Jealousy in *Othello* and Jealousy in Social Psychology: The Relevance of Darwin?

Robert C. Evans
Auburn University at Montgomery

Jealousy has long been recognized as a central preoccupation of Shakespearean drama, especially in such plays as *Much Ado About Nothing*, *The Merry Wives of Windsor*, *Cymbeline*, and *The Winter's Tale*. Nowhere, however, is the presence of this theme more obvious or more obviously central than in *Othello*, which uses the word "jealousy" (or its variations) more frequently than any other Shakespearean work.[1] Shakespeare goes out of his way to emphasize the complex permutations of jealousy in this play, not only by making Othello jealous of Cassio, but also by making both Roderigo and Iago jealous of both Cassio and Othello; by making Bianca jealous of Cassio's alleged "newer friend" (3.4.181); and even (arguably) by making Brabantio jealous of his new son-in-law.[2]

Given the obvious importance of jealousy in human relations, it comes as something of a surprise to learn that until recently the topic was relatively neglected by modern sociologists and psychologists. Writers who often agree on little else seem to concur that only in the last several decades has jealousy received much sustained and vigorous attention as a topic of study and especially of empirical investigation. Bram P. Buunk, for instance, claims in an essay from 1991 that "theoretical and empirical work within social psychology on this phenomenon was virtually nonexistent until recently," and he further argues that it was not until the 1970s and 1980s that "jealousy became a legitimate and flourishing area of research."[3] Similarly, Gary L. Hansen argued that the 1980s saw "unprecedented advances in the study of jealousy,"[4] although Gregory L. White, writing at around the same time, still lamented the lack of "systems-oriented research on jealousy,"[5] and Jeff B. Bryson likewise regretted the unfortunate lack of sophistication of the then-available tests for measuring jealous responses.[6] Writing in the mid-1970s, Jessie Bernard asserted that jealousy in marriage

had been largely ignored by social scientists for four decades,[7] and another article published at the same time declared that "romantic love, as well as its intimate associate, sexual jealousy, largely remain . . . empirical puzzles."[8] In the intervening twenty-five years, however, jealousy has increasingly become the focus of intense theoretical speculation and detailed empirical research.

Much of this theorizing and research is reviewed in one of the most comprehensive and provocative of recent books on the topic, a volume by David M. Buss entitled *The Dangerous Passion: Why Jealousy is as Necessary as Love and Sex*.[9] As his title implies, Buss argues that while extreme jealousy can be enormously destructive, jealousy in moderation can serve various useful social functions. The latter assumption is not nearly as controversial as it sounds. Indeed, sociologists and psychologists of various stripes have come to view controlled jealousy as a potentially benign emotion. Thus a recent article on the topic in a standard social-psychological encyclopedia concludes that although jealousy was sometimes "previously depicted as a sort of personal weakness, current conceptualizations of jealousy describe it as a protective reaction, one geared toward maintaining intimate relationships. Certainly, jealousy can, at relatively low levels of intensity, stimulate communication about the boundaries of a relationship, revive passion, and bring two partners closer together."[10] It would not be difficult to compile a list of similar quotations from other recent sources.[11]

Buss, then, is controversial not for arguing that some moderate degree of jealousy is probably "necessary," inevitable, and even somewhat beneficial, but rather for claiming that an innate tendency to be jealous may be rooted in our genes, having evolved in humans over many eons through the process of Darwinian natural selection. Most humans, he thinks, come hard-wired to be jealous; as he provocatively puts it, "[n]on-jealous men and women . . . are not our ancestors, having been left in the evolutionary dust by rivals with different passionate sensibilities. We come from a long lineage of ancestors who possessed the dangerous passion."[12] As he later explains,

> 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.[13]

Buss's book merits close attention, especially from intelligent skeptics, for a variety of reasons. In the first place, Buss amasses a wealth of information about jealousy that should be of interest to anyone concerned with the topic—even to those who may strongly disagree with Buss's own interpretations of the data. Secondly, Buss's book epitomizes (and Buss himself is significantly responsible for) the growing emphasis on Darwinian "evolutionary psychology" in the contemporary social sciences—an emphasis that seems to have been largely ignored by students of Shakespeare.[14] While more and more social scientists turn to Darwin for help in understanding human behavior, Shakespeare scholarship still often relies on Freudian (or updated Lacanian) models of human conduct that are increasingly seen as unreliable by professionals in the relevant fields.[15] The almost total absence of Darwinian thinking from discussions of Shakespeare seems odd, to say the least, especially when Shakespeare has been discussed in detail from nearly every other imaginable perspective. The scarcity of reflection on the possible relevance of Darwin to Shakespeare seems particularly puzzling in view of the current boom of interest in Darwin in other fields. Finally, Buss's book—and the Darwinian approach it typifies—raises many interesting questions, not only about the pitfalls and possibilities of "evolutionary psychology," but also about some of the most fundamental issues in any serious approach to literary study.

Among such questions are the following: Do literary texts reflect an underlying "human nature" (a "nature" that has been relatively constant during recorded human history), or are the cultural and historical differences between various human groups and eras far more important than any similarities? Is it legitimate to interpret past texts from later perspectives, and is it reasonable to assume that those later perspectives may be more "objective" than the ones available when an earlier text was first written? Are there important similarities between the ways we presently respond to earlier texts and the responses of the people for whom they were written? These are just a few of the issues implicit in considering a Darwinian approach to literature.

In the following pages, then, I hope to use Shakespeare's *Othello* as a touchstone for testing the usefulness of recent social-psychological writings about sexual jealousy. In particular I hope to consider the possible usefulness (and possible limitations) of current Darwinian thinking on the subject—thinking represented by Buss's book, *The Dangerous Passion.* I hope to explore whether Darwinian ideas may contribute to a fuller understanding of Shakespeare's play (and, by implication, of other literary texts), but I also hope to explore some reasons why many literary scholars are likely to find Buss's Darwinian approach less than fully convincing.

I

Buss's study of jealousy will seem especially significant if one is willing to assume that most humans living in Tudor-Stuart England did not *fundamentally* differ, in their basic psychological responses, from most humans alive today. This is, of course, a highly debatable assumption, and the controversy it can generate is a matter to which I shall return later and at greater length. Yet the assumption that humans today fundamentally resemble people who lived four hundred years ago is made all the time in many (and probably most) studies of Shakespeare's work, especially in those which offer modern psychological readings of Shakespeare's characters and plays. If it is legitimate to assume (and this is a large "if") that classical Freudian, updated Lacanian, or traditional Jungian approaches (to name just a few) have anything significant to tell us about Shakespeare, then the same may be true of current Darwinian thinking. Indeed, if it is legitimate to assume that modern "common sense" assumptions about human thought and behavior can help us comprehend Shakespeare's works, then the same may also be true of scientific Darwinism. For the moment I will proceed as if Buss's Darwinian arguments may be just as potentially worthy of consideration as those of Jacques Lacan, Sigmund Freud, Carl Jung, or the typical modern academic.

Buss's basic assumptions are laid out clearly in the early pages of his book:

> 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 . . . . Our ancestral mothers confronted a different problem, the loss of a partner's commitment to a rival 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 [sic] 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.[16]

Buss argues, then (and many empirical data seem to support his case), that men tend to be more jealous of sexual infidelity while women tend to be more jealous of emotional betrayal.

