

CHAPTER ONE

The Dangerous Passion

Why Jealousy Is as Necessary as Love and Sex

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The Dangerous Passion

Jealousy is not only inbred in human nature, but it is the most basic, all-pervasive emotion which touches man in all aspects of every human relationship.

— Boris Sokoloff, 1947, *Jealousy: A Psychological Study*

Every human alive is an evolutionary success story. If any of our ancestors had failed to survive an ice age, a drought, a predator, or a plague, they would not be our ancestors. If any had failed to cooperate with at least some others in the group or dropped below a minimal position in the social hierarchy, they would have met certain death by being cast out from the group. If even one had failed to succeed in choosing, courting, and keeping a mate, the previously inviolate chain of descent would have irreparably broken, and we would not be alive to tell the tale. Each of us owes our existence to thousands of generations of successful ancestors. As their descendants, we have inherited the passions that led to their success — passions that drive us, often blindly, through a lifelong journey in the struggle for survival, the pursuit of position, and the search for relationships.

We usually think of passion as restricted to sex or love, the burning embrace or constant craving. But it has a broader meaning, referring to the drives and emotional fires that propel us in our quests through life. They sometimes glow quietly, but at other times they burst into full flame. They range from tranquil devotion to violent eruption. Their expression yields life's deepest joys, but also the cruelest suffering. And although we commonly think of passion as a force opposed to reason and rationality, something to be tamed or overcome, passions when properly understood have a crystalline logic, precise purpose, and supreme sensibility.

The drives that stir us out of bed at dawn and hurl us headlong into our daily struggles have two sides. On the positive side, passions inspire us to achieve life's goals. They impel us to satisfy our desire for sex, our yearning for prestige, and our quest for love. The dazzling plays of Shakespeare, the mesmerizing art of Georgia O'Keeffe, and the brilliant inventions of Thomas Edison would not exist if passion had not stirred them

from repose and impelled creation. Without passion, we would lie listless in bed, for there would be no motivation to do anything at all.

But passions carry a darker, more sinister side. The same passions that inspire us with love can lead to the disastrous choice of a mate, the desperation of unrequited obsession, or the terror of stalking. Jealousy can keep a couple committed or drive a man to savagely beat his wife. An attraction to a neighbor's spouse can generate intoxicating sexual euphoria while destroying two marriages. The yearning for prestige can produce exhilarating peaks of power while evoking the corrosive envy of a rival and a fall from a greater height. *The Dangerous Passion* explores both the destructive and triumphant sides of human desires.

Together with many colleagues, my research over the past decade has centered on exploring the nature, origins, and consequences of the passions of men and women, with a special focus on jealousy, infidelity, love, sex, and status. Our goal has been to seek a deeper understanding of what makes men and women tick, the desires that drive people to heights of success or depths of despair, and the evolved mechanisms of mind that define who we are. This book illuminates the dark side of sexual treachery, the mysterious puzzle of romantic love, and the central role of jealousy in our intimate relationships.

Some argue that these mysteries should be left alone, pristine and untrammelled, shielded from the harsh glare of scientific scrutiny. But is the woman who has her freedom and sense of safety crushed by a jealous husband better off unequipped with the knowledge of how to prevent her torment? Is the man obsessed by unrequited love better off failing to understand the underlying reasons for his rejection? Ignorance may sometimes be bliss, but it can also cause needless anguish. My hope is that revealing the underlying logic of dangerous passions will be intellectually illuminating, provide one path for understanding the distress we experience at the hands of our lovers and rivals, and just possibly improve in some small measure the tools for coping with the untamed demons in our lives.

At the center of *The Dangerous Passion* is an exploration of a hazardous region of human sexuality — the desires people experience for those who are not their regular partners and the jealous shield designed to combat its treacherous consequences.

The Green-Eyed Monster

Think of a committed romantic relationship that you have now, or that you had in the past. Now imagine that your romantic partner becomes interested in someone else. What would upset or distress you more: (a) discovering that your partner is forming a deep emotional attachment, confiding and sharing confidences with another? or (b) discovering that your partner is enjoying passionate sex with the other person, trying out different sexual positions you had only dreamed about? Both scenarios are distressing, of course, but which one is more distressing? If you are like the majority of women we

surveyed recently in the United States, the Netherlands, Germany, Japan, Korea, and Zimbabwe, you will find the emotional infidelity more upsetting. The answer seems obvious, at least to women. The majority of men, however, find the prospect of a partner's sexual infidelity more agonizing. The gulf between the sexes in emotional reactions to infidelity reveals something profound about human mating strategies.

The explanation for sex differences in jealousy lies deep in the evolutionary past of the human species. Consider first a fundamental sex difference in our reproductive biology: fertilization takes place inside women's bodies, not men's. Now, internal female fertilization is not universal in the biological world. In some species, such as the Mormon crickets, fertilization occurs internally within the male. The female takes her egg and literally implants it within the male, who then incubates it until birth. In other species, fertilization occurs externally to both sexes. The female salmon, for example, drops her collection of eggs after swimming upstream. The male follows and deposits his sperm on top, and then they die, having fulfilled the only mission in life that evolution gave them. But humans are not like salmon. Nor are we like Mormon crickets. In all 4,000 species of mammals, of which we are one, and in all 257 species of primates, of which we are also one, fertilization occurs internally within the female, not the male. This posed a grave problem for ancestral men — the problem of uncertainty in paternity.

