friends near the banks of the Rancocas river in New Jersey. Wandering off by ourselves, we hiked through a pungent pine woods, hearing the needles scrunch

under our feet. The sunlight filtered down through the trees, and the sweet odor of the dead needles assailed our nostrils.

He slipped my hand into his. As we walked along, I was conscious of the feeling of being in total harmony with him, and with the enchanted world through which we walked.

He paused in a sun-filled clearing and turned to face me. Drawing me closer, he leaned down: I, turning my lips upward to meet his, pressed my entire body tightly against his.

We clung together, wanting to remain locked in this elated mood forever. At the same time, the moment's intensity was almost unbearable—a sense that our egos were passing beyond their normal boundaries and coalescing with that of the other. Knees wobbling, hearts pounding, we were high on Nature's most delicious elixir, romantic love; it was as if we were in an altered state of being.

Falling in love

Romantic lovers *are*, from an internal, neurophysiological point of view, in a profoundly altered state. The courting lover is comparable to someone who's taken stimulant drugs, such as amphetamines, both in terms of biochemical brain and behavioral responses.

The person in a state of romantic excitement is (like the person who's started using stimulants) unusually energized, optimistic, high-spirited and eager to communicate. If the whole world seems to be a much happier place, it's because the lover's own perceptions of others is so strikingly different. According to psychiatric researcher Michael Liebowitz, M.D., what is probably happening to the romantic lover's brain internally is that it is being bombarded with its own natural amphetamines.

When you fall in love, the object of your desire—rather than a psychoactive drug—serves as the stimulus to produce the gushing forth of excitatory brain biochemicals. During this period of high energy and superoptimism, when love is blinder than it ever will be again, positive feelings reign and negative ones are ignored. The intimate other is approached with awe and uncertainty, like a god or goddess whose loving approval can bring balm, joy and self-acceptance.

Early on in romance, lovers experience a sense of interpersonal merger. They feel a deep affinity to one another, an implicit mutuality and agreement, even though each is, to the other, largely an unknown quantity. The very lack of precise knowledge of the beloved, in fact, fuels the sense of novelty and excitement.

For the beloved, like an empty container, can be filled up with illusions, qualities, thoughts and feelings. What we see in our love-mates, in the first transports of romantic excitement, is largely what we have put there ourselves.

Our deepest wishes and desires are embodied, often, in what has been called "the Golden Fantasy": the dream of being nurtured in a relationship with an all-caring, intuitively knowing intimate other (who meets one's needs automatically, without being told what they are). This is a dream of Eden, in which two are perfect company and differences between them nonexistent. It is bliss, or as close to it as we can imagine.

But behind the romance and magnetism is science, and all states of being have their neurophysiological parallels. What, then, is the biological state of romantic excitement, and is it destined to be temporary or can it be sustained?

Although the data is incomplete, what does seem evident is that certain brain biochemicals called the neurotransmitters are critically involved. As their name implies, neurotransmitters are chemical messengers in the brain. Our nerve cells are not directly linked to one another, and the neurotransmitters serve to convey information across the gaps (synapses) that divide one nerve cell from another. These delicate brain biochemicals are, in ways that remain somewhat mysterious, integrally connected to our mood-states. Fluctuations in brain levels of the neurotransmitters can make us happy as larks or make us feel down and defeated.

Of the thirty known neurotransmitters, two of the major ones—*norepinephrine* and *dopamine*—are most important in mediating the experiencing of pleasure, cerebrally. These neural substances, according to Dr. Liebowitz, seem to play a central role in creating the euphoric feelings that characterize the initial phase of a romantic attraction (as well as the psychological and physical responses to psychoactive drugs). When we fall in love, brain levels of norepinephrine and dopamine rise, flooding us with feelings of hopefulness and joy.

Speaking in broad, evolutionary terms, the biology of romantic attraction seems to be an integral part of nature's internal reward system—for becoming aroused, sexually interested, eventually mating and producing a new generation.

The "ramp effect"

Over time, however, the romantic "high" levels off. The mysterious, exalted other person becomes someone familiar. Novelty fades, the romantic haze dissipates and the god or goddess is revealed to be just another person. The illusion of perfect harmony and oneness succumbs to the reality that one person and one person don't really add up to one person; they add up to two, who will—because they *are* different people—differ in ways that are substantial.

In romantic love, as in drug usage, what pharmacologists call the "ramp effect" inevitably begins to develop. As Liebowitz observes in his book, *The Chemistry of Love*: "The steeper the ramp—that is, the more rapid or greater the change in the drug level—the more powerful its effect on us. Once the (Continued on page 150)

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(Continued from page 127) drug hits its peak concentration and levels off, its effects begin to subside, even if the amount still present in the brain remains high for some time.”