Perhaps the portion of Buss's book that seems most relevant to *Othello* is the section in which he describes the often murderous violence jealousy can cause. Indeed, he argues that "there may be no passion in humans that rivals jealousy in the outpouring of violence it creates,"[17] and later he reports on numerous studies "'suggesting that sexual jealousy lies at the root of spousal battering and may exceed all other causes combined."[18] Such reports indicate that jealousy may contribute to anywhere from 52% to 94% of reported cases of violence.[19] Buss quotes one report that concluded that in "every study in which a respondent had a chance to check or list jealousy as a cause [of violence], it is the most frequently mentioned reason."[20] Also relevant to Shakespeare's play—and particularly to the staging of Desdemona's murder—is the finding that "although women sometimes attack out of jealousy, more often it [i.e., women's violence] is in defense against a husband who is attacking them out of jealousy."[21] Elsewhere Buss reports that

> women's violence is typically prompted by self-defense against a husband who is about to beat them, who is in the process of beating them, or who has had a long history of beating them. Women rarely initiate the battering, but do defend themselves when attacked. Most women are not passive victims of violence. They fight back when they can.[22]

Whether this would also have been true in early modern England is, of course, an intriguing question, but if Buss's basic assumption is correct (the assumption that humans are in large part genetically "wired" to react as they do), then there may be some good cause for thinking that Desdemona should not be presented as a merely passive sacrifice on the altar of Othello's jealousy.

Other data on violence in Buss's book also seem relevant to Shakespeare's *Othello*. Thus he notes that in one study of spousal homicides, "76 percent of the killers issued threats to the victims on the day of the killing, and 47 percent stated that their quarrels at the time of the homicide centered on sexual refusals or extramarital affairs."[23] These statistics help explain Othello's blunt language to Desdemona just before he kills her. It would have been easy enough, after all, for him to stab her immediately and silently when he finds her sleeping; instead, he tells her exactly what he intends to do. Buss suggests, in fact, that the number of killings resulting from jealousy is probably under-reported, "since in many cases a large percentage of killings are attributed [in official records] merely to 'drunken arguments,' with the real issue of contention left unspecified."[24]

Moreover, Buss disputes the contention that many spousal murders caused by jealousy result from accidents or mistakes—from brinkmanship pushed too far: "If spousal murders are really just slip-ups in a dangerous game of coercive threats and control," he asks, "why do many spousal homicides seem planned and premeditated?" His gruesome answer is that "men have evolved a mate-killing module, a psychological mechanism whose function is not threat or deterrence, but rather the literal death of a mate."[25] One reason for the possible evolution of this "module," he suggests, is that in some cultures a cuckold stands to lose less in his social standing (and thus in his later reproductive success) by killing than by not killing a straying spouse. Another reason for deliberate spousal murder—and a reason especially relevant in the era before effective birth control (an era that comprises all but the last several decades of human history)—is that a cuckold who failed to kill his wife ran the strong risk of supporting another man's child. Indeed, Buss contends that even during the current era of relatively accessible birth control, DNA studies have repeatedly suggested that "roughly 9 percent of children have genetic fathers who are different than those who believe that they are the father."[26] Another study, similarly based on DNA fingerprinting, put the estimate at about 10%.[27] If Buss is at all

correct in assuming that males may have evolved a "mate-killing module," his argument would help explain the swiftness, passion, and sense of righteousness with which Othello decides that killing Desdemona is not only acceptable but positively virtuous. Buss's assumption would also offer at least one possible explanation for the sickening frequency, in many places and eras, of wife-killings and other violence perpetrated by jealous husbands.

Buss controversially claims, in fact, that "jealous violence is not merely an American phenomenon, nor can it be attributed to Western culture, media images, or capitalism. Spousal battering occurs in every culture for which we have relevant data."[28] According to Buss, "Explanations limited to American culture, local socialization practices, or Western patriarchy fail to explain the universality of jealous violence. A deeper explanation is needed, one that traces violence back over human history."[29] He finds that deeper explanation, of course, in human genetics, and some of the empirical data he uses to support his claim are truly sobering. He cites one study, for instance, that reports that "most people have had the thought of killing someone else at one point or another in their lives" and that "[h]omicidal thoughts are thousands of times more common than actual killings."[30] These findings, if accurate, would thus make it far more difficult for most people to distance themselves comfortably from Othello and Iago than we might normally hope or assume. Shakespeare, by depicting a violently jealous husband, may have been exploring emotions that were, unfortunately, not uncommon in his own audience and that are not uncommon among later auditors and readers as well.

Perhaps part of the power of Shakespeare's play derives, in fact, from our sense of suspense: as we watch or read the play for the first time, perhaps we wonder whether Othello will merely *feel* violently jealous, or whether he will ultimately act on his violently jealous emotions. Part of his tragedy is that he actually performs a murderous deed that many others might only have imagined, and part of his even greater tragedy is that he punishes a wife whom *we* know to be perfectly innocent. Ironically, if Desdemona were *not* innocent—if she truly *were* involved in an extramarital affair with Cassio—her death (if Buss's views are correct) would strike most persons (or at least most males) as less truly tragic. Buss cites the historical tendency, in many systems of law, to treat the killers of actually adulterous wives with far more leniency than would otherwise be the case.[31] From this perspective, then, Desdemona's death is a tragedy less because she dies than because she dies actually innocent of the "crime" of adultery. What kind

of reactions would her death provoke, both in Othello and in on-stage and off-stage spectators, if Desdemona really had been having a sexual liaison with Cassio? The possible answers to this question may be even more uncomfortable than the present play itself.

II

As distanced and somewhat helpless spectators, of course, *we* know that Desdemona *is* innocent, and we are astonished at how quickly and easily Othello allows himself to believe in her guilt. Indeed, the question of why Othello proves so ready to accept the charges against her has always been one of the most troubling aspects of the play. Here again, though, Buss's book offers a wealth of useful information that can help us comprehend—even if we can never accept—Othello's thinking. Buss's book can help us understand *why* Othello thinks and acts as he does, and, once again, the insights Buss provides can help us realize that Othello's thinking and actions are unfortunately less abnormal and aberrational than we might like to assume. Once more, then, Buss's conclusions may force us to erase part of the comfortable distance that we may like to think separates us from Othello.[32]

One rational explanation for Othello's suspicions may lie in the possibility that adultery is, unfortunately, not as rare as may wish to assume. Buss contends, for instance, that at least in contemporary American culture, extramarital affairs are not uncommon: one estimate suggests that

> approximately 20 to 40 percent of American women and 30 to 50 percent of American men have at least one affair over the course of the marriage. Even these figures, however, underestimate the likelihood that *at least one partner in the marriage* will be unfaithful. Another study suggests that the probability that either the husband *or* wife will have an affair (the affair rate for the couple) may be as high as 76 percent.
>
> Although the figures for men and women cheating at least once are fairly close, men break their marital vows of fidelity more frequently. . . . [One study showed that] 26 percent of the men, but only five percent of the women, had affairs with three or more partners. A full 64 percent of women who have affairs have them with only one partner, whereas only 43 percent of the men who have affairs restrict themselves to a single partner.[33]

These figures seem astonishingly high, even by contemporary standards, and even if they were true for modern American society

they still might be highly irrelevant to Othello's culture. We would need hard evidence of the actual rates of adultery (or at least of adulterous thoughts) in sixteenth-century Italy and England before we could even begin to determine whether Buss's figures have much bearing on Shakespeare's play. However, if figures for actual adultery or adulterous thoughts in Shakespeare's time were only a fraction of those Buss reports for contemporary society, Othello's suspicions of Desdemona might still seem less completely irrational and paranoid than they sometimes appear.