From an ancestral man's perspective, the single most damaging form of infidelity his partner could commit, in the currency of reproduction, would have been a sexual infidelity. A woman's sexual infidelity jeopardizes a man's confidence that he is the genetic father of her children. A cuckolded man risks investing years, or even decades, in another man's children. Lost would be all the effort he expended in selecting and attracting his partner. Moreover, he would lose his partner's labors, now channeled to a rival's children rather than his own.

Women, on the other hand, have always been 100 percent sure that they are the mothers of their children (internal fertilization guarantees that their children are genetically their own). No woman ever gave birth and, watching the child emerge from her womb, wondered whether the child was really hers. One African culture captures this sex difference with a phrase more telling than any technical summary: "Mama's baby, papa's maybe." Biology has granted women a confidence in genetic parenthood that no man can share with absolute certainty.

Our ancestral mothers confronted a different problem, the loss of a partner's commitment to a rival woman and her children. Because emotional involvement is the most reliable signal of this disastrous loss, women key in on cues to a partner's feelings for other women. A husband's one-night sexual stand is agonizing, of course, but most women want to know: "Do you love her?" Most women find a singular lapse in fidelity without emotional involvement easier to forgive than the nightmare of another woman capturing her partner's tenderness, time, and affection. We evolved from ancestral mothers whose jealousy erupted at signals of the loss of love, mothers who acted to ensure the man's commitment.

But who cares who fathers a child or where a man's commitments get channeled? Shouldn't we love all children equally? Perhaps in some utopian future, we might, but that is not how the human mind is designed. Husbands in our evolutionary past who failed to care whether a wife succumbed to sex with other men and wives who remained stoic when confronted with their husband's emotional infidelity may be admirable in a certain light. Perhaps these self-possessed men and women were more mature. Some theories, in fact, propose that jealousy is an immature emotion, a sign of insecurity, neurosis, or flawed character. Nonjealous men and women, however, are not our ancestors, having been left in the evolutionary dust by rivals with different passionate sensibilities. We all come from a long lineage of ancestors who possessed the dangerous passion.

Jealousy, according to this theory, is an adaptation. An adaptation, in the parlance of evolutionary psychology, is an evolved solution to a recurrent problem of survival or reproduction. Humans, for example, have evolved food preferences for sugar, fat, and protein that are adaptive solutions to the survival problem of food selection. We have evolved specialized fears of snakes, spiders, and strangers that are adaptive solutions to ancestral problems inflicted by dangerous species, including ourselves. We have evolved specialized preferences for certain qualities in potential mates, which helped to solve the problems posed by reproduction. Adaptations, in short, exist in modern humans today because they helped our ancestors to combat all of the many "hostile forces of nature," enabling them to successfully survive and reproduce. Adaptations are coping devices passed down over millennia because they worked — not perfectly, of course, but they helped ancestral humans to struggle through the evolutionary bottlenecks of survival and reproduction.

Jealousy, according to this perspective, is not a sign of immaturity, but rather a supremely important passion that helped our ancestors, and most likely continues to help us today, to cope with a host of real reproductive threats. Jealousy, for example, motivates us to ward off rivals with verbal threats and cold primate stares. It drives us to keep partners from straying with tactics such as escalating vigilance or showering a partner with affection. And it communicates commitment to a partner who may be wavering, serving an important purpose in the maintenance of love. Sexual jealousy is often a successful, although sometimes explosive, solution to persistent predicaments that each one of our ancestors was forced to confront.

We are typically not conscious of these reproductive quandaries. Nor are we usually aware of the evolutionary logic that led to this dangerous passion. A man does not think, "Oh, if my wife has sex with someone else, then my certainty that I'm the genetic father will be jeopardized, and this will endanger the replication of my genes; I'm really mad." Or if his partner takes birth-control pills, "Well, because Joan is taking the pill, it doesn't really matter whether she has sex with other men; after all, my certainty in paternity is secure." Nor does a woman think, "It's really upsetting that Dennis is in love with that other woman; this jeopardizes my hold on his emotional commitments to me and my children, and hence hurts my reproductive success." Instead, jealousy is a blind passion, just as our hunger for sweets and craving for companionship are blind. Jealousy is

emotional wisdom, not consciously articulated, passed down to us over millions of years by our successful forebears. One goal of *The Dangerous Passion* is to bring to the surface the deep roots of the inherited emotional wisdom we possess.

The Othello Syndrome

Despite its value for people past and present, jealousy is an emotion that exposes partners to extreme danger. The dark side of jealousy causes men to explode violently to reduce the odds that their partners will stray. Women seeking refuge at shelters for battered women almost invariably report that their husbands seethe with jealousy. In one study of battered women, many of whom required medical attention, the typical woman reported that her husband "tries to limit my contact with friends and family" (the tactic of concealment), "insists on knowing where I am at all times" (the tactic of vigilance), and "calls me names to put me down and make me feel bad about myself" (the tactic of undermining self-esteem). Jealousy is the leading cause of spousal battering, but it's even worse than that. Men's jealousy puts women at risk of being killed.

Consider the following remarks made to police by a 31-year-old man who stabbed his 20-year-old wife to death, after they had been reunited following a six-month separation.