In other words, the same stimulus—whether it be a walk in the woods with your beloved or the ingestion of the same amount of stimulant drugs—fails to produce the same degree of pleasure. The newness of the relationship and the excited sense of discovering unknown aspects of the beloved start to taper down; he or she is becoming familiar. There is less novelty and *what our brains respond to is change—rising levels of novelty and stimulation.*

Inevitably, in a romantic relationship, you reach a plateau of possible excitement. The brain then experiences this “sameness” as “fall-off”—for the excitement that was escalating is not continuing to do so. The lover who expected to remain in a state of rising euphoria indefinitely often feels this loss of altitude as a serious disappointment or possibly even the beginning of the end of the relationship. Getting better acquainted with the romantic partner produces (as does steady use of psychoactive drugs) “tolerance.” That is, the brain learns to tolerate the exciting stimulation and adapts to its presence, over time. Looked at from this point of view, an end to romantic ecstasy is inevitable: Habituation to the beloved is *ordained* by the very nature of our nervous circuitry, which responds more extravagantly to what is new and unfamiliar.

But this doesn't mean that another set of positive feelings doesn't replace this initial euphoria. There is a difference between the excited “at-

traction” phase of an intimate relationship and the less dramatic but more durable phase known as “attachment.” Obviously, intense romantic and sexual feelings often lead to the formation of a commitment, a long-lasting emotional bond that Liebowitz feels involves a completely different neural system in the brain. The neurobiology of romantic or sexual attraction (the first phase), he believes, involves amphetamine-related brain chemical systems. The neurobiology of human love attachment, on the other hand, may involve the brain's own naturally produced narcotics—the *endorphins*—which, Liebowitz believes, come into play when the organism feels calm and secure, and anxieties about separation are not in the ascendant.

The passage from “romantic ecstasy” to “long-term attachment” is in love's cards, the natural sequence of a love relationship.

As time passes, the presence of the intimate other—once the stimulus for wild arousal and magical experience—becomes transmuted into a source of comfort and security. The partner's presence is calming, affording a sense of emotional stability and well-being. He or she is, as the parent once was, an orienting person—an emotional home base in the world.

Being in love

While I am fascinated by the explanation of the different brain chemical systems, I don't happen to believe that these distinctions in love—“attraction” and “attachment”—can be drawn quite so sharply. For while the earth may not rock beneath the feet of long-term lovers—and the illusion that two beings can fuse into one has usually proven to be just that—it may nevertheless be true that the partner remains to some degree mysterious,

full of novelty and surprises. To the degree that differences between the mates are *not* viewed as betrayals, those differences become a source of wonder and edification.

Further along in a love-relationship, and beyond the stage of romantic fantasy, there are still new things to learn about your partner—less about his or her surface aspects—much more about the person within. If an atmosphere of safety and trust has developed between two people, then truly knowing and being known by another person affords another kind of enchantment entirely.

For example, how analytically my husband approaches a problem: He sorts the subissues into mental piles and then reframes the entire quandary into something orderly, approachable and manageable. I, on the other hand, rely on feelings far more than I do on intellect, method and rationality. My instinctive reactions often take me to the heart of a matter, and this capacity sometimes seems like black magic to him. What is important here is that we continue to surprise and amaze each other. How different a person he really is! “As long as I've known you, you really keep on surprising me,” he tells me.

As Avodah Offit, M.D., observes in *The Sexual Self*, the most important English derivation of the word “love” comes from the word “lief,” meaning “belief.” “For English-speaking people,” she writes, “the root of love is belief, faith and trust.”

The novelty and excitement of new romance is wonderful, and something everyone envies, but as far as I and many other people who have known the excitement and satisfaction of long-term relationships are concerned, it is belief, faith and trust that are the ultimate turn-ons. □

Big bucks theory

(Continued from page 141) taking financial risks may be a way to make those obligations seem somewhat less oppressive.

Men often seem cheap. Men often think that women use money for instant gratification. And women, in turn, often think men are tightwads. Although psychologists say that the stereotype of the hoarding male is fading, they admit there are good rea-

sons why it hasn't yet disappeared.

“Some men and women—the hoarders and the spenders—relate to money the same way they relate to other things,” says Olivia Mellan, a Washington, D.C., psychotherapist specializing in money problems. “Women spenders are more expressive in general, whereas men hoarders are more likely to hold back.”

To their dismay, some women have discovered that getting a man to spend doesn't mean he will enjoy the

experience. Glenda Stone-Ulmer, an investor relations analyst with Federal Mogul Corporation in Detroit, convinced her husband that they could afford to stay in \$200-a-night hotels on a recent trip to Europe, but the posh accommodations almost turned him into a basket case. “Spending the money really bothered him,” she says. “I don't think he slept at all.”

Men are more likely to think of money in the abstract. “Money per se is more completely satisfying (Continued)