This would be especially true if Othello assumed, as he seems to do, that Desdemona has no lover besides Cassio and that she has actually fallen in love with Cassio and is not merely motivated by random sexual desire. Both assumptions would jibe with Buss's arguments about the typical differences between male and female sexual psychology. According to Buss's perspective, it would make more statistical sense for Othello to suspect Desdemona of having an affair with just one other man (which is what he indeed suspects) than for him to suspect her of multiple infidelities with multiple partners. Although he famously accuses her of being a "whore," he apparently never seriously suspects that she is involved with anyone other than Cassio.

Why, however, should Othello ever assume that Desdemona might want to have an affair with Cassio in the first place? Buss's book provides many intriguing possible answers to this question. He argues that men have evolved a well-substantiated yearning for multiple sexual partners (a point to which I shall later return), but he also notes that "men could not possibly have evolved a desire for sexual variety without women who were willing"[34]—a claim that helps explain both Bianca and Emilia in Shakespeare's play. However, as Buss later puts it, "If men's desires require willing women, willing women require benefits. . . . Natural selection could not have forged a female psychology of infidelity if it failed to carry substantial advantages."[35] Buss argues that women have evolved an innate tendency to favor sexual partners (whether as husbands or as casual lovers) who are healthy, strong, powerful, and dependable,[36] and that women are motivated to have affairs partly as a form of "mate insurance": "Cultivating a backup mate provides security in the event that the regular mate gets injured or killed, infected with some disease, loses status within the group, fails to provide food, becomes abusive, mistreats the children, or defects from the relationship."[37]

I will discuss later all the reasons why Cassio might strike Othello as a suitably threatening "backup mate" for Desdemona,

and I will also discuss later all the reasons why Desdemona in particular might seem (at least to Othello) a likely candidate for engaging in an affair. For the moment, however, the important point is simply to emphasize Buss's findings that women have many solid, practical reasons for considering affairs in the first place. Buss concludes that "a host of circumstances could cause a woman to want to 'trade up' in the mating market, and affairs can be used to evaluate potential husbands."[38] He therefore suggests that "selection may have fashioned a female psychology of mate switching."[39] Emilia seems familiar with this psychology (4.3.70-102), and perhaps Othello is not entirely unreasonable in assuming that Desdemona may also understand its logic. Buss would argue that feminine infidelity is not as uncommon as jealous males might wish, and that indeed the existence of such infidelity is one reason that male jealousy evolved in the first place.

Of course, unfaithful women could not exist if there were not plenty of men quite willing to engage in casual sex, and Buss's book is full of data documenting the existence of such willingness. From an evolutionary perspective it makes great sense, after all, for males to wish to copulate as frequently as possible, while it also makes sense for women to be far more literally selective. Buss cites one study in which men and women were approached by attractive strangers who asked the following questions: "'Would you go out on a date with me tonight?' 'Would you go back to my apartment with me?' 'Would you have sex with me?'" Of the women approached,

> . . . 50 percent agreed to go out on a date with the man; 6 percent agreed to go back to his apartment; and 0 percent agreed to have sex with him. Most women thought it bizarre for a man to approach them out of the blue and ask for sex. Men differed. Of the men approached by the attractive female, 50 percent agreed to go out on a date with her; 69 percent agreed to go back to her apartment; and 75 percent agreed to have sex with her! The men who refused were typically apologetic, citing a previous engagement with parents or a fiancée. Some asked for a rain check. This is one of many studies that reveal fundamental differences between the sexes in the desire for a variety of sex partners.[40]

One objection to this study might be to suggest that a woman would naturally fear to accompany a perfect stranger to his apartment, let alone have sex with him, lest she be overpowered and raped. To determine the possible importance of this "fear factor," a related study altered the parameters of the first one:

> Men and women participants were contacted by a close personal friend who testified about the integrity and character of the stranger. The participants were assured by their friends that the other person was warm, sincere, trustworthy, and attractive. The participants were then asked one of two questions: "Would you be willing to go on a date?" or "Would you be willing to go to bed?" After being debriefed, participants were asked for the reasons for their decision.
>
> The overwhelming majority of both sexes agreed to date: 91 percent of the women and 96 percent of the men. As for the sex, however, a big difference emerged: 50 percent of the men, but only 5 percent of the women agreed. Not a single woman indicated concern for safety.[41]

These, however, are hardly the only differences between typical male and female sexual responses that emerge in Buss's book. Thus he reports one study showing that "48 percent of American men, but only 5 percent of American women, expressed a desire to engage in extramarital sex."[42] An earlier study showed that of nearly 1600 men and women surveyed, 72 percent of the men, but only 27 percent of the women, admitted that they sometimes desire sex with someone outside their marriage."[43] Other studies have reached similar conclusions, and Buss, of course, has one ready explanation: "The insatiable desire for a variety of sex partners evolved as a powerful passion in men, expressing itself in a host of behaviors ranging from patronizing prostitutes to indulging in infidelity."[44] Othello has very good reason to assume that Cassio patronizes a prostitute (Bianca); he may also feel that it would not be unnatural or uncommon for Cassio (or most men) to be willing to have sex with another man's wife.

Some of the most startling data in Buss's book concern sexual fantasies, and particularly the differences in the number and kinds of fantasies reported by men and by women. Buss summarizes as follows:

> Numbers, variety, and novelty dominate men's fantasies. Men focus on body parts and sexual positions stripped of emotional context. Male sexual fantasies are heavily visual, focusing on smooth skin, breasts, genitals, thighs, and buttocks. During sexual fantasy, 81 percent of men but only 43 percent of women focus on visual images rather than feelings. Men fantasize about attractive women with lots of exposed skin who show signs of easy access and no commitment. . . . Women's sexual fantasies, like men's, vary widely, and no two are alike, but they are more likely than

> men's to contain familiar partners. . . . Fifty-nine percent of American women but only 28 percent of American men report that their sexual fantasies typically focus on someone with whom they are already romantically and sexually involved. . . . [Another study suggests that] 57 percent of women but only 19 percent of men report that they focus on feelings as opposed to visual images. . . . Men's fantasies, in contrast, focus on sexual variety, since those men in the past who were inclined in this direction tended to reproduce more than men not so inclined. . .[45]

> . . . fundamental physiological sex differences led to the evolution of several psychological sex differences; men view sex one way, women another. Men evolved a more powerful desire for sexual variety, which increased their chances of impregnating women. Men express a desire for more than four times as many sex partners in their lifetimes, have more than twice as many sexual fantasies, more often engage in partner switching during the course of a single fantasy episode, lower their standards to abysmal levels in casual sex, let less time elapse before seeking casual intercourse with a new partner, spend more time trying to initiate sex, and are more willing to consent to sex with a total stranger.[46]

Let us assume—as Buss certainly does—that these differences are not peculiar to contemporary America or even to cultures anywhere of the late twentieth century. Let us assume, instead, that these findings may in fact be relevant to Shakespeare's *Othello* and to the psychology of the play's characters, particularly to the psychology of Othello himself. What are some of the possible implications, for Shakespeare's drama, of Buss's findings?

In the first place, they help to explain the sexual cynicism (or is it, unfortunately, realism?) of both Iago and Othello. Both men readily assume that Cassio, because he is also a man, would be quite willing to engage in casual sex, not only with Bianca but with Desdemona as well. If males are in fact generally more willing to have sex with women who are not their regular partners, such a willingness would help to explain why Othello so easily assumes that Cassio may be having sex with Desdemona at the same time that he is obviously also involved with Bianca. As professional soldiers, both Iago and Othello have spent most of their adult lives around other adult (or adolescent) males—men in the prime of their sexual lives—and so they could both be expected to be very familiar with (and therefore suspicious of) "typical" male sexual thoughts and behavior. Perhaps Othello, as a black male immersed in a prejudiced white culture, has had even fewer opportunities for

romantic and sexual success than most other males his age, and thus perhaps he has had even more occasion than most men to fantasize sexually and also to ponder the sexual success of his (white) competitors.