Then she said that since she came back in April she had fucked this other man about ten times. I told her how can you talk about love and marriage and you been fucking this other man. I was really mad. I went to the kitchen and got the knife. I went back to our room and asked: Were you serious when you told me that? She said yes. We fought on the bed, I was stabbing her. Her grand-father came up and tried to take the knife out of my hand. I told him to go and call the cops for me. I don't know why I killed the woman, I loved her.

Jealousy can be emotional acid that corrodes marriages, undermines self-esteem, triggers battering, and leads to the ultimate crime of murder. Despite its dangerous manifestations, jealousy helped to solve a critical reproductive quandary for ancestral men. Jealous men were more likely to preserve their valuable commitments for their own children rather than squandering them on the children of their rivals. As descendants of a long line of men who acted to ensure their paternity, modern men carry with them the dangerous passion that led to their forebears' reproductive success.

A professional couple therapist I know related to me the following story. A young couple, Joan and Richard, came to her with a complaint of irrational jealousy. Without provocation, Richard would burst into jealous tirades and accuse Joan of sleeping with another man. His uncontrollable jealousy was destroying their marriage. Richard and

Joan both agreed on this point. Could the therapist help cure Richard of irrational jealousy? A common practice in couple therapy is to have at least one session with each member of the couple individually. The first question the therapist posed to Joan during this individual interview was: Are you having an affair? She burst into tears and confessed that, indeed, she had been carrying on an affair for the past six months. Richard's jealousy, it turned out, had not been irrational after all. He had been picking up on subtle cues of his wife's infidelity that triggered his jealousy. Since he trusted Joan and she had assured him of her fidelity, however, he believed that his jealousy had been irrational. In a sense, Richard had failed to listen to his internal emotional whisperings. He came to the wrong conclusion because he overrode his feelings with "rationality."

This episode gave me the first hint that jealousy represented a form of ancestral wisdom that can have useful as well as destructive consequences. Despite the possible hazards of conducting research on jealousy, its potency convinced me that it could not be ignored by science. In surveys we discovered that nearly all men and women have experienced at least one episode of intense jealousy. Thirty-one percent say that their personal jealousy has sometimes been difficult to control. And among those who admit to being jealous, 38 percent say that their jealousy has led them to want to hurt someone.

Extreme jealousy has been given many names — the Othello syndrome, morbid jealousy, psychotic jealousy, pathological jealousy, conjugal paranoia, and erotic jealousy syndrome. Jealousy, of course, can be pathological. It can destroy previously harmonious relationships, rendering them hellish nightmares of daily existence. Trust slowly built from years of mutual reliance can be torn asunder in a crashing moment. As we will explore in a later chapter, jealousy leads more women to flee in terror to shelters than any other cause. A full 13 percent of all homicides are spousal murders, and jealousy is overwhelmingly the leading cause.

But destruction does not necessarily equal pathology. The pathological aspect of extreme jealousy, according to the mainstream wisdom, is not the jealousy itself. It is the delusion that a loved one has committed an infidelity when none has occurred. The rage itself upon the actual discovery of an infidelity is something people everywhere intuitively understand. In Texas until 1974, a husband who killed a wife and her lover when he caught them *in flagrante delicto* was not judged a criminal. In fact, the law held that a "reasonable man" would respond to such extreme provocation with acts of violence. Similar laws have been on the books worldwide. Extreme rage upon discovering a wife naked in the arms of another man is something that people everywhere find intuitively comprehensible. Criminal acts that would normally receive harsh prison sentences routinely get reduced when the victim's infidelity is the extenuating circumstance.

The view of jealousy as pathological ignores a profound fact about an important defense designed to combat a real threat. Jealousy is not always a reaction to an infidelity that has already been discovered. It can be an anticipatory response, a preemptive strike to prevent an infidelity that might occur. Labeling jealousy as pathological simply because a spouse has not yet strayed ignores the fact that jealousy can head off an infidelity that might be lurking on the horizon of a relationship.

Excessive jealousy can be extraordinarily destructive. But moderate jealousy, not an excess or an absence, signals commitment. This book explores both sides of this double-edged defense mechanism.

To understand the power of this extraordinary emotion, we must trace it to its origin, long before capitalism, long before agriculture and cash economies, long before writing and recorded history, and long before humans fanned out and colonized every habitable continent. We must trace its roots to the evolution of one of the most unusual adaptations in primate history, yet one that we take so much for granted that its existence is hardly questioned: the emergence of long-term love.

The Evolution of Love

Our closest primate cousins, the chimpanzees, lack exclusive sexual bonds. Most mating takes place within the narrow window of female estrus. When a female chimpanzee is in heat, a variety of physiological changes take place. Her genitals become swollen and pink for four to six days. The swellings peak just before ovulation when she is most likely to conceive. She emits pheromonal signals, hormone-saturated substances that males find especially attractive, sometimes driving them into a sexual frenzy. Sarah Hrdy of the University of California at Davis notes that males sometimes touch the vagina of the estrous female, gathering her secretions on their fingers to smell or taste. Males use these signals to monitor the female's reproductive state.

A male chimpanzee's position in the social hierarchy strongly determines his sexual access to estrous females. Among the chimpanzees at a large zoo colony in Arnhem, the Netherlands, for example, the dominant male achieves as many as 75 percent of the matings with estrous females. The relationships between male and female chimps are complex and can extend over time, but chimps do not form the long-term committed relationships that most humans desire.

