

CUT LOOSE

(MOSTLY)
OLDER WOMEN
TALK ABOUT
THE END OF
(MOSTLY)
LONG-TERM
RELATIONSHIPS

Edited by

Nan Bauer-Maglin

*Rutgers University Press
New Brunswick, New Jersey, and London*

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Lost Love

The Nature of Romantic Rejection

HELEN FISHER

“Parting is all we need to know of hell.”

—EMILY DICKINSON

Fires run through my body—the pain of loving you. Pain runs through my body with the fires of my love for you. Sickness wanders my body with my love for you. Pain like a boil about to burst with my love for you. Consumed by fire with my love for you. I remember what you said to me. I am thinking of your love for me. I am torn by your love for me. Pain and more pain. Where are you going with my love? I’m told you will go from here. I am told you will leave me here. My body is numb with grief. Remember what I’ve said, my love. Goodbye, my love, goodbye.” This poem, recited by an anonymous Kwakwiltl Indian of southern Alaska to a missionary in 1896, captures the excruciating pain of lost love.¹

Thousands of men and women in other cultures have left evidence of their despair. An Aztec native left these melancholy words in the sixteenth century, “Now I know / why my father / would go out / and cry / in the rain.” An eighth-century Japanese poet wrote, “I look at the hand you held, and the ache is hard to bear.” And Edna St. Vincent Millay scribed these wrenching lines, “Sweet love, sweet thorn, when lightly to my heart / I took your thrust, whereby I since am slain, / And lie disheveled in the grass apart, / A sodden thing bedrenched by tears and rain.”

People around the world have also told anthropologists about their suffering.

A forsaken Chinese woman confided, "I can't bear life. All my interests in life have disappeared." A scorned Polynesian woman moaned, "I was lonely and really sad and I cried. I stopped eating and didn't sleep well; I couldn't keep my mind on my work." Up the Sepik River in New Guinea rejected men compose tragic love songs called "*namai*," songs about marriages that "might have been." And in India, brokenhearted men and women have formed a club, The Society for the Study of Broken Hearts. Each year, on the third of May, they celebrate National Broken Hearts Day, swapping stories and consoling one another.

From the ancient Sumerians, Aztecs, and Hindus to contemporary African Pygmies, Australian Aborigines, and Arctic Eskimos, people in over 150 societies have left songs, stories, accounts, myths, and legends recounting the anguish of lost love. It seems that at some point in life, just about everyone feels the emptiness, hopelessness, fear, and fury that romantic rejection creates. In fact, among college students at Case Western Reserve, 93 percent of both sexes reported that they had been spurned by someone they adored; 95 percent also said they had rejected someone who was deeply in love with them.

A Multipart Study of Romantic Love

The degrees and shades of this fierce malaise are probably as varied as human beings. Yet psychiatrists and neuroscientists currently divide romantic rejection into two general phases: protest and resignation/despair. During the protest phase, the deserted lover tries obsessively to win back the departing mate. Alas, their romantic passion also intensifies. And most abandoned men and women feel rage as well as love. Then, as resignation sets in, the discarded lover gives up and often slips into depression triggered by despair. These two phases of romantic rejection, I will maintain, are caused by the activity of several conjoining brain systems. Among them is dopamine; this natural stimulant plays a key role.

I hypothesize this because in 1996 I embarked on a multipart study of romantic love. First I canvassed the psychological literature on romantic love, culling those traits, symptoms or conditions that were mentioned repeatedly.

Being in Love

Romantic love begins as a man or woman starts to feel that another is unique; the sweetheart takes on special meaning. The lover then starts to focus his/her attention on the beloved. Lovers can list what they don't like about their sweetheart, but they minimize these traits and aggrandize those that they adore. As Chaucer wrote, "love is blynd." The lover feels euphoria when things

are going well and swings into despair when the relationship has a setback. Adversity heightens the lover's passion. Lovers feel intense energy too; some hardly eat or sleep. And they become emotionally dependent on the relationship, reordering their daily priorities to remain in contact with their sweetheart and experiencing separation anxiety when apart.

