Murderous jealousy -- it's in our genes

Should we take a pill to quell jealousy, the urge that compelled an astronaut to plot murder?

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WE BECAME ODDLY ENERGIZED when Lisa Marie Nowak, an astronaut with a sterling record, drove nearly 1,000 miles to attack Colleen Shipman, a woman Nowak believed was a rival for the man she loved. Nowak was charged with attempted murder, and her alleged "kill kit" contained a knife, 3 feet of hose, garbage bags, a BB gun and, most ominously, a steel mallet.

Jealousy is possibly the most destructive emotion housed in the human brain. It's the leading cause of spousal murder worldwide, according to analyses I did of data over the last century. And, statistics show, it's the leading drive behind the killing of "mate poachers" — interlopers who attempt to lure away our partners.

Jealousy causes much suffering. Those whose partners are jealous endure behavior that ranges from vigilance to violence. Their mail is torn open, their computers hacked, their activities monitored, their motives interrogated, their integrity impugned, their worth denigrated, their friends banished. Those who experience jealousy suffer too. They feel anxious, depressed, angry, humiliated, out of control, sometimes suicidal. Remember Othello?

In the modern world, we take pills for everything — weight loss, anxiety, depression. If the drug companies created a pill to eliminate jealousy, would we take it? Should we take it?

We like to believe that Nowak represents a strange and isolated case. Perhaps she snapped, suffering a mental meltdown. We like to think that jealousy is a personal failure, a sign of immaturity, neurosis or pathology. Psychological science, however, points in the opposite direction. Although few of us go to Nowak's extremes in attempting to destroy a romantic rival, we are all capable of jealousy. Contrary to common beliefs, jealousy exists in all human societies and is reliably activated by threats to a romantic relationship. My studies in the United States, the Netherlands and South Korea found that romantic rivals who have higher status or more money are more likely to cause men to erupt. Interlopers who are physically attractive or younger (Nowak is 43, Shipman 30) are more likely to stoke jealous passions in women.

By scanning the brains of volunteers who are instructed to imagine their lovers having sex with other people, neuroscientists have found that jealous emotions excite the amygdala and hypothalamus, brain structures linked with both sexual and aggressive behavior. Jealousy also stimulates the posterior superior temporal sulcus, which activates when an individual tries to discern the intentions of others or perceives that social norms are being violated. Even merely imagining our partner in the arms of a rival causes substantial physiological distress — a heart that races, electrodermal activity skyrocketing with a profusion of sweat, and muscular tension.

Many of us cherish romantic notions, which fluoresce on Valentine's Day, that if everything works out well, we will find our "one and only" love and live happily ever after. Sometimes we do. Unfortunately, there is much consensus about what constitutes desirability in mates, and attractive people are always in short supply compared to the many competing for their affections.

In one of my studies, 93% of American men and 82% of women said they had been the recipient of someone else's attentions while in a romantic relationship. And 87% of men and 88% of women believed that, like Nowak, they had been the victim of love thieves. Many of these thieves were successful, 53% of men and 41% of women reported having had a romantic partner lured away by a rival.

We discovered that mate poachers evoke an astonishing number of homicidal fantasies in otherwise normal people. In a study of 5,000 people in six cultures, 84% of women and 91% of men admitted to having had at least one fantasy of murder, and the vast majority fantasized about killing sexual rivals, often in painful and gruesome ways. Fortunately, most don't act on their homicidal fantasies. Laws and morals are powerful deterrents to murderous impulses — most of the time.

Wouldn't taking a pill to chemically deactivate this destructive emotion make for more harmonious relationships, reduce violence and create a happier society? Surely an enterprising drug company could fill its coffers by developing such a drug. But before we seek to do away with jealousy, let's first consider what functions it evolved to serve. Jealousy evolved, in part, to fend off mate poachers, and it inspires what scientists call "mate-guarding actions." In its modern form, that means spotting someone flirting with your beloved at a party and making tracks to Victoria's Secret or the local jeweler to secure an offering to make yourself more desirable. Hanging on to a mate is, evolutionarily speaking, usually advantageous for both sexes. Jealousy also alerts us to threats that loom on the horizon of a relationship, such as an imbalance in desirability between the partners. That's why a man who loses his job and consequently becomes less desirable to women often experiences jealousy, perceiving that his wife now has better mating options.

Modest displays of jealousy provide important signals to our partners about the depth of our love and strength of our commitment. Indeed, people sometimes intentionally evoke jealousy in partners by flirting with others precisely to test the bond. Most interpret a total absence of jealousy as a signal of lack of love. Jealousy also can stoke sexual ardor, reigniting desire in relationships whose romantic fires have cooled with the passage of time.

Taking a pill to eliminate jealousy would surely reduce much personal anguish, violence and murder triggered by lovers'
triangles. But it also would make us less aware of threats to our romantic relationships. It might dampen our sex drive. And by depriving us of this litmus test of the strength of our emotional bonds, it might lead us to conclude that we and our partners lack the love we so desperately desire.

Jealousy reminds us that we possess an ancient brain designed for a world long forgotten. Adaptations so beneficial in our ancestral past, such as our intense fondness for fat, now lead to clogged arteries, obesity and life-threatening diseases. Is jealousy an antiquated emotion no longer serving the functions for which it was designed? Or does it still alert us to dangers and keep love alive, despite the destruction it causes when it spins out of control?