

Sexual Economics: Sex as Female Resource for Social Exchange in Heterosexual Interactions

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A heterosexual community can be analyzed as a marketplace in which men seek to acquire sex from women by offering other resources in exchange. Societies will therefore define gender roles as if women are sellers and men buyers of sex. Societies will endow female sexuality, but not male sexuality, with value (as in virginity, fidelity, chastity). The sexual activities of different couples are loosely interrelated by a marketplace, instead of being fully separate or private, and each couple's decisions may be influenced by market conditions. Economic principles suggest that the price of sex will depend on supply and demand, competition among sellers, variations in product, collusion among sellers, and other factors. Research findings show gender asymmetries (reflecting the complementary economic roles) in prostitution, courtship, infidelity and divorce, female competition, the sexual revolution and changing norms, unequal status between partners, cultural suppression of female sexuality, abusive relationships, rape, and sexual attitudes.

Sexual activity is often regarded as among the most private of activities, negotiated by two individuals on the basis of their own individual desires and values. Idealistic treatments describe the two individuals as potentially equal and interchangeable. In this article, we place sexual negotiations in the context of a cultural system in which men and women play different roles resembling buyer and seller—in a marketplace that is ineluctably affected by the exchanges between other buyers and sellers.

In recent decades, two main theoretical approaches have dominated the field of sexuality. One of these emphasizes biological determinants, especially as shaped by evolutionary pressures. The other emphasizes social construction, especially as shaped by political forces. Both have proposed to explain differences between men and women. The evolutionary approach stresses the different reproductive strategies of men and women and the difference as to what pattern of sexual response would have led to the highest quality and number of

successful offspring. The social constructionist approach, generally based on feminist theory, has emphasized male subjugation of women and how women respond to their oppressed position in society. Thus, the disciplines of biology and politics have been most prominent in guiding how psychologists think about sex.

This article turns to a different discipline, namely economics, to elucidate a theory of sexual interactions. An economic approach to human behavior was defined by (subsequent) Nobel laureate Gary Becker (1976) as having four main assumptions. First, the behavior of individuals is interconnected in market systems in which individual choices are shaped by costs and benefits in the context of stable preferences. Second, scarce but desirable resources are allocated by price shifts and other market influences. Third, sellers of goods or services compete with each other (as buyers also sometimes do, but not as much). Fourth, people seek to maximize their outcomes. Although economists initially focused on material goods and material needs, many have begun to look at nonmaterial goods (such as services) and nonmonetary media of exchange (such as time or emotion). In adopting such an approach, our theory will therefore be primarily cultural in the sense that it looks at how individual behavior is shaped by the market and other aspects of the collective network, but just as economic exchange is based on what nature has shaped people to want and need, natural motivations

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and tendencies will provide a foundation for the sexual economy.

Although applying economic principles to sex may seem novel, psychology has invoked economic theories in other contexts. Social exchange theory has been used to analyze a broad range of social interactions (e.g., Blau, 1964; Homans, 1950, 1961; Sprecher, 1998), based on the assumption that each party in an interaction gives something and gets something in return. Analyzing the costs and benefits of various interpersonal behavior furnishes a useful basis for making predictions about how people will think, feel, and choose to act.

In our view, previous attempts to apply social exchange theory to sex have neglected one crucial aspect, which will be featured in this article. Specifically, sex is a female resource. Put another way, cultural systems will tend to endow female sexuality with value, whereas male sexuality is treated by society as relatively worthless. As a result, sexual intercourse by itself is not an equal exchange, but rather an instance of the man getting something of value from the woman. To make the exchange equal, the man must give her something else in return and his own sexual participation does not have enough value to constitute this. How much he gives her in terms of nonsexual resources will depend on the price (so to speak) set by the local culture and on her relative standing on valued sexual characteristics (see Table 1). When sex happens, therefore, it will often be in a context in which the man gives the woman

material gifts, consideration and respect, commitment to a relationship as desired by her, or other goods.

There are two main parts to this article. The first will consist of an extended exposition of the theory. We attempt to develop and elaborate the economic analysis of sex from an exchange perspective as thoroughly as we can, even extending to aspects and predictions that are not fully testable against extant data. The second section will then review published empirical findings about many patterns of sexual behavior, as a way of evaluating the exchange theory's capacity to account for what is known.