Lovers are also sexually and emotionally possessive. They feel powerful empathy for their amour; indeed, many would die for him or her. And they think obsessively about the beloved. The fourth-century Chinese poet Tzu Yeh wrote of this, "How can I not think of you." And an anonymous eighth-century Japanese poet moaned, "My longing has no time when it ceases." But perhaps most important, the lover craves emotional union with his or her sweetheart. Indeed, the lover is intensely motivated to win this prize—at almost any cost. As Walt Whitman declared, "I would stake all for you."

Last, all these feelings of romantic passion are involuntary and exceedingly difficult to control. As Stendhal wrote, "Love is like a fever; it comes and goes quite independently of the will."

Questionnaire on Romantic Love

After establishing these core components of romantic love, I designed a questionnaire using these traits and administered it to 437 Americans at and around Rutgers University (New Jersey) and New York City and to 402 Japanese at the University of Tokyo.

The results were what you might predict. Age, gender, sexual orientation, religious affiliation, ethnic background: none of these variables made much difference. For example, on 82 percent of the statements, people over age forty-five reported being just as passionate about their beloved as those under age twenty-five. Heterosexuals and homosexuals gave similar responses on 86 percent of the questions. On 87 percent of the queries, American men and women responded virtually alike. Race and religious affiliation were not factors either. The greatest differences were between the Americans and the Japanese. On most of the questions where they showed statistically significant variations, however, one nationality simply expressed somewhat greater romantic passion.

I became convinced from these questionnaires and other literature on romantic love that this passion is a human universal. This madness must be deeply embedded in the human brain.

The Chemistry of Love

Then I launched an investigation into the brain circuitry associated with human romantic love. Using functional magnetic resonance imaging (fMRI),

I and my colleagues, neuroscientist Lucy Brown at the Albert Einstein College of Medicine and psychologist Dr. Arthur Aron at the State University of New York at Stony Brook, first studied the brain activity of seven men and ten women who had “just fallen madly in love” (Aron et al. 2005). Participants reported being in love an average of 7.4 months (median=7; range 1–17 months), and they ranged in age from eighteen to twenty-six.

The experiment consisted of four tasks: each subject looked at a photograph of his/her beloved and then at one of an emotionally neutral acquaintance, interspersed with a distraction task to cleanse the mind of romantic passion. In this case the task consisted of looking at a large number, such as 8,241, and mentally counting backwards from this number in increments of seven. Hence each participant looked at the positive stimulus for thirty seconds; then counted backward for forty seconds; then looked at the neutral photograph for thirty seconds, then counted backward for twenty seconds. This process (or its reverse) was repeated six times; the experiment lasted about twelve minutes.

The results told us much about the brain in love. Most important, when participants looked at the photo of their beloved, they showed increased activity in a tiny factory in the midbrain known as the Ventral Tegmental Area (VTA), as well as in regions of a much larger organ located near the center of the head, the caudate nucleus. The VTA is rich in cells that produce and distribute dopamine to many brain areas, including the caudate nucleus. And in the right proportions and quantities, dopamine can produce feelings of ecstasy, as well as focused attention, enormous energy, and intense motivation to win a reward. In fact, the VTA and the caudate are both part of the brain’s “reward system,” the network that controls general arousal, sensations of pleasure, focused attention, and goal-oriented behaviors.

The Drive to Love

These data suggest something important about romantic love. Because early-stage intense romantic passion activates the VTA and caudate nucleus, rather than emotion centers of the brain, I came to believe this madness is a fundamental human mating drive.