Men and women have always depended on each other for survival and reproduction. Love was not invented a few hundred years ago by European poets, contrary to conventional wisdom in this century. Love is a human universal, occurring in societies ranging from the !Kung San of Botswana to the Ache of Paraguay. In my study of 10,041 individuals from 37 different cultures, men and women rated love as the single most important quality in selecting a spouse. Across the globe, people sing love songs and pine for lost lovers. They elope with loved ones against the wishes of parents. They recount personal tales of anguish, longing, and unrequited love. And they narrate great love stories of romantic entanglements down through the generations. The German writer Herman Hesse summed it up best: Life is "the struggle for position and the search for love." Love is the universal human emotion that bonds the sexes, the evolutionary meeting ground where men and women lay down their arms.

The universal existence of love, however, poses a puzzle. From an evolutionary perspective, no single decision is more important than the choice of a mate. That single fork in the road determines one's ultimate reproductive fate. More than in any other domain, therefore, we expect evolution to produce supremely rational mechanisms of mate choice, rational in the sense that they lead to wise decisions rather than impetuous mistakes. How could a blind passion like love — a form of dementia that consumes the mind, crowds out all other thoughts, creates emotional dependency, and produces a delusional idealization of a partner — possibly evolve to solve a problem that might be better solved by cool rationality?

To penetrate this mystery, we must start with the scientific evidence for mate preferences. Worldwide, from the coastal dwelling Australians to the South African Zulu, women desire qualities such as ambition, industriousness, intelligence, dependability, creativity, exciting personality, and sense of humor — characteristics that augur well for a man's success in acquiring resources and achieving status. Given the tremendous investment women undertake to produce a single child, the nine months of costly internal fertilization and gestation, it is perfectly reasonable for women to want men who can invest in return. A woman's children will survive and thrive better if she selects a resourceful man. Children suffer when their mothers choose "slackers." Men, in contrast, place a greater premium on qualities linked with fertility, such as a woman's youth, health, and physical appearance — clear skin, smooth skin, bright eyes, full lips, symmetrical features, and a slim waist. These preferences are also perfectly sensible. We descended from ancestral mothers and fathers who chose fertile and resourceful partners. Those who failed to choose on these bases risked reproductive oblivion.

Although these rational desires set minimum thresholds on who qualifies as an acceptable mate, rationality profoundly fails to predict the final choice of a mate. As the psychologist Steven Pinker of the Massachusetts Institute of Technology observes, "Murmuring that your lover's looks, earning power, and IQ meet your minimal standards would probably kill the romantic mood, even if statistically true. The way to a person's heart is to declare the opposite — that you're in love because you can't help it."

One key to the mystery of love is found in the psychology of commitment. If a partner chooses you for rational reasons, he or she might leave you for the same rational reasons: finding someone slightly more desirable on all of the "rational" criteria. But if the person is blinded by an uncontrollable love that cannot be helped and cannot be chosen, a love for only you and no other, then commitment will not waver when you are in sickness rather than in health, when you are poorer rather than richer. Love overrides rationality. It's the emotion that ensures that you won't leave when someone slightly more desirable comes along or when a perfect "10" moves in next door. It ensures that a partner will stick by you through the struggles of survival and the hazards of childbirth.

Love, however, has a tragic side. The stories of great lovers of the past, in fiction and in history, are often marked by disaster. Juliet died of poison. Romeo chose to kill himself rather than live without her. Love suicides have pervaded Japanese culture for centuries, a final vindication of the intensity of a person's commitment. When parents and society

conspire to keep lovers apart, lovers sometimes tie themselves together and jump off a cliff or hurl themselves into a well. The most perilous side of love, however, comes not from a *folie à deux*, but from a *folie à un* — the demonic possession that consumes a person when love is not reciprocated. Unrequited love is the foundation for fatal attraction.

Consider the case of John W. Hinckley, Jr., who scrawled a final letter to the actress Jodie Foster on March 30, 1981, shortly before attempting to assassinate President Ronald Reagan:

Dear Jodie:

There is a definite possibility that I will be killed in my attempt to get Reagan. It is for this very reason I am writing you this letter now.

As you well know by now I love you very much. Over the past seven months I've left you dozens of poems, letters and love messages in the faint hope that you could develop an interest in me...I know the many messages left at your door and in your mailbox were a nuisance, but I felt that it was the most painless way for me to express my love for you...

Jodie, I would abandon this idea of getting Reagan in a second if I could only win your heart and live out the rest of my life with you...I will admit to you that the reason I'm going ahead with this attempt now is because I just cannot wait any longer to impress you. I've got to do something now to make you understand, in no uncertain terms, that I am doing this for your sake! By sacrificing my freedom and possibly my life, I hope to change your mind about me. This letter is being written only an hour before I leave for the Hilton Hotel. Jodie, I'm asking you to please look into your heart and at least give me the chance, with this historic deed, to gain your respect and love.

I love you forever.

John Hinckley

Cases as extreme as John Hinckley are rare, but the experience of unrequited love is quite common. In one recent survey, 95 percent of men and women indicated that, by the age of 25, they had experienced unrequited love at least once, either as a would-be lover whose passions were rejected or as the object of someone's unwanted desires. Only one person in 20 has never experienced unrequited love of any kind.