According to one recent study reported by Buss, "Of more than 1000 men and women [interviewed], 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 imagined having sex with 1,000 or more partners."[47] If these kinds of figures are at all relevant to attitudes in Shakespeare's era, they have some bearing on *Othello* in at least two ways: they help to explain why Othello is so immediately and intensely suspicious of Cassio's intentions, and perhaps they also suggest that both he and Iago are *projecting* onto Desdemona and Emilia (and even Cassio) the sexual appetites and sexual fantasies they take for granted in many of their fellow males. Othello and Iago may be assuming (incorrectly, at least in Desdemona's case) that their wives feel sexual longings that are as promiscuous as those of many men. Yet Othello's suspicions are not entirely irrational, since, as Buss argues, if "ancestral women were naturally inclined to be flawlessly faithful, men would have had no evolutionary catalyst for jealousy. . . Affairs are known in all cultures, including tribal societies, pointing to the universal prevalence of infidelity. . . . Sexual infidelity causes divorce worldwide more than any other marital violation, being closely rivaled only by the infertility of the union. . . 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."[48]

Why are women, from an evolutionary perspective, willing to take such risks? Why would a woman, having acquired a mate, be willing to risk losing him (or even risk losing her life) by subsequently mating with someone else? A desire for sexual gratification is the reason most often reported by modern women who have affairs, especially if the relationship is simply a "one-night stand."[49] Even in such cases, however, matters quickly become more complicated, thanks (Buss would claim) to evolutionary logic. The "sexy" men whom women prefer as partners in casual flings (like the "sexy" women preferred by men) tend to be younger, better-looking, healthier, or stronger than their regular partners. From an evolutionary perspective, women sense that they "can acquire better genes from higher value extrapair matings [i.e., from adultery or affairs] than from their regular mates."[50] Indeed, studies suggest that "women who have affairs appear to select men who,

for genetic reasons, are unusually healthy and whose genes then make children more healthy and resistant to diseases."[51] Both women and men tend to associate health with symmetrical appearance and vice versa, but Buss reports on one experiment showing that even smell can reliably indicate healthy symmetry:

> In an innovative study, Gangestad and Thornhill asked men who varied in symmetry to wear the same T-shirts for two days straight without showering or using deodorants. They instructed these men not to eat any spicy food . . . . After two days, they collected the T-shirts, and then brought women into the laboratory to smell them. The women rated each shirt on how good or bad it smelled. They were of course not aware of the purpose of the study in advance, nor did they know the men who had worn the T-shirts. The fascinating finding was that women judged the T-shirts that had been worn by the symmetrical men as more pleasant smelling, but only if they happened to be in the ovulation phase of their menstrual cycle.[52]

This final fact is important, because it helps to address what Buss calls "two potential criticisms" of his evolutionary reasoning.

> The first is that modern women often don't want to have babies with their lovers, and so might argue that the quality of their lover's genes is irrelevant. Women's sexual psychology, however, was forged in an evolutionary furnace lacking birth control. Sex led to babies regardless of a woman's conscious desire to reproduce or not. Ancestral women who had affairs with healthier, more symmetrical men tended to bear healthier, more symmetrical babies. Modern women have inherited from their successful ancestors an attraction to these men. The fact that roughly 10 percent of children today have genetic fathers other than their putative fathers suggests that these internal whisperings continue to operate today in the modern world.
>
> A second possible objection is: Why wouldn't women want symmetrical mates as husbands as well as affair partners? The answer, of course, is that they should and do. But the economics of the mating market means that most women are able to attract a more symmetrical man as an affair partner than as a husband. Some women, in short, are able to get the best of both worlds — attracting investment [of resources] from one man while obtaining superior genes from another.[53]

Even when a woman's interest in an extramarital lover seems mainly rooted in sexual desire, then, an underlying cause of her interest may be genetic or evolutionary. Indeed, one particularly

fascinating aspect of Buss's book is its discussion of "sperm competition," which "occurs when the sperm from two different men inhabit a woman's reproductive tract at the same time," where they can remain viable "for up to seven days." Thus, "if a woman has sex with two different men within the span of one week, then she sets the stage for the men's sperm to compete with each other in the race to her valuable egg."[54] Buss contends that

> [p]hysiological clues . . . betray a long history of sperm competition. First, men's testis size and sperm volume are far larger than those of the more monogamous primates such as gorillas and gibbons. This clue suggests that men have evolved a larger ejaculate to increase the odds of successful competition by crowding out the sperm from competing men. Second, men's sperm come in several predictable shapes, not merely the government-issue conical shape sperm that are designed for swimming speed. . . . men possess "kamikaze" sperm, coil tailed and terrible at swimming, that have been observed in laboratory studies to wrap themselves around competing sperm [i.e., sperm from other men] and destroy them while simultaneously self-destructing. Furthermore, these sperm appear designed to position themselves within the female reproductive tract to interfere with the progress of their competitors in the race for the eggs. . . . [In addition, one] of the most startling findings to emerge from the studies of sperm competition . . . centers on women's sexual orgasm, one of the factors most closely linked with women's sexual satisfaction. Women have more "high sperm retention" orgasms with their affair partner than with their regular partner, as indexed by the amount of sperm contained in the "flowback" collected after intercourse. Furthermore, women seem to time their orgasms with their affair partners more closely with when they ovulate. These findings, together with the theory of sperm competition, may solve the puzzle of why women place such importance on sexual gratification as a benefit from extramarital liaisons.[55]

Since all of this may seem extremely remote from the concerns of *Othello*, perhaps it is worth pausing at this point to draw a few direct connections with the play. One of these connections, ironically, should have helped reassure Othello that Desdemona was far *less* likely to commit adultery than many other women he might have married. The mere fact that Desdemona is white and that Othello is black would have made it extremely difficult for her to conceal from him the birth of another man's child, unless that other man were also black himself. Cassio, in other words, should in this sense be one of the *last* persons Othello should suspect of

an affair with his wife, especially in an era preceding effective birth control. Desdemona would have even more disincentives for committing adultery (at least with a white man) than most other women; by freely choosing Othello as her husband, she voluntarily put a practical limit on her ability to have successfully covert affairs with non-black partners. On the other hand, Othello presumably also realizes that if Desdemona *did* have an affair with a white man, and that if she did have the white man's child, her infidelity would be impossible to disguise or ignore or pretend not to notice. It would be evident to everyone, and, given the racist attitudes of Venetian society, Othello may presume (probably correctly) that many people would sympathize with Desdemona's infidelity, or at least understand why she might have been tempted.