Neuroscientist Donald Pfaff defines a drive as a neural state that energizes and directs behavior to acquire a particular biological “need” to survive or reproduce. Like drives, romantic attraction is tenacious; if you love someone in the morning, you will love them in the afternoon. Emotions, on the other hand, come and go across the day. Like drives, romantic love is focused on a *specific* reward, the beloved; emotions are linked instead to a variety of objects

and ideas. Like drives, romantic love is not associated with any particular facial expression; all of the primary emotions (such as anger, fear, joy, and disgust) have stereotypic facial poses. Like drives, romantic love is exceedingly difficult to control; it is harder to curb thirst, for example, than to control anger. And like all drives, romantic love is associated with elevated activity of dopamine in the brain.

Drives lie along a continuum. Some, like thirst and the need for warmth, cannot be extinguished until satisfied. The sex drive, hunger, and the maternal instinct can often be redirected, even quelled. Falling in love is evidently stronger than the sex drive because when one's sexual advances are rejected, people do not kill themselves or someone else. Rejected lovers, on the contrary, sometimes stalk, commit suicide or homicide, or experience severe depression, even physical pain. Indeed, a recent neuroimaging study indicates that emotional pain induced by social exclusion affects some of the same brain regions as does physical pain (Eisenberger et al. 2003). So the pain that many rejected lovers report is real.

To understand more about the suffering of romantic rejection, I and my colleagues put a second group of subjects into the brain scanner: eleven women and six men who had recently been spurned by their romantic partner. We used the same protocol. Each looked at a photo of their rejecting mate and an emotionally neutral individual, interspersed with the count-back distraction task. This study is still in progress. But the psychological literature on rejection, and some preliminary findings from this study, suggest that dopamine (as well as other chemicals) is also associated with the agony of lost love.

The Protest Response

When a man or woman first realizes that their partner is ending the relationship, some deny the truth. The rupture is too horrible to comprehend. But as the hours or days go by, they come to face the fact: he or she is leaving.

With this realization, the abandoned partner generally becomes intensely restless. They reminisce, searching for clues to what went wrong and how to patch up the crumbling partnership. They think continually about him or her. And they protest. Spurned lovers take extraordinary, often dangerous, even humiliating measures to reconnect with their beloved, revisiting mutual haunts, phoning day and night, writing letters or incessantly e-mailing. They make dramatic entrances into a beloved's home or place of work, then storm out, only to return and renew their appeal for reconciliation. Most become so focused on this missing partner that everything reminds them of their sweetheart. As poet Kenneth Fearing put it, "tonight you are in my hair and eyes, /

And every street light that our taxi passes shows me / you again, still you.” Their obsession: reunion. So they relentlessly seek the slightest sign of hope. Psychiatrists Thomas Lewis, Fari Amini, and Richard Lannon maintain that this protest response is a basic mammalian mechanism that activates when any kind of social bond is ruptured. They use the example of the puppy. When you remove a puppy from its mother and put it in the kitchen by itself, it begins to pace. Frantically it combs the floor, scratches at the door, leaps at the walls, and barks and whines in protest. Baby rats that are isolated from their mother hardly sleep, their brain arousal is so intense. So these psychiatrists believe this protest reaction is associated with elevated activity of dopamine, as well as the closely related neurotransmitter norepinephrine. Rising activity of these catecholamines, they say, serves to increase alertness and stimulate the abandoned individual to search and call for help.

Their hypothesis may turn out to be correct. Preliminary results from our brain scanning study of rejected people suggest that regions of the caudate nucleus are involved in romantic suffering, and these regions are associated with the activity of dopamine (Fisher et al. 2005). This dopamine activity, in combination with many other brain chemicals, could contribute to the abandoned lover’s motivation to protest.

A related brain chemical kicks into action as one gets dumped: cortisol. Any kind of severe stress stimulates the adrenal cortex to synthesize and release this hormone. Cortisol then activates myriad brain and bodily systems to ameliorate the trauma. Among these circuits, the immune system revs up to fight disease. Despite this bodily readiness, disappointed lovers tend to get sore throats and colds. But this short-term stress reaction also triggers production of dopamine and norepinephrine—which most likely also contributes to the protest response.