Social Exchange and Female Resource Theory

Social exchange theory analyzes interactions between two parties by examining the costs and benefits to each. Interactions are only likely to continue if each party gains more than it loses. Crucially, the exchange analysis assumes that in each social interaction, each person gives something to the other and gains something from the other (hence the exchange). The value of what is gained and exchanged depends in part on the preferences of the individuals and in part on the broader market. By applying economic principles to social rewards, one can make predictions about how social behavior will proceed. How much someone pays for a banana, for example, depends partly on that per-

Table 1. Factors Influencing Sexual Exchange

Factors	Effect on Price of Sex
Preconditions of market exchange	
In general, men want sex more than women want sex	
In general, men have resources women want	
Women are free to make sexual decisions	
The man and woman live in a culture in which information about others' sexual activities is known or hinted about, so that each person knows the current market price	
Individual factors	
Woman's age is past young adulthood	Lowers
Woman is unattractive	Lowers
Other women also want the man (competition)	Lowers
Woman has high sex drive	Lowers
Man has much higher status than the woman	Lowers
Woman lacks alternate access to resources	Lowers
Woman has had many prior sexual partners or has the reputation of having had many sex partners	Lowers
Woman is attractive	Raises
Woman is in young adulthood	Raises
Woman wears sexy clothing	Raises
Other men also want the woman (competition)	Raises
Man has high sex drive	Raises
Woman has had few or no prior sexual partners, or has the reputation of having few or no sex partners	Raises
Market factors	
Larger pool of women than men (supply exceeds demand)	Lowers
Permissive sexual norms (low market price)	Lowers
Men have easy access to pornography or prostitutes (low-cost substitutes)	Lowers
Larger pool of men than women (demand exceeds supply)	Raises
Female collusion to restrict men's sexual access to women (monopolistic manipulation)	Raises
Men have few opportunities for sexual satisfaction	Raises

son's hunger and liking for bananas, but also partly on the shifting balance between the local community's supply of bananas and its demand for them.

The central point to our social exchange analysis of sex is that sex is essentially a female resource. When a man and a woman have sex, therefore, the woman is giving something of value to the man. In that sense, the interaction is one-sided—unless the man gives the woman something else of comparable value.

Although the social exchange analysis will invoke a social system to explain sex and is therefore essentially a cultural theory, ironically its most famous advocate came from evolutionary theory (although Cott, 1979, developed a similar line of analysis in a feminist historical context). Symons (1979) observed that "Everywhere sex is understood to be something females have that males want" (p. 253). By "everywhere" he meant in all cultures and historical eras, although to be sure he only presented observations from a handful of these. Indeed, he offered relatively little in the way of empirical evidence for his theory, a deficiency that this article seeks to remedy (aided by the substantial amount of empirical data on sex that have been produced in the decades since Symons' book was published). Symons also did not find it useful to consider how economic theory might elaborate his basic observation. Nonetheless, his work deserves recognition for having put forth the observation that sex is essentially something that women provide and men desire.

Although not many others have explicitly discussed sex as a female resource, we believe that that view is implicit, though often unstated, in many writings. For example, Wilson (2001) recently published a widely influential sociological analysis of the decline of marriage in Western cultures, in the course of which he found it necessary to invoke unsupported assumptions such as "If the culture offers sexual access and does not require in exchange personal commitment, a lot of men will take the sex every time" (p. 15; although no sources or evidence were cited to back up this assertion). Later he speculated that if the government wanted to make marriages more durable, the most effective policy intervention would be to require that fathers retain custody of children after divorce, because this would reduce the men's ability to attract new sex partners—the implicit assumption being that divorces are caused because husbands but not wives leave their spouses to gain access to new, more exciting sex partners. In effect, this policy would reduce what the divorcing husband could offer another woman in exchange for sex. Thus, again, the view of sex as a female resource was implicit in his reasoning, but he did not have any scholarly basis for evaluating that view. Our hope is that an open statement and appraisal of the female resource theory of sexual economy can enable such analyses to have a strong, explicit basis in research findings, including frank recognition of its limi-

tations—and we think that would be preferable to relying on impressions and stereotypes, as many writers currently must.

Sex as Female Resource

A consideration of the cultural economy of sex goes beyond the simple recognition that men want sex from women. Insofar as that is generally true, the social network will recognize it and organize the behavior of individuals and couples on that basis. Treating sex as a female resource means that each culture (we define culture as an information-based social system) will endow female sexuality with value, unlike male sexuality. Women will receive other valued goods in return for their sexual favors. Male sexuality, in contrast, cannot be exchanged for other goods. Put another way, women become the suppliers of sex, whereas men constitute the demand for it and play the role of purchasers and consumers. Even though in one sense a man and a woman who are having sexual intercourse are both doing similar things, socially they are doing quite different things.

Thus, the first prediction based on the social exchange theory of sex is that interpersonal processes associated with sexual behavior will reveal a fundamental difference in gender roles. Men will offer women other resources in exchange for sex, but women will not give men resources for sex (except perhaps in highly unusual circumstances). In any event, the bottom line is that sexual activity by women has exchange value, whereas male sexuality does not. Female virginity, chastity, fidelity, virtuous reputation, and similar indicators will have positive values that will be mostly absent in the male (see Table 1). Put another way, it will matter more to the formation and continuation of a relationship whether the woman is a virgin than whether the man is; whether the woman engages in sex with another partner than whether the man does, and so forth.