Othello knows, moreover, that in many other conventional respects Cassio would make a highly attractive affair partner for Desdemona, at least from a Darwinian perspective. Cassio is younger than Othello, is apparently quite healthy, and is also seemingly attractive in various other ways. All these traits would make him a suitable candidate for a one-time liaison, but still other traits would make him a suitable candidate for an even more serious affair. Some of these traits, ironically, include the very qualities that cause Othello to promote Cassio (and thereby provoke Iago's wrath). Othello apparently considers Cassio a natural leader: he not only chooses him as his lieutenant but also appoints him to lead the watch in Cyprus. The leaders of Venice, moreover, seem to concur: when they decide that Othello should be transferred from Cyprus, they appoint Cassio to take his place, and it hardly seems surprising that Othello's jealousy first erupts into violence when this promotion is announced and when Desdemona seems to approve of Cassio's elevation. Women, according to Buss, tend to prefer mates (whether as husbands or as long-term affair partners) who possess

> the ability to secure resources as well as the qualities that tend to lead to resources such as status, ambition, industriousness, and maturity. Women universally desire men with good financial prospects. This preference does not diminish when women gain personal access to financial resources, nor when women achieve high socioeconomic status, nor even when women reside in cultures of relatively high economic equality between the sexes. Furthermore, since violence has been a recurrent problem women face at the hands of men, women place a greater premium on qualities that signal a man's ability to protect her, such as physical strength and athletic prowess. The ability to secure

> economic resources and possess athletic prowess, in short, are more central to men's than to women's overall value on the mating market. . . . Since women desire professionally successful men, . . . men's jealousy should have evolved in tandem to be activated by a rival who excels professionally. [56]

These comments seem applicable to *Othello* in various ways. They help to explain, for instance, why Desdemona may have been attracted to Othello in the first place: he is a man of obvious professional accomplishment who has earned his stature, and his status, largely through his physical prowess. He has earned so much respect from the Venetians that Desdemona's own father regularly invited Othello to his home, and when Desdemona's secret liaison with the Moor is discovered, Othello's status among the Venetian prevents the father from undoing the match. Desdemona's choice of Othello, in spite of the presumptive disapproval of most of her fellow Venetians, should, in one sense, give Othello confidence in her fidelity, but both he and she realize that many of her fellow citizens would normally consider him a less suitable match for her than a young, attractive, intelligent, motivated, mature, up-and-coming white candidate such as Cassio.

From an evolutionary perspective, in fact, Desdemona would probably strike many of her fellow Venetians as by far a more desirable partner than Othello. To them she would seem the partner with the better prospects not only *as* a mate but also of finding and keeping a mate. While many men in Venice would have desired Desdemona as a wife, far fewer Venetian women would probably have been attracted to Othello, if only because of cultural prejudice. Othello's recognition of Desdemona's considerable attractiveness probably, in fact, intensifies his jealousy, for, as Buss writes, it is usually a "divergence between spouses in desirability that triggers jealousy."[57] Indeed, Desdemona possesses many of the qualities that men, according to Buss, typically look for in a woman. Whereas women tend to look for indications of success in a mate (including strength, dependability, and especially material resources), men (he suggests) tend to "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."[58] These are the features of Desdemona that Othello often mentions—and this is especially true (ironically) as he is about to kill her (5.2.3-5). Othello has obeyed evolutionary logic in choosing a young, attractive wife, but he may also feel that he has stepped into a common Darwinian trap, since

> [y]oung women are more attractive to a man's rivals, who are therefore more likely to flirt, charm, or try to lure them away from their existing partners. Men mated to young women are more often surrounded by encroaching competitors, which trips the jealousy switch.
>
> Young women, because they tend to be desirable, are in the best positions in their lives to secure a desirable mate. At no other time in a woman's life does she have more options. Attempts to switch mates—to find a better mate to replace her current mate—may be most effective during this stage. Their husbands seem to be aware that they may be expendable.[59]

Buss reports that the younger a woman is, the more likely she is to be killed by a jealous partner. Moreover, when "a man is substantially older than his partner" (as Othello seems to be), "he may be especially vulnerable to being cuckolded and abandoned" since "women usually want men who are only a few years older than they are, not men substantially older."[60] Studies show that young women married to older men—especially to men at least ten years older than themselves—are especially likely to be murdered by jealous husbands..[61] Younger women have more sexual options than older women, but, at least as important, the older husbands of younger women also know that such options exist.

Othello is not entirely irrational, then, in worrying that Desdemona might possibly be unfaithful, especially if he is also influenced by Venetian social prejudice and considers himself less desirable than she. Various studies reported by Buss suggest that the more desirable partner in a relationship is indeed more likely to prove unfaithful[62] and that "people who believed they were superior in some way to their partner felt that they were 'unlucky in marriage,' and consequently felt justified in having affairs sooner and more frequently than those who felt 'lucky' in marriage."[63] Studies also suggest that the "more committed partner" in a relationship "is generally less desirable" and that "the less desirable partner becomes more jealous."[64]

From an evolutionary perspective, then, Othello has some statistically good reasons to suspect that Desdemona may someday prove unfaithful, and, from the same perspective, he also has some plausible reason to assume that she might prove unfaithful with a person such as Cassio. Desdemona is young, physically attractive, and conventionally more desirable than Othello, and the same can also be said of Cassio. Moreover, Othello has some statistically

good reasons to assume that Desdemona may consider herself "unlucky" in marriage; certainly many of her fellow Venetians would believe that she is, and certainly many of them would find Cassio a far more fitting mate for Desdemona than Othello. Othello may also be assuming that either Desdemona herself, or certainly Cassio, or possibly both, may tend to view sexual relations as men (from a Darwinian viewpoint) tend to do: as *merely* sexual. Or Othello may be assuming (again from a Darwinian perspective) that Desdemona is in the market for a dependable back-up mate.[65] Othello's predicament is even more complicated, moreover, by his inability to prove a negative: how can he be absolutely sure that Desdemona is *not* unfaithful (in mind if not in deed), especially when Buss contends that a kind of "co-evolutionary arms race has created exquisite sensitivity to the most subtle signals of betrayal, while simultaneously creating extraordinarily skilled evaders of detection?"[66] When Buss and a co-investigator interviewed more than 200 men and women and asked them "to list clues that they believed would provoke suspicions of sexual or emotional infidelity," the list quickly grew to 170 possible reasons for suspicion.[67] Two of these clues—"[s]howing either a reluctance to discuss a specific person or an increased reference to a specific person"[68]—unfortunately seem relevant to *Othello*, since the Moor seems suspicious both when Desdemona fails to mention Cassio and also when she seems to mention him too much. Given the sheer abundance of possible signals of possible infidelity, and especially given the fact that both Desdemona and Cassio probably strike Othello as in many ways more desirable than he is, it is little wonder that Othello seems so tormented and uncertain.

Ironically, in some respects Desdemona seems, from a statistical point of view, far *less* likely to be unfaithful than many other women. Thus, when Buss and a colleague studied more than a hundred newly wedded couples to determine which personality traits of either partner were mostly likely to cause an affair, they examined more than a hundred possible variables. They discovered that of these, "only three proved to be strong predictors of susceptibility to infidelity":

> The first was narcissism. People high on narcissism have a grandiose sense of self-importance, often exaggerating their accomplishments or talents. They expect to be recognized by others as superior, and often get infuriated when such admiration is not forthcoming. Typically preoccupied with fantasies of unlimited success, they believe that they are "special" and unique, and that the usual rules and norms

> [y]oung women are more attractive to a man's rivals, who are therefore more likely to flirt, charm, or try to lure them away from their existing partners. Men mated to young women are more often surrounded by encroaching competitors, which trips the jealousy switch.
>
> Young women, because they tend to be desirable, are in the best positions in their lives to secure a desirable mate. At no other time in a woman's life does she have more options. Attempts to switch mates—to find a better mate to replace her current mate—may be most effective during this stage. Their husbands seem to be aware that they may be expendable.[59]

Buss reports that the younger a woman is, the more likely she is to be killed by a jealous partner. Moreover, when "a man is substantially older than his partner" (as Othello seems to be), "he may be especially vulnerable to being cuckolded and abandoned" since "women usually want men who are only a few years older than they are, not men substantially older."[60] Studies show that young women married to older men—especially to men at least ten years older than themselves—are especially likely to be murdered by jealous husbands..[61] Younger women have more sexual options than older women, but, at least as important, the older husbands of younger women also know that such options exist.