Frustration Attraction

Alas, along with the stress and impulse to protest, abandoned lovers also feel another powerful sensation: renewed passion. Terence, the Roman dramatist, once wrote of this: “The less my hope, the hotter my love.” Indeed, rejection heightens feelings of romantic passion, what I call “frustration attraction.” And this seemingly odd reaction also has a biological correlate: when an expected reward is delayed in coming, dopamine-producing neurons in the brain’s reward system *prolong* their activities.

How ironic: as the adored one slips away, the very chemical that contributes to feelings of romantic love becomes even more potent, creating protest and romantic passion—and impelling the abandoned lover to try with all his/her might to secure the deserting mate.

Abandonment Rage

The impulse to protest, the stress, and the heightened romantic ardor that abandoned men and women experience all make sense to me. Rejecting people often feel deeply guilty about causing the breakup. So if the discarded partner earnestly pursues, the rejecter is likely to reconsider and return. Many do, at least temporarily. Protest sometimes works.

But why do jilted lovers get so angry? Even when the deserting mate honors his or her responsibilities as a friend (and often co-parent) and leaves the relationship with compassion and honesty, many rejected people swing violently from feelings of heartbreak to utter fury. English poet John Lyly commented on this phenomenon in 1579, saying, “As the best wine doth make the sharpest vinegar, / so the deepest love turneth to the deadliest hate.” Psychologist Reid Meloy calls this reaction “abandonment rage.” I use the term “love hatred” as well.

Why does passionate love turn to hate and rage? Because love and hate/rage are connected in the brain. The primary rage system is closely linked to centers in the prefrontal cortex that anticipate rewards. And animal studies have shown how intimately these reward and rage circuits are intertwined. Just pet a cat to stimulate its reward circuits and hear it purr; then remove your hand and feel it bite. This common response to unfulfilled expectations is known as “frustration-aggression.” In short, when people and other animals begin to realize that an expected reward is in jeopardy, even unattainable, these centers in the prefrontal cortex signal lower regions associated with rage—and trigger fury.

This anger is not always directed at the lost reward, however. An enraged monkey may vent his ire on a subordinate monkey rather than attack a superior. In the same way, a rejected lover may kick a chair, throw a glass, or get angry at a friend rather than strike an errant sweetheart with words or fists. But this brain link between love and hate/rage helps explain why crimes of passion—such as stalking, homicide, and suicide—are so common around the world. When an attachment is ruptured, the brain can easily turn romantic love to fury. The opposite of love is not hate, but indifference.

In fact, love and hate have much in common. Both are associated with bodily and mental arousal. Both produce excessive energy. Both drive one to obsessively focus one’s attention on the beloved. Both generate goal-directed behaviors. And both cause intense yearning, either for union with a sweetheart or for revenge against a rejecting partner.

But rage stresses the heart, raises blood pressure, and suppresses the immune system. Why did our ancestors evolve brain links that enable us to hate

the one we cherish? Psychiatrist John Bowlby argued in the 1960s that the anger that accompanies the loss of a loved one is part of nature's biological design to regain the lost attachment figure. Undoubtedly abandonment rage sometimes serves this purpose. But fury is not a likeable trait; I can't imagine it often entices a lover to return. So I have come to think that abandonment rage evolved for another purpose: to drive disappointed lovers to *extricate* themselves from dead-end matches and resume their quest for love in greener pastures.

Abandonment rage most likely also motivates people to fight for the welfare of their children. This occurs frequently in divorce proceedings. Otherwise well-adjusted men and women become diabolical to acquire custody of and resources for their young. In fact, an American judge who presides over trials of violent criminals reports that he is much more worried about his personal safety during divorce proceedings, particularly when child custody is an issue. He and other judges have even installed panic buttons in their chambers in case arguing spouses become violent.