Why a Female Resource?

Why would sex be a female resource? Symons's (1979) original answer focused on reproductive strategies shaped by evolution as the ultimate cause. In his account, the minimal male investment in parenthood is almost zero, whereas for a woman it is substantial. Therefore, he proposed, sex for a man is all benefit with little or no cost, whereas for a woman the potential cost (possible pregnancy, with pain and possibly death attending childbirth) is substantial even if the pleasure is quite high. The risk of high cost will be an incentive for the woman to hold back, and so the man must offer her some benefits to offset this. However, Symons also acknowledged (p. 261) that human beings do not necessarily care about these ultimate causes, and so the immediate psychological

factors that lead people to treat sex as a medium of exchange require further explanation.

A somewhat different explanation for why sex is a female resource can be deduced from motivational differences. Social exchange theory has featured the "principle of least interest" (Waller & Hill, 1938/1951). According to that principle, a party gains power by virtue of wanting a connection less than the other wants it. For example, Waller and Hill proposed that the person who is less in love has more power to shape and influence the relationship, because the one who is more in love will be more willing to make compromises and offer other inducements to keep the relationship going. If men want sex more than women, therefore, men would have to offer other benefits to persuade women to have sex, even if women desire and enjoy sex too.

Is it plausible that men desire sex more than women? A literature review recently examined the question of gender differences in sex drive by comparing men and women on behavioral indexes of sex drive (Baumeister, Catanese, & Vohs, 2001). On every measure, men were found to display greater sexual motivation than women. Specifically, men think about sex more often, have more frequent fantasies, are more frequently aroused, desire sex more often (both early and late in relationships and outside of relationships), desire a higher number of sex partners, masturbate more frequently, are less willing to forego sex and are less successful at celibacy (even when celibacy is supported by personal religious commitments), enjoy a greater variety of sexual practices, take more risks and expend more resources to obtain sex, initiate more goal directed behavior to get sex, refuse sex less often, commence sexual activity sooner after puberty, have more permissive and positive attitudes toward most sexual behaviors, are less prone to report a lack of sexual desire, and rate their sex drives as stronger than women. No findings indicated that women had a stronger sex drive than men on any measure.

Although certainly there are some women with high sex drives and some men with relatively low ones, these are exceptions, and moreover these exceptional types do not appear to form mismatched couples very often. Byers and Lewis (1988) found that half the couples in their large sample disagreed about sex at least once a month, and without exception all of the disagreements involved the man wanting sexual activity while the woman did not. Likewise, a large sample of couples studied by McCabe (1987) found that the category of partnered individuals who wanted sex but were not having it ("reluctant virgins") consisted almost entirely of men. Thus, the sexual negotiations of couples appear to center around the men's efforts to induce the women to have sex, and not the reverse.

The gender difference in sex drive applies both to new and established relationships. Therefore the prin-

ciple of least interest might predict that men would continue to give resources for sex throughout the relationship. Within established relationships, however, the rules of exchange may be blurred by several factors. In modern marriage, for example, resources are generally jointly owned by both couples, and so the woman already technically has claim to all her husband's resources. This limits what more he can offer her, thereby removing the basis for exchange or negotiation. Possibly her role is simply to give him enough sex to sustain the marriage. The exchange may also be concealed or complicated by other aspects of long-term marriage, such as declining sex appeal with aging and the reduced freedom of both spouses to seek other partners and thereby ensure that they get full market value.

A last perspective on why sex is a female resource would invoke the economic subjugation of women in society. In hunter-gatherer and subsistence farming societies, men and women already had separate roles and spheres of activity, both of which made vital contributions to survival. The development of a broader sphere of economic and political activity occurred mainly from the male sphere, however, and so as wealth and power were created in society, they were created by and owned by men, leaving women at a disadvantage (see Wood & Eagly, 2002). Sex was one of the few resources women had with which to barter for access to these new, social resources (and the material resources that often depended on the social resources). The social exchange surrounding sex may therefore be especially associated with cultures and periods in which women lack avenues other than being a supplier of sex for obtaining material and social resources.

The Local Sexual Marketplace

Most theories of sex have acknowledged that local norms exist to guide behavior, and even that people are curious to learn about the sex acts of others as a way of learning what those norms are. The exchange theory endows those norms with much greater power and importance, however. One crucial feature of the social exchange analysis is that all the sexual activities within a community are loosely interconnected as part of a sexual marketplace. Sex is therefore not entirely a private matter between two consenting adults. Rather, sex becomes part of an economic system, just as the sale of a house is not purely a transaction between two parties but is tied in to the local economy and housing market.