Othello is not entirely irrational, then, in worrying that Desdemona might possibly be unfaithful, especially if he is also influenced by Venetian social prejudice and considers himself less desirable than she. Various studies reported by Buss suggest that the more desirable partner in a relationship is indeed more likely to prove unfaithful[62] and that "people who believed they were superior in some way to their partner felt that they were 'unlucky in marriage,' and consequently felt justified in having affairs sooner and more frequently than those who felt 'lucky' in marriage."[63] Studies also suggest that the "more committed partner" in a relationship "is generally less desirable" and that "the less desirable partner becomes more jealous."[64]

From an evolutionary perspective, then, Othello has some statistically good reasons to suspect that Desdemona may someday prove unfaithful, and, from the same perspective, he also has some plausible reason to assume that she might prove unfaithful with a person such as Cassio. Desdemona is young, physically attractive, and conventionally more desirable than Othello, and the same can also be said of Cassio. Moreover, Othello has some statistically

good reasons to assume that Desdemona may consider herself "unlucky" in marriage; certainly many of her fellow Venetians would believe that she is, and certainly many of them would find Cassio a far more fitting mate for Desdemona than Othello. Othello may also be assuming that either Desdemona herself, or certainly Cassio, or possibly both, may tend to view sexual relations as men (from a Darwinian viewpoint) tend to do: as *merely* sexual. Or Othello may be assuming (again from a Darwinian perspective) that Desdemona is in the market for a dependable back-up mate.[65] Othello's predicament is even more complicated, moreover, by his inability to prove a negative: how can he be absolutely sure that Desdemona is *not* unfaithful (in mind if not in deed), especially when Buss contends that a kind of "co-evolutionary arms race has created exquisite sensitivity to the most subtle signals of betrayal, while simultaneously creating extraordinarily skilled evaders of detection?"[66] When Buss and a co-investigator interviewed more than 200 men and women and asked them "to list clues that they believed would provoke suspicions of sexual or emotional infidelity," the list quickly grew to 170 possible reasons for suspicion.[67] Two of these clues—"[s]howing either a reluctance to discuss a specific person or an increased reference to a specific person"[68]—unfortunately seem relevant to *Othello*, since the Moor seems suspicious both when Desdemona fails to mention Cassio and also when she seems to mention him too much. Given the sheer abundance of possible signals of possible infidelity, and especially given the fact that both Desdemona and Cassio probably strike Othello as in many ways more desirable than he is, it is little wonder that Othello seems so tormented and uncertain.

Ironically, in some respects Desdemona seems, from a statistical point of view, far *less* likely to be unfaithful than many other women. Thus, when Buss and a colleague studied more than a hundred newly wedded couples to determine which personality traits of either partner were mostly likely to cause an affair, they examined more than a hundred possible variables. They discovered that of these, "only three proved to be strong predictors of susceptibility to infidelity":

> The first was narcissism. People high on narcissism have a grandiose sense of self-importance, often exaggerating their accomplishments or talents. They expect to be recognized by others as superior, and often get infuriated when such admiration is not forthcoming. Typically preoccupied with fantasies of unlimited success, they believe that they are "special" and unique, and that the usual rules and norms

the opposite.[73] In a third study designed to discriminate even more clearly between sexual and emotional jealousy, "63 percent of the men, but only 13 percent of the women, found the sexual aspect of infidelity to be most upsetting; in contrast, 87 percent of the women, but only 37 percent of the men, found the emotional aspect of the infidelity to be most upsetting. No matter how the questions were worded, no matter which method we used, we saw the same sex difference in every test."[74] These contrasts between male and female responses also transcended differences in culture and nationality, even when comparing sexually "liberal" Sweden with sexually "conservative" China. Buss concludes, in other words, what *Othello* seems also to illustrate: that men are especially likely to be obsessed with the sexual aspects of infidelity. And Buss argues, moreover, that men are probably hard-wired to respond in this fashion. As we have seen, however, this is only one of many ways in which Buss's book offers data that are apparently relevant for a better understanding both Othello the man and *Othello* the play.

III

Othello is an older, conventionally less desirable man who feels threatened in his relationship with a younger, physically attractive woman. That threat is posed, he thinks, by a younger, physically attractive, socially successful, and obviously ambitious male. Although Othello is clearly wounded by the thought of losing his partner's love, he seems ferociously and eventually murderously obsessed at thought that his partner may have had sex with his rival. Imaging them in bed together drives him to fury. He is willing to kill his partner rather than allow her alleged sexual liaison to continue, and, even as he kills her, he reveals a preoccupation with her physical beauty. He seems to take for granted the prospect that his ostensible male rival is willing to have sex with Desdemona even though that rival is already engaged in an apparently satisfying sexual relationship with another woman, and he seems to assume that both Desdemona and Cassio are motivated by vivid sexual fantasies which exist, in fact, mostly in his own mind. He is obsessed with preserving his reputation, even if this means murdering his wife. Moreover (and perhaps this is the most depressing reflection of all), there seems some reason to think that if Othello *had* been right in suspecting Desdemona of sexual infidelity, many men—both in Shakespeare's day as well as in subsequent eras—would probably even have felt that her death was not completely unjustifiable. *Othello*, in short, would probably

strike many people as less truly a "tragedy" if Desdemona had actually had sex with Cassio, or even if Othello or Cassio (as Iago suspects) had had sex with Emilia. That is, if any of these supposed sexual betrayals of one man by another man had proved true, we would probably have a different kind of play, with a history of provoking rather different kinds of emotional responses (at least from male spectators) than the play we presently possess.

Nothing in the foregoing paragraph would surprise a Darwinian—or at least a Darwinian such as David Buss. Everything in the foregoing paragraph is perfectly explicable from Buss's Darwinian point of view. And yet, despite all the ways in which the data in Buss's book help explicate *Othello*, most present-day scholars of literature are likely to be highly skeptical of this kind of Darwinian reading. They are likely to argue, for instance, that a perspective not even codified until the nineteenth or twentieth centuries has little relevance to a masterpiece of seventeenth-century literature. This objection, however, might apply with equal force to nearly any post-Renaissance perspective, including many of the ones now most widely used. A Darwinian reading is no more or less anachronistic than a Lacanian, Marxist, or deconstructivist reading. Any of these "modern" approaches must be judged by how well they can explain facts that existed long before the approaches themselves were conceived.

A more serious objection to a Darwinian approach to *Othello* is that it greatly simplifies both the plot and the characters of an enormously rich and complex play—that it is, in sum, highly reductionistic. Once again, however, such an objection can be lodged against most "single-perspective" readings of any work. All such readings tend to emphasize some textual data at the expense of others, highlighting some aspects of a work while downplaying or ignoring other kinds of evidence. Only an extraordinarily close reading—a line-by-line, word-by-word explication from multiple points of view—could even begin to do justice to a work as rich and provocative as *Othello*. Such a pluralistic reading (a reading that examined the work from multiple conflicting and sometimes complementary perspectives) would do most justice to the complexity of the play, but it would also be enormously long, dwarfing even a decent "variorum" edition of the work. And, besides, a Darwinian perspective might still, presumably, have something of value to contribute to such an enterprise.