But despite this fury, abandonment rage does not extinguish romantic love. In a study of 124 dating couples, psychologists Bruce Ellis and Neil Malamuth found that romantic love and feelings of hate/rage can operate simultaneously. Hence, you can be terribly angry at a rejecting sweetheart, but still very much in love.

Resignation and Despair

Eventually, however, all these feelings wane. The focused attention on the failing partnership; the drive to win back the beloved; the showdowns; even the rage: for most disappointed lovers, all dissipate. The abandoned person is now spent. As the eighth-century Chinese Poet, Li Po, wrote of this, "I am exhausted by longing."

Then the rejected individuals must deal with new forms of torture—hopelessness and despair. They toss in bed and cry or just sit woodenly and gaze into a void. Perhaps they feel an occasional urge to renew pursuit or a passing flash of anger. But generally they feel deep melancholy, what is known as the "despair response." In a study of 114 men and women who had been rejected within the past eight weeks, some 40 percent experienced "clinically measurable depression"; of these, 12 percent displayed moderate to severe depression. People also die of a broken heart. They expire from heart attacks or strokes caused by their depression.

Men and women tend to handle love-sadness differently. Men are often more dependent on their romantic partners, probably because men, as a rule,

have fewer ties to relatives and friends. Perhaps because of this, despairing men are more likely to turn to alcohol, drugs, or reckless driving than to their kin or friends. Moreover, men are less likely to reveal their pain. And men are three to four times more likely than women to commit suicide after a love affair has decayed. As poet John Dryden put it, “dying is a pleasure, / when living is a pain.”

Rejected women sob, lose weight or eat too much, sleep too much or not at all, lose interest in sex, become unable to concentrate, have trouble remembering commonplace daily things, withdraw socially, and contemplate suicide. Some write out their grievances. And most women talk for hours on the phone with any sympathetic ear, retelling all. Although this chatter can give a woman some relief, these replays of shattered dreams often backfire. As she dwells on the dead relationship, she can inadvertently retraumatize herself.

This second phase of rejection—resignation coupled with despair—is well documented in other species. Infant mammals suffer terribly when they are separated from their mothers. As you recall, when you isolate the puppy in the kitchen, at first it protests. Eventually, however, it curls up in a corner in a despondent heap. Abandoned infant monkeys suck on their fingers or their toes, clasp themselves, and often curl into a fetal position and rock.

The feeling of despair has been associated with several different networks in the mammalian brain. But among them are the brain’s reward system and its fuel: dopamine. As the abandoned partner gradually realizes that the reward will never come, the dopamine-making cells in the midbrain *decrease* their activity. And diminishing activity of dopamine produces lethargy, despondency, and depression. The stress system contributes. As mentioned, short-term stress activates the production of dopamine and norepinephrine and suppresses serotonin. But as the stress wears on, it drives the activity of all these potent substances down below normal—producing profound depression.

Evolution of the Despair Response

Like abandonment rage, the despair response seems counterproductive. Why waste precious time and energy crying? But scientists now believe that the depression that otherwise psychologically healthy people experience when abandoned may have evolved as a coping mechanism. Perhaps, some maintain, it originally emerged to enable abandoned infant mammals to conserve their stamina, to discourage them from wandering until their mother returns, and to keep them quiet and thus protected from predators. Others suggest that the high metabolic and social costs of depression are actually its benefits: depression is an honest, believable signal to others that something is desperately wrong, that the depressed person genuinely needs help.

Aeschylus, the classical Greek dramatist, saw another merit to depression. As he proclaimed in *Agamemnon*, “He who learns must suffer. And even in our sleep, pain that cannot forget falls drop by drop upon the heart, and in our own despair, against our will, comes wisdom to us by the awful grace of god.” Depression gives insight. In fact, mildly depressed people make clearer assessments of themselves and others. But even severe, prolonged depression can push a person to accept unhappy facts, make decisions, and resolve conflicts that will ultimately promote their survival and ability to reproduce. The pain of rejection probably steers the abandoned individual away from making similar bad choices in the future, too.