Although unrequited love is a perilous passion, producing fatal attractions and unwanted stalking, the dogged persistence it produces sometimes pays off. One of the great love stories in history is that of Nicholas and Alexandra. Nicholas inherited the Russian throne at the end of the 19th century. During his adolescence his parents started looking for a suitable mate for him. At age 16, contrary to his parent's wishes, he became obsessed with Alexandra, a beautiful princess then living in England with her grandmother, Queen Victoria. Despite parental objections, cultural chasms, and a separation spanning thousands of miles, Nicholas was determined to capture Alexandra's love. Alexandra,

however, found him a bit dull and did not relish the thought of moving to the harsh climate of Moscow. She spurned his advances. In 1892, Nicholas turned 24 and, having loved Alexandra for nearly eight years, resolved to make one final effort to win her heart. Given this state of mind, he was devastated when she wrote saying that she had definitely decided not to wed him. She asked him not to contact her again. All seemed lost.

Nicholas left his beloved Moscow immediately. He traveled across Europe, suffering rough terrain and treacherous weather in the journey to London. Although exhausted from travel, Nicholas immediately began to pursue Alexandra with great passion. After two months, she finally relented and agreed to marry him. The young couple thus became man and wife, rulers of the Russian empire.

Although Nicholas's love was initially unrequited, their marriage proved a joyful one. Diary entries from each revealed sublime happiness, the great joy of their union, and the depth of their love for each other. They produced five children. Nicholas so enjoyed spending time with Alexandra and their children that the Russian empire apparently suffered from his neglect. When forced to be apart, they pined for each other, wrote often, and endured great psychological pain until their reunions. Their mutual love lasted throughout their lives, until the Russian Revolution brought down the czarist rule and they were executed. They died on the same day, their lifelong love never having diminished. Had Nicholas given up when initially spurned, their great love would have been lost forever.

The same passion that led John Hinckley to pursue Jodie Foster with desperate measures led Nicholas to succeed in turning an unrequited obsession into lifelong love. In retrospect, one seems irrational and unbalanced, the other logical and normal. One we call pathological, the other a love story. But what if Hinckley had succeeded in winning Jodie Foster's love and Nicholas had failed in his quest for Alexandra? Love is a dangerous passion that cuts both ways. There's a rationality to the irrationality.

Once humans evolved love, the bonds they created required protection. It would be extraordinarily unlikely that evolution would fail to defend these fragile and fruitful unions against interlopers. In the insect world, there is a species known as the "lovebug." Male lovebugs venture out in a swarm of other males each morning in search of a chance to mate with a female. When one succeeds, the couple departs from the swarm and glides to the ground to copulate. Because other males sometimes attempt to copulate with her, even after the pair has begun mating, the couple maintains a continuous copulatory embrace for as long as three days, hence the nickname "the lovebug." This strategy guards the union against outside intruders.

In humans, guarding a bond must last more than days, months, or even years because love can last a lifetime. The dangerous emotion of jealousy evolved to fill this void. Love and jealousy are intertwined passions. They depend on each other and feed on each other. But just as the prolonged embrace of the lovebug tells us that their bonds can be threatened, the power of jealousy reveals the ever-present possibility that our love bonds can be broken. The centrality of jealousy in human love reveals a hidden side of our

desires, one that we typically go to great lengths to conceal — a passion for other partners.

Hidden Desires

One Sunday morning William burst into the living room and said, "Dad! Mom! I have some great news for you! I'm getting married to the most beautiful girl in town. She lives a block away and her name is Susan." After dinner, William's dad took him aside. "Son, I have to talk with you. Your mother and I have been married 30 years. She's a wonderful wife, but has never offered much excitement in the bedroom, so I used to fool around with women a lot. Susan is actually your half-sister, and I'm afraid you can't marry her." William was heartbroken. After eight months he eventually started dating again. A year later he came home and proudly announced, "Dianne said yes! We're getting married in June." Again, his father insisted on a private conversation and broke the sad news. "Dianne is your half-sister too, William. I'm awfully sorry about this." William was furious. He finally decided to go to his mother with the news. "Dad has done so much harm. I guess I'm never going to get married," he complained. "Every time I fall in love, Dad tells me the girl is my half-sister." His mother just shook her head. "Don't pay any attention to what he says, dear. He's not really your father."

We find this story funny not simply because the ending carries a surprise. It's amusing because the mother ultimately gets payback for the "father's" philandering. Cuckolds are universal objects of laughter and derision, and a constant source of engaging tales from the tragedy of William Shakespeare's *Othello* to the middle-class marital dramas portrayed in the novels of John Updike.

To understand the origins of sexual passion we must introduce a disturbing difference between the sexes. Everyday observation tells us that men are more promiscuously inclined than women. "Men found to desire more sex partners than women desire" would be no more likely to make the headlines than "Dog bites man." But scientific verification is always useful, since common sense, which tells us that the earth is flat, sometimes turns out to be wrong. Science, in this case, has verified the everyday knowledge that men do display a greater passion for playing around. In one of our recent studies of more than 1,000 men and women, men reported desiring eight sex partners over the next three years, whereas women reported desiring only one or two. In another study, men were four times more likely than women to say that they have imagined having sex with 1,000 or more partners.

Observing that men and women differ, however, is not the same as explaining *why* they differ. There are compelling evolutionary reasons for the fact that this difference in desire for sexual variety is universal, found not just in cultures saturated with media images of seductive models, not just among Hugh Hefner's generation of *Playboy* readers, and not just in studies conducted by male scientists. To explain this desire, we must introduce another key fact about human reproductive biology.