A third possible objection to a Darwinian reading of *Othello* is that it rests on the assumption that "human nature" (which is itself a highly disputable concept) is everywhere and always *essentially* the

same. It assumes that historical and cultural variables are far less important than an alleged substratum of ingrained responses, somehow connected to our genes. It assumes, in other words, that "nature" is more important than "nurture." It also assumes that "typical" responses are more important than "atypical" ones—that what matters most, for instance, is how *most* men or women will predictably behave, rather than how specific, unique individuals actually do behave. It emphasizes, in other words, gross statistical probabilities rather than subtle and precise variations. For all these reasons (it can be alleged), a Darwinian perspective can offer us only a caricature of *Othello*—one that fails to do justice to a multitude of historical, cultural, and literary variables and specificities. The success of possible responses to this objection will depend on whether, and how well, Darwinian "evolutionary psychology" continues to develop in subtlety and sophistication in the decades to come. In evaluating any Darwinian reading of any literary text, it is always worth stressing that "evolutionary psychology" is a relatively recent phenomenon, and that not all Darwinists, by any means, agree among themselves about how the approach should be developed or applied. Buss's book is hardly the last or only word in the possible applicability of Darwinian ideas to Shakespeare's plays, but in view of the almost total and somewhat astounding silence on this subject in Shakespeare criticism, Buss's book may be as good a starting point as any for initiating much more detailed discussion and exploration. Even readers who ultimately reject Buss's views probably have much to learn about Shakespeare, and much else, from some kind of Darwinian perspective.

Notes

1. See the *Harvard Concordance to Shakespeare*, ed. Marvin Spevack (Cambridge, MA: Harvard University Press, 1973). It is worth noting, however, that in Shakespeare's day the word 'jealousy' had a wider range of connotations than it tends to have today; it could, for instance, suggest zeal or even solicitude as well as the more negative emotion of rivalry (see the *Oxford English Dictionary*, CD-Rom version 2.01 [1999]). It seems clear, however, that the latter connotation is the one most often relevant in Shakespeare's play. Important discussions of jealousy in *Othello* include the following: Lily B. Campbell, *Shakespeare's Tragic Heroes: Slaves of Passion* (Cambridge: Cambridge University Press, 1930); Theodor Reik, "Note on Jealousy," in his *Psychology of Sex Relations* (New York: Farrar and Reinhart, 1945), 173-81; Kenneth Muir, "The Jealousy of Iago," *English Miscellany* 2 (1951): 65-83; Roger John Trienens, "The Green-Eyed Monster: A Study of Sexual Jealousy in the Literature of the English Renaissance, Ph.D. Diss., Northwestern University, 1951; A. Bronson Feldman, "The Yellow Malady: Short Studies of Five Tragedies of Jealousy" *Literature and Psychology* 6 (1956): 38-52; Kenneth Muir, "Shakespeare and the Tragic Pattern, *Proceedings of the British*

Academy 44 (1958): 145-62; R. Rappaport, "The Theme of Personal Integrity in *Othello*," *Theoria* 14 (1960): 1-12; J.P. Sullivan, "The Machiavel and the Moor," *Essays in Criticism* 10 (1960): 231-34; F. Grelon, "Shakespeare et la jalousie," *Etudes Anglaises* 17 (1964): 390-401; Kenneth Muir, "Shakespeare's Soliloquies, "*Occidente* (Lisbon) 67 (1964): 45-58; Barriss Mills," Motivation in *Othello* and *The Winter's Tale," University Review* (Kansas City) 33 (1966): 107-112; Louis Jolyon West, "The Othello Syndrome, *Contemporary Psychoanalysis* 4 (1968): 103-110; Harendra Prosad Mohanty, "Othello's Jealousy," *Calcutta Review* 1 (1969): 579-83; Teoman Sipahigil, "The Dramatic Uses of Thought in the Structure of *Othello*," Ph.D. Diss., University of California at Los Angeles, 1970; Leslie Fiedler, *The Stranger in Shakespeare* (New York: Stein and Day, 1972), 139-96; Ruth Levitsky, "Prudence Versus Wisdom in *Othello*," *Dalhousie Review* 54 (1973): 281-88; Charlotte N. Clay, *The Role of Anxiety in English Tragedy, 1580-1642* (Salzburg: Institut fur Englische Sprache und Literatur, 1974), 164-80; Walter Dias, *Shakespeare: His Tragic World: Psychological Explorations* (New Delhi: S. Chand, 1972), 132-233; Doris Adler, "Imaginary Toads in Real Gardens," *English Literary Renaissance* 11 (1981): 235-60. For help in tracing many of the items in this list, I am greatly indebted to *Othello: An Annotated Bibliography*, comp. Margaret Lael Mikesell and Virginia Mason Vaughan (New York: Garland, 1990).

See also Werner Gundersheimer, "'The Green-Eyed Monster': Renaissance Conceptions of Jealousy, "*Proceedings of the American Philosophical Society* 137.3 (1993): 321-31; Kenneth Muir, "The Jealousy of Othello and Herod," *Aligarh Critical Miscellany* 4.1 (1991): 26-35; Michael W. Shurgot, "Othello's Jealousy and the 'Gate of Hell,'" *Upstart Crow* 12 (1992): 96-104; Ronald St. Pierre, "'Cuckold Me': Cuckoldry in Shakespeare's *Othello*," *Shoin Literary Review* 35 (2002): 1-15; Millicent Bell, "Othello's Jealousy" *Yale Review* 85.2 (1997): 120-36; Michael O'Connell, "Vital Cultural Practices: Shakespeare and the Mysteries," *Journal of Medieval and Early Modern Studies* 29.1 (1999): 149-68; Derek Cohen, "Patriarchy and Jealousy in Othello and The Winter's Tale" *Modern Language Quarterly* 48.3 (1987): 207-23; Lawrence Danson, "'The Catastrophe Is a Nuptial': The Space of Masculine Desire in *Othello, Cymbeline*, and *The Winter's Tale*," *Shakespeare Survey* 46 (1993): 69-79; Yoko Takakuwa, "Diagnosing Male Jealousy: Woman as Man's Symptom in *The Merry Wives of Windsor*, *Othello*, and *The Winter's Tale*," in *Hot Questrists after the English Renaissance: Essays on Shakespeare and His Contemporaries,* ed. Yasunari Takahashi (New York: AMS, 2000), 19-36.

2. All citations from the play are from the newest Arden edition, edited by E.A.J. Honigmann (Walton-on-Thames, Surrey: Thomas Nelson and Sons, 1997).

3. Bram P. Buunk, "Jealousy in Close Relationships: An Exchange-Theoretical Perspective," in *The Psychology of Jealousy and Envy*, ed. Peter Salovey (New York, Guilford Press, 1991), 148-77; see esp. 149. Salovey's collection is an important compilation from which I will cite frequently.

4. Gary L. Hansen, "Jealousy: Its Conceptualization, Measurement, and Integration with Family Stress Theory," in *The Psychology of Jealousy and Envy*, ed. Peter Salovey, 211-30; see esp. 211

5. Gregory L. White, "Self, Relationship, Friends, and Family: Some Applications of Systems Theory to Romantic Jealousy," in *The Psychology of Jealousy and Envy*, ed. Peter Salovey, 231-51; see esp. 232.

6. Jeff B. Bryson, "Modes of Response to Jealousy-Evoking Situations," in *The Psychology of Jealousy and Envy*, ed. Peter Salovey, 178-207; see esp. 178-79.