Not everyone suffers from abandonment to the same degree, of course. How we react to rejection depends on many forces. Our upbringing makes an enormous difference. Some people make secure attachments as children and have the self-esteem and resilience to overcome a romantic setback relatively quickly. Others grow up in loveless homes fraught with tension, chaos, or rejection, leaving them clingy and defenseless. As we venture through life, we develop new feelings of competence or incompetence, different sorts of romantic expectations, and different coping mechanisms that also affect how we weather lost love. Some people have more mating opportunities than others, so some more easily mitigate their feelings with amorous distractions. And some people are simply biologically less angry, less depressed, more self-confident, and more relaxed about life in general and romantic rejection in particular.

Still, we humans are intricately wired to suffer when we have been spurned. Most men and women can vividly remember the bitter details of their distress at a breakup—even decades after the turmoil has defused. For good evolutionary reasons. Those who love and mate and breed will pass on their genes toward eternity, while those who lose in love and sex and reproduction will ultimately die out. Jilted men and women have wasted priceless reproductive time and energy. And their reproductive future has been jeopardized—along with their social alliances, personal happiness, self-esteem, and reputation. So to avoid genetic oblivion, you and I have evolved intensely powerful reactions to desertion, including the protest response, frustration-attraction, abandonment rage, and despair.

Crimes of Passion

“We must in tears / Unwind a love knit up in many years. / In this last kiss I here surrender thee / Back to thyself. / Lo thou again art free.” Poet Henry King was able to let a departing lover go. Some people find this impossible to

do. And the sexes tend to vary in the ways they handle their urge to protest, their rage, and their despair.

Men stalk; they are far more likely than women to obsessively follow a departing lover and threaten or harass her. Some shower her with vile or entreaty messages. Some steal her valuables or personal items, such as underwear. Some follow with their car. Others loiter near her home or place of work to jeer or plead. In one study of American college students, 34 percent of women said they had been followed or harassed by a man they had rejected. And one out of twelve American women will be stalked by a man at some point in her life, usually a former spouse or lover. In fact, every year over a million American women are stalked; 59 percent are stalked by a boyfriend, husband, former spouse, or live-in partner. Eight out of ten are physically assaulted by their stalker as well. And five independent investigators on three continents report that in some 55 percent to 89 percent of cases, stalkers became violent (Meloy and Fisher in press). Most are men. Men kill, too. About 32 percent of all female murder victims in the United States die at the hands of a spouse, ex-spouse, boyfriend, or ex-boyfriend; but experts believe the true numbers may be as high as 50 percent to 70 percent. Men commit the vast majority of spousal homicides in all other countries as well.

Women are far less likely to maim or murder when they have been abandoned. They tend to berate themselves for their own inadequacies and try to lure and seduce instead, hoping to recapture their mate's affection and rebuild the relationship. Women are also more likely to try to talk things over and understand the problems. But when all this fails, some women stalk. In 1997 about 370,000 American men reported being stalked; most were between the ages of eighteen and thirty-nine, men of reproductive age. Unlike males, many female stalkers have other mental problems. Like males, female stalkers send e-mails or letters, phone ceaselessly, or appear unexpectedly as they obsessively follow a departed mate. Women also kill rejecting lovers. But far fewer take this drastic step. In 1998, only 4 percent of male homicide victims were killed by a former or current female partner.

Like love, hate is blind. For some, no form of violence is too extreme. And this violence is probably influenced, in least in part, by brain chemistry. As you recall, when lovers are first rejected, they protest—a reaction that is most likely accompanied by soaring activity of dopamine and norepinephrine. These stimulants probably give the stalker, batterer, and murderer their focus, energy, and motivation. But rising activity of dopamine also *reduces* the activity of serotonin in the brain. And low activity of serotonin is associated with impulsive violence against others.