To produce a single child, women bear the burdens and pleasures of nine months of pregnancy — an obligatory form of parental investment that men cannot share. Men, to produce the same child, need only devote a few hours, a few minutes, or even a few seconds. Wide is the gulf between men and women in the effort needed to bring forth new life. Over time, therefore, a strategy of casual mating proved to be more reproductively successful for men than for women. Men who succeeded in the arms of many women out-reproduced men who succeeded with fewer. An ancestral woman, in contrast, could have had sex with hundreds of partners in the course of a single year and still have produced only a single child. Unless a woman's regular partner proved to be infertile, additional sex partners did not translate into additional children. As a consequence, men evolved a more powerful craving for sex with a variety of women.

This sex difference in desire creates an intriguing puzzle. Sexual encounters require two people. Mathematically, the number of heterosexual encounters must be identical for the sexes. Men cannot satisfy their lust for sex partners without willing women. Indeed, men's passion for multiple partners could never have evolved unless there were some women who shared that desire. Is casual sex a recent phenomenon, perhaps created by the widespread prevalence of birth control devices that liberated women from the previous risks of pregnancy? Or did ancestral women do it too?

Three scientific clues, when taken together, provide a compelling answer. Men's sexual jealousy provides the first clue, the ominous passion that led us to this mystery. If ancestral women were naturally inclined to be flawlessly faithful, men would have had no evolutionary catalyst for jealousy. Men's jealousy is an evolutionary response to something alarming: the threat of a loved one's infidelity. The intensity of men's jealousy provides a psychological clue that betrays women's desire for men other than their regular partners.

Second, affairs are known in all cultures, including tribal societies, pointing to the universal prevalence of infidelity. Prevalence rates vary from culture to culture (high in Sweden and low in China), but affairs occur everywhere. Sexual infidelity causes divorce worldwide more than any other marital violation, being closely rivaled only by the infertility of the union. The fact that women have affairs in cultures from the Tiwi of northern Australia to the suburbs of Los Angeles reveals that some women refuse to limit themselves to a single partner despite men's attempts to control them and despite the risk of divorce if discovered.

A third line of evidence comes from new research on human sperm competition. Sperm competition occurs when the sperm from two different men inhabit a woman's

reproductive tract at the same time. Human sperm remain viable within the woman's tract for up to seven days, not merely one or two days as scientists previously believed. Indeed, my colleagues have discovered hundreds of "crypts" recessed within the vaginal walls of women in which they store a man's sperm and then release it several days later to enter a marathon race to her egg. If a woman has sex with two men within the course of a week, sperm competition can ensue, as the sperm from different men scramble and battle for the prize of fertilizing the egg. Research on sperm competition reveals that men's sperm volume, relative to their body weight, is twice that which occurs in primate species known to be monogamous, a clue that hints at a long evolutionary history of human sperm competition.

Human sperm, moreover, come in different "morphs," or shapes, designed for different functions. Most common are the "egg getters," the standard government-issue sperm with conical heads and sinewy tails designed for swimming speed — the Mark Spitzes of the sperm world. But a substantial minority of sperm have coiled tails. These so-called kamikaze sperm are poorly designed for swimming speed. But that's not their function. When the sperm from two different men are mixed in the laboratory, kamikaze sperm wrap themselves around the egg getters and destroy them, committing suicide in the process. These physiological clues reveal a long evolutionary history in which men battled with other men, literally within the woman's reproductive tract, for access to the vital egg needed for transporting their genes into the next generation. Without a long history of sperm competition, evolution would have favored neither the magnitude of human sperm volume nor the specialized sperm shapes designed for battle.

All these clues — the universality of infidelity, men's sexual jealousy, and the hallmarks of sperm competition — point to a disturbing answer to the question of ancestral women's sexual strategies. They reveal the persistent expression of women's passion for men other than their husbands, a phenomenon that must have occurred repeatedly over the long course of human evolution. Modern women have inherited this passion from their ancestral mothers.

Why Women Have Affairs

Because scientists have focused primarily on the obvious reproductive benefits of men's desire for sexual variety, the potential benefits to women of short-term sexual passion languished for years unstudied. The puzzle is compounded by the fact that a woman's infatuation with another man comes laden with danger. An unfaithful woman, if discovered, risks damage to her social reputation, the loss of her partner's commitment, physical injury, and occasionally death at the hands of a jealous man. Undoubtedly, many women weigh these risks, and choose not to act on their sexual desires. The benefits to women who do act on their passion for other men, given the possibility of catastrophic costs, must be perceived as sufficiently great to make it worth the risk.

For the past seven years, Heidi Greiling and I have been studying why women have affairs. Our lab has focused on the benefits that are so alluring that women from all walks of life are willing to take great risks to pursue sex and love outside of marriage. Our research centered on three questions: What *benefits* do women reap from affairs? What *circumstances* are most likely to drive a woman into another man's arms? And *which* women are most prone to affairs?

Historically, women may have benefited from an affair in countless ways. The first and most obvious benefit comes from the direct resources that an affair partner may provide. A few expensive dinners may not seem like much today, but an extra supply of meat from the hunt would have made the difference between starving and surviving during ancestral winters when the land lay bare, or between merely surviving and robustly thriving during more plentiful times.