7. Jessie Bernard, "Jealousy and Marriage," in *Jealousy*, ed. Gordon Clanton and Lynn G. Smith, 3rd ed. (Lanham, MD: University Press of America, 1998),

141-50; see esp. 141. This anthology edited by Clanton and Smith is a major collection from which I will cite frequently.

8. Ellen Berscheid and Jack Fei, "Romantic Love and Sexual Jealousy, " in *Jealousy*, ed. Clanton and Smith, 101-109; see esp. 102.

9. David M. Buss, *The Dangerous Passion: Why Jealousy Is as Necessary as Love and Sex* (New York: Free Press, 2000). Buss synopsizes many of his findings in his article "Prescription for Passion," *Psychology Today* 33.3 (May/June 2000): 54-61.

10. Don J. Sharpsteen, "Jealousy," *Encyclopedia of Human Emotions*, ed. David Levinson, et al. (New York: Macmillan Reference USA, 1999), 2:413-18; see esp. 417. Sharpsteen immediately emphasizes, however, that at "higher levels . . . jealousy has the potential to become dangerous."

11. See, for instance, Gordon Clayton and Lynn G. Smith, "Introduction," in their anthology entitled *Jealousy*, 1-11; see esp. 7-9. See also Gordon Clayton and David J. Kosins, "Developmental Correlates of Jealousy," in *The Psychology of Jealousy and Envy*, ed. Peter Salovey, 132-45, esp. 141-43; Buunk, "Jealousy in Close Relationships," 149 and 172; and White, "Self, Relationship, Friends, and Family," 231-32. A good, brief overview of recent research can be found in the article on "Jealousy and Envy" by W. Gerrod Parrott in the *Encyclopedia of Psychology*, ed. A.E. Kazdin, 8 vols. (Washington, D.C.: American Pyschological Association, 2000), 4: 391-94.

12. Buss, 5.

13. Buss, 5-6.

14. Buss is the author of one of the first and most influential classroom textbooks in the field: *Evolutionary Psychology: The New Science of the Mind* (Boston: Allyn and Bacon, 1999).

15. For evidence of the trend toward emphasizing evolutionary perspectives in the study of society and psychology, see, for instance, W.G. Runciman, *The Social Animal* (Ann Arbor: University of Michigan Press, 2000), or Christopher Badcock, *Evolutionary Psychology: A Critical Introduction* (Cambridge: Polity, 2000). As his subtitle implies, Badcock questions the conclusions and emphases of some prominent evolutionary psychologists, but he typifies the tendency, even among critics of the field as it currently exists, to assume that *some* kind of evolutionary perspective is necessary, inevitable, and worth pursuing.

16. Buss, 4-5.

17. Buss, 100.

18. Buss, 102; see also 121.

19. Buss, 103.

20. Buss, 103.

21. Buss, 109.

22. Buss, 109.

23. Buss, 119.

24. Buss, 120.

25. Buss, 122.

26. Buss, 171.

27. Perhaps this startlingly high statistic is related to another empirical finding reported by Buss: that 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"(21). Buss immediately goes on to make the important point that none of these behaviors are rationally and consciously

calculated; instead, "women simply experience sexual desire when they are ovulating, and if they have an affair partner, have urges to have sex with him during this phase" (21).

28. Buss, 110. Strong support for many of Buss's claims about the universality of violent male jealousy can be found, for instance, in Margo Wilson and Martin Daly, "Till Death Do Us Part," in *Femicide: The Politics of Woman Killing*, ed. Jill Radford and Diana E.H. Russell (New York: Twain, 1992), 83-98. For a specific case study that comes to some of the same conclusions about the importance of jealousy, see Jacqueline C. Campbell, "'If I Can't Have You, No One Can': Power and Control in Homicide of Female Partners," also in Radford and Russell, eds., *Femicide*, 99-113, esp. 103-05. In the same volume, see also Sue Lees, "Naggers, Whores, and Libbers: Provoking Men to Kill," 267-88, esp. 268-69.

29. Buss, 112.

30. Buss, 128.

31. Buss, 124-125. For support of this contention, see Wilson and Daly, "Till Death Do Us Part," 83-85. See also Jill Russell, "Womanslaughter: A License to Kill: The Killing of Jane Asher," in Radford and Russell, eds., *Femicide*, 253-66, esp. 254-55. See also, in the same volume, Sue Lees, "Naggers, Whores, and Libbers," esp. 272, 279, and 282-84. On the double standard in the treatment of male and female adultery in the early modern period and the prevalence of righteous male violence, see, for instance, Margaret L. King, *Women of the Renaissance* (Chicago: University of Chicago Press, 1991), 42. Ralph A. Houlbrooke notes that in the early modern England, "Adultery was widely held to be a much more serious offence in the wife than in the husband. . . . Women for their part sometimes sought judicial separations for adultery as well as men, although far less often." See *The English Family: 1450-1700* (London: Longman, 1984), 116-17. However, for evidence of a comparatively lax English attitude toward adultery, see Alan Macfarlane, *Marriage and Love in England: Modes of Reproduction 1300-1840* (Oxford: Blackwell, 1986), 240-43. On the greater tendency of jealous husbands to kill wives, rather than vice-versa, in medieval England, see Barbara A. Hanawalt, *The Ties That Bound: Peasant Families in Medieval England* (New York: Oxford University Press, 1986), 208-09. For similar conclusions about early modern murder, and for evidence that the relatively few husband-killing wives were more harshly punished than the more numerous wife-killing husbands, see, for instance, Olwen Hufton, *The Prospect Before Her: A History of Women in Western Europe: Volume I: 1500-1800* (New York: Knopf, 1996), 56-57 and 194-95. Hufton concludes that in northwestern Europe during this period, "the husband was two to three times as likely as his wife to commit spouse murder" (294-95). A classic historical account of the widespread tendency to wink at male infidelity but to punish it severely in women is Keith Thomas, "The Double Standard," *Journal of the History of Ideas* 20 (1959): 195-216.

32. Wilson and Daly make the important point that in addition to the many murders of wives caused by jealous husbands, many male killings of other males result from conflicts over women, including "a man's taking offense at sexual advances made to his daughter or another female relative"; see "Till Death Do Us Part," 91. It is not entirely surprising, then, that at the beginning of the play Brabantio goes hunting after Othello with his sword in hand and a bunch of armed followers; more surprising, perhaps, is that he consents so readily to his eventual defeat.

33. Buss, 133.

34. Buss, 159.

35. Buss, 159.
36. Buss, 166.
37. Buss, 165.
38. Buss, 166.
39. Buss, 167.
40. Buss, 134.
41. Buss, 135.
42. Buss, 136.
43. Buss, 136.
44. Buss, 136.
45. Buss, 138-39.
46. Buss, 159.
47. Buss, 17.
48. Buss, 17.
49. Buss, 167-70.
50. Buss, 160.
51. Buss, 161.
52. Buss, 162.
53. Buss, 162-63.
54. Buss, 171.
55. Buss, 171-73.
56. Buss, 66-67.
57. Buss, 89.
58. Buss, 10-11.
59. Buss, 126.
60. Buss, 126.
61. Buss, 127.
62. Buss, 23.
63. Buss, 93.
64. Buss, 93-94.
65. Buss, 166.
66. Buss, 152.
67. Buss, 152-53.
68. Buss, 154.
69. Buss, 148-49.
70. Buss, 150.
71. Buss, 56.
72. Buss, 56.
73. Buss, 56-57.
74. Buss, 59.