Stalkers and murderers are responsible for their mayhem, of course. Humanity has evolved sophisticated brain mechanisms for *curbing* murderous impulses. Nevertheless, we carry within us a “fatal reflex,” as psychologist William James called our human ferocity. And some abandoned men and women do not contain it: they stalk, batter, even slaughter their jilting sweet-hearts.

Love Suicide

Others kill themselves. Humans are the only creatures on earth who commit violent suicide in high numbers. It is difficult to obtain accurate accounts of why healthy people kill themselves; solid statistics are lacking. Loss of money, power, status, or respect and/or the realization that one will never achieve a long-sought goal can drive a person to quit this life. But most men and women don't have a lot of money, power, prestige, or goals they can't attain. They do, however, fall desperately in love. And romantic love is associated with high activity of dopamine—a *brain substance that drives down the activity of serotonin*. Low activity of serotonin is associated with suicide. I suspect many who kill themselves do so over lost love. For centuries, the Japanese even glorified this act, regarding “love suicide” as an honorable statement of one's devotion.

Attempted love suicide may even have been adaptive in ancestral times. Many suicidal women fail to kill themselves. Psychiatrists now believe these cases are examples of an extreme strategy that abandoned women use to manipulate a rejecting mate into returning to the relationship. Alas, many mistakenly do kill themselves. And suicide is unquestionably maladaptive. For these unfortunate men and women the drive to love triumphs over their will to live.

Ageless Love

“How cruel, you say. But did I not warn you? Shall I count for you love's ways? Fear, jealousy, revenge—pain. They all belong to love's innocent game.” These words come across the centuries from the Celtic legend of Tristan and Iseult. I often think of them as I walk through archeological museums and look at the beads, pots, and arrowheads that lie in the display cases. All the men and women who made these precious objects must have loved and lost at some point in their lives. Romantic love evolved millions of years ago to enable our forebears to focus their courtship energy on a particular mate, form a pair-bond, and conceive a child. This drive is deeply embedded in the human brain. And I suspect just about everyone who has ever lived has felt the despair of romantic rejection.

But we are creatures with an elegant array of adaptive mechanisms, and among them are persistence and hope. The vast majority of us eventually recover from lost love, renew our quest, and fall in love again. And today we have the time to do it. Men and women are living longer. Anthropologists believe the natural human life-span has not changed in at least a million years. But today far more people survive infancy, infectious childhood diseases, accidents, and childbirth. So many more live into old age. In 1900, only 4 percent of Americans were over age sixty-five; today 11 percent survive to this age; by 2030 some 20 percent of all Americans will be over sixty-five; by 2050, 15 percent to 19 percent of the world population will be over age sixty-five as well. Many older people now live alone, too, rather than with their children. And many are healthy. In fact, some demographers say we should begin to think of middle-age as extending to age eighty-five because 40 percent of men and women at that age are fully functional. Humanity is gaining time to love.

Technology is helping. Testosterone creams, Viagra, estrogen replacement therapy, and a host of other innovations, from plastic surgery and hip replacements to unguents and clothing of every imaginable texture, shape, and style, help men and women attract a mate, even in old age. And they are doing it. One friend of mine fell in love again at age ninety-two. His wife had died five years before and he became enchanted with a longtime friend of the family. His only concern was that she was a younger woman, aged seventy-six. Interestingly, in a study of 255 people aged sixteen to sixty, scientists found no overall difference in the intensity of romantic passion. The only difference was that aging people did more varied and imaginative things together.

This primordial brain mechanism can be triggered at any age. One only needs to make oneself available. Then, with some luck, one can soar with romantic passion, what the classical Greeks called the “madness of the gods.”

Note

1. References for all quotes and facts in this article can be found in Helen Fisher, *Why We Love: The Nature and Chemistry of Romantic Love* (New York: Henry Holt, 2004), except where other references are indicated.

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