Women also can benefit from affairs in the currency of quality genes. The puzzle of the peacock's tail provided the telltale clue to this benefit. A peahen's preference for peacocks with brilliant plumage may signal selection for genes for good health. When peacocks carry a high load of parasites, their diminished health is revealed in duller displays. By selecting for luminescence, peahens secure good genes for health that benefit their offspring. Research by Steve Gangestad and Randy Thornhill of the University of New Mexico reveals that women may be choosing affair partners with especially healthy genes. Women who have sex with different men can also produce more genetically diverse children, providing a sort of "hedge" against environmental change.

Although genetic and resource benefits may flow to women who express their hidden sexual side, our studies uncovered one benefit that overshadowed the others in importance, a benefit we call "mate insurance." During ancestral times, disease, warfare, and food shortages made survival a precarious proposition. The odds were not trivial that a husband would succumb to a disease, become debilitated by a parasite, or incur injury during a risky hunt or a tribal battle. The paleontological and cross-cultural records reveal this clue — the skulls and skeletons show injuries mostly on males. A woman's husband, in short, stood a significant chance of suffering a debilitating or lethal wound.

Ancestral women who failed to have mate insurance, a backup replacement in the event that something happened to her regular partner, would have suffered greatly compared to women who cultivated potential replacements. Modern women have inherited the desires of their ancestral mothers for replacement mates. In the words of one woman in our study, "Men are like soup — you always want to have one on the back burner." Mate insurance provides a safeguard against reasonable risks of losing a partner.

And mate insurance remains relevant today, even though we've conquered many of the hazards that felled our forebears. American divorce rates now approach 67 percent for those currently getting married, up from the mere 50 percent figure that alarmed many over the past two decades. Remarriage is rapidly becoming the norm. *The Dangerous Passion* explores how women's desire for additional partners is ancestral wisdom that,

however alarming to husbands, continues to serve a critical insurance function for women today.

Urges of Ovulation

Women's attraction to lovers has another mysterious ingredient: the puzzle of concealed ovulation. Unlike chimpanzees, women's genitals do not become engorged when they ovulate. Women have "lost estrus" and engage in sex throughout their ovulatory cycle. Conventional scientific wisdom has declared that a woman's ovulation is cryptic, concealed even from the woman herself. But have the urges associated with ovulation totally vanished?

In the most extensive study of ovulation and women's sexuality, several thousand married women were asked to record their sexual desires every day for a period of twenty-four months. The methods were crude but straightforward: women simply placed an X on the recording sheet on each day that they experienced sexual desire. Basal body temperature was recorded to determine the phase of the menstrual cycle. These thousands of data points yielded a startling pattern. On the first day of a woman's period, practically no women reported experiencing sexual desire. The numbers rose dramatically across the ovarian cycle, peaking precisely at the point of maximum fertility, and then declining rapidly during the luteal phase after ovulation. Women, of course, can experience sexual desire at any phase of their cycle. Nonetheless, they are five times more likely to experience sexual desire when they are ovulating than when they are not.

Women sometimes act on their passions. A recent survey of 1,152 women, many of whom were having affairs, revealed a startling finding. Women who stray tend to time their sexual liaisons with their affair partners to coincide with the peak of their sexual desire, when they are most likely to conceive. Sex with husbands, in sharp contrast, is more likely to occur when women are *not* ovulating, a strategy that may be aimed at keeping a man rather than conceiving with him. None of this is conscious, of course. Women do not think "I'll try to time sex with my affair partner when I'm ovulating so that I'll bear his child and not my husband's." Psychologically, women simply experience sexual desire more when they are ovulating, and if they have an affair partner, have urges to have sex with him during this phase. Ovulation may seem concealed to outside observers, but women appear to act on the impulses that spring from it. And when that desire for men other than their husbands occurs, it's difficult for most men to tell when their mates are straying or may be likely to stray. I call this the signal detection problem.

The Signal Detection Problem

Across cultures, people have affairs that are specifically designed to avoid detection. In Arizona, one motel marquee boasts that it is the "No-Tell Motel." In states across

America, you can rent some hotel rooms at an hourly rate. The woman returning from a business trip does not make her brief fling on the road the first topic of conversation. The husband who conceals his finances from his wife may be funneling resources to support a mistress on the side.

Spouses experience a signal detection problem. Consider camping in the woods at night and hearing a sound somewhere in the dark. Was that the sound of a twig snapping, merely the wind blowing, or the unfamiliar night sounds playing tricks on your ears? Assuming that you have correctly detected the signal as a twig snap, the possible causes of this event are many, but they are not infinite. It could be a rock that somehow got dislodged. But it could also be a dangerous animal or a hostile human. The signal detection problem is not merely about picking up accurate signals in the face of an uncertain and ambiguous welter of information. It is also about making correct inferences about the cause of the signal.

Since sexual infidelities are almost invariably secret, the signals they might emit are intentionally muted. An unfamiliar scent, the purchase of a sharp new jacket, the running of a yellow light, a new interest in Beethoven or the Beastie Boys, an unexplained absence — all of these can be signals, but they can originate from many causes other than infidelity. The jealous person experiences an elevated sensitivity to signals of infidelity: "He may see a red flush on his wife's cheek, she may appear to be standing awkwardly, or sitting sideways on a chair, she has put on a clean dress, there is a cigarette-end in the fireplace...the jealous man sees a handkerchief on the floor, a wet cloth in the bathroom, newspapers in a ditch, and attaches to all the same import."

Consider the case of a European psychiatrist who counseled many couples referred to him in which one of the spouses experienced "morbid jealousy." Most cases were husbands who had delusions that their wives were sexually unfaithful, and these delusions destroyed the fabric of trust required for harmonious marriage. Because he believed that extreme jealousy was a psychiatric illness that could not be cured, his most common recommendation was that the couples separate or divorce. Many couples followed his recommendations. Because he was keenly interested in the subsequent fate of his patients, he routinely contacted them after a number of months had passed. To his astonishment, he discovered that many of the wives of his patients had subsequently become sexually involved with the very men about whom their husbands had been jealous! Some of these women actually married the men who were the objects of their husbands' suspicions. In many cases, the husbands must have been sensing signs of infidelity. But because the wives proclaimed innocence and declared that their husbands' jealousy was irrational, the husbands ended up believing that the problem was in their heads. The problem of signal detection is how to identify and correctly interpret a partner's betrayal in an uncertain social world containing a chaos of conflicting clues.

Jealousy is often triggered by circumstances that signal a real threat to a relationship, such as differences in the desirability of the partners, as illustrated by the following case. The man was 35 years old, working as a foreman, when he was referred to a psychiatrist and diagnosed with "morbid jealousy." He had married at age 20 to a woman of 16 whom

he deeply loved. During their first two years of marriage, he was stationed in military service in England. During this two-year separation, he received several anonymous letters saying that his wife was carrying on an affair. When he returned to America to rejoin her, he questioned her intensely about the allegations, but she denied them. Their own sexual relations proved disappointing. He became obsessed with the earlier time in their marriage, repeatedly accused his wife of infidelity, and hit her from time to time, especially after a bout of drinking. He tried to strangle her twice, and several times he threatened to kill himself.

He openly admitted his problems to the psychiatrist: "I'm so jealous that when I see anyone near her I want to hurt her. I have always loved her but do not think she has returned my affection. This jealousy is something I feel in my stomach and when it comes out of me there is nothing I can do about it. That is why I behave so madly....My wife is always telling me that other men are stronger and can beat me....I'm not a big chap or a handsome chap but my wife is so pretty and I don't think I come up to her high standards." In other words, he perceived a difference in their level of desirability; she was attractive and alluring, and he saw himself as beneath her. When the psychiatrist questioned the wife in private, she admitted to meeting and having an affair with a married man. The affair was carried on in secret, and throughout the duration of her affair she insisted that her husband's jealousy was delusional. The affair began roughly one year before the husband was referred to the psychiatrist to treat "his problem."

Differences in desirability — when an "8" is married to a "10" — can heighten sensitivity to signals of infidelity in the partner who has fewer outside mating options. Elaine Hatfield and her colleagues at the University of Hawaii discovered that the more desirable partner in the couple in fact is more likely to stray. Those who have been in relationships with both more attractive and less attractive partners have an acute awareness of how jealousy is attuned to these differences. These differences represent one among many signs of actual or impending infidelity explored in depth later in the book.

Emotional Wisdom

Jealousy is necessary because of the real threat of sexual treachery. In a hazardous world where rivals lurk, partners harbor passions for other people, and infidelity threatens to destroy what could have been a lifelong love, it would be surprising if evolution had not forged elaborate defenses to detect and fend off these threats. Exposing these threats, and the psycho-logical arms we have to combat them, is a first step toward comprehending the wisdom of passions that sometimes seem so destructive.

The Dangerous Passion takes us on a journey through the rationality of these seemingly irrational emotions, examining the fundamental desires of what men and women want, and why these longings so often produce conflict. Chapter 2 introduces the jealousy paradox — why an emotion that evolved to protect love can rip a relationship apart. It

explores the evolution of conflict between men and women, why painful emotions are necessary in resolving conflicts, and why men and women are locked in a never-ending spiral of love and strife.

Chapter 3 focuses on why men and women differ in their underlying psychology of jealousy. It reveals that men and women are neither unisex equivalents nor aliens from different planets. When it comes to adaptive problems that differ for men and women, passions diverge; for adaptive problems that are the same, their emotions joyfully commingle.

Chapter 4, "The Othello Syndrome," investigates seemingly bizarre clinical cases in which a jealous person becomes untethered, resulting in delusional suspicions about a partner's infidelity. We explore why our minds are designed not merely to pick up on infidelities that have already occurred, but also to detect circumstances that signal an increased likelihood that a partner will stray in the future. Chapter 5 delves into the frightening abuses produced by the dangerous passion — battering, stalking, and killing — and identifies when women are most vulnerable to these violations.

Although I call jealousy the dangerous passion, it cannot be disentangled from the risky cravings that men and women harbor for other lovers. Chapter 6 examines the qualities of relationships that make a person susceptible to infidelity, the personality characteristics that predict who's likely to cheat, and why some people unwittingly drive their partners into the arms of a paramour. Chapter 7 explores why women have affairs, and why modern women have inherited from their ancestral mothers a roving eye.

Chapter 8 identifies the strategies we use to cope with jealousy and infidelity and why some therapeutic efforts to eradicate jealousy are often misguided. The final chapter reveals the positive uses of jealousy for enhancing sexual passion and life-long love, and examines how we can harness emotional wisdom to enrich our relationships.