Stated this way, our analysis is compatible with recent dynamical systems approaches to gender differences in mate selection. A comprehensive article emphasizing emergent social norms during mate selection (Kenrick, Li, & Butner, 2003) noted that male and female mate selection does not occur in a vacuum but rather that men and women influence each other's sex-

ual choices. This reciprocal-influences approach is similar to our perspective, in which the local cultural marketplace influences the behavior of individuals, which in turn changes local norms and expectations, which cycle around again to influence individuals' behavior. Hence in our model, the local culture and the individuals therein affect one another in a recursive fashion.

The social exchange analysis emphasizes that sex is a female resource, so that men must offer women other resources in exchange for it. But how much? The price of sex (so to speak) may vary widely. To commence a sexual relationship with a particular woman, a man may have to offer her a fancy dinner, or a long series of compliments, or a month of respectful attention, or a lifetime promise to share all his wealth and earnings with her exclusively. This price is negotiated between the two individuals in the context of the prices that other, similar couples set.

Sexual norms thus constitute a kind of local going rate as to the appropriate price for sex. Across cultures and across different historical periods, the going rate may vary widely. Within a given community, however, it probably varies much less. Market forces will tend to stabilize this rate within a community (but not necessarily across communities). To illustrate, suppose a particular woman demands too high a price for sex, such as if she refuses to have sex until the man has promised to marry her and has given her an engagement ring. Her suitor may abandon her and turn his attention to another woman—but only if other women in the community will offer sex at a significantly lower price. If all the women in her community demand an engagement ring before giving sex, however, the man will be more likely to agree.

A related prediction is that a low price of sex favors men, whereas a high price favors women. Therefore men will tend to support initiatives that lower the price of sex, whereas women will generally try to support a higher price. Ideologies of "free love" (that is, sex unaccompanied by any other obligations or exchanges) will appeal to men more than women.

The price of sex is not restricted to money, of course. Our broad conceptualization of resources (as money, material gifts, respect, love, time, affection, or commitment) is consistent with arguments that women do not select their sex partners on the basis of material goods alone. A recent analysis (Miller, Putcha, & Pederson, 2002) noted that during much of humans' evolutionary history, people lived in small groups. Typically, a group of men brought back meat for the group and all the meat was shared. Miller et al. argued that this arrangement obscured individual hunting ability, and therefore women could not easily use gifts of material resources as a sign of long-term mate potential. With a broader conceptualization of resources, however, it would still be possible for a woman to de-

tect the desirability of individual men within her community because she could see how much attention, affection, or time each gave to her.

In short, we may regard a local sexual marketplace as a loose community in which men and women act as individual agents seeking to find an advantageous deal. Men will act like buyers who want to get good sex or plenty of sex without spending too much (in terms of time, effort, money, or commitment). Women will act like sellers who want to get a high price for their sexual favors. Each couple may negotiate its own price, but whether this price is a better deal for the man or for the woman depends on how it compares to the going rate within their community.

Because much sexual activity is conducted in secret, there is likely to be considerable ambiguity about what the actual norms are. Another prediction is therefore that men and women will seek to convey different impressions. Men would be likely to try to create the impression that many couples are having sex at a low price. Women are more likely to emphasize that sex is unusual outside of serious, committed relationships. Male conversation may feature and exaggerate sexual activity, whereas female conversation should conceal and understate sex.

Supply and Demand

The laws of supply and demand can be substantiated in all sorts of marketplaces, and there is no reason that sex should be an exception. With sex, the female resource hypothesis depicts that women constitute the supply and men constitute the demand.

Patterns of sexual activity should change drastically with the balance between supply and demand, such as the sex ratio. When the pool of eligible women (i.e., young, unattached female adults) is much larger than the pool of eligible men, supply can be said to exceed demand. The price will therefore drop, which means that men will be able to obtain sex without giving or promising much in return. In contrast, a shortage of eligible women relative to men means that demand outstrips supply, and so the price is likely to be high. Thus, contrary to any simple view that power in the marketplace depends on having a majority, the price of sex will tend to favor the minority gender. More precisely, men will give women more resources for sex when men outnumber women than when women outnumber men.

Another common result of shortages of desired goods is that low-cost substitutes become available. Prostitution and pornography may be regarded as low-cost substitutes for the preferred alternative of having sexual relations with a special, desired partner (e.g., Cott, 1979). The economics of the sexual marketplace would suggest that such low-cost alternatives will be targeted for men and to varying degrees will be

welcomed by men. In contrast, women should generally oppose them as if they represent a threat to women generally—which they do, in an important sense. Put another way, why should a woman care whether men in her community purchase pornographic materials and masturbate? But if pornography satisfies some of the male demand for sex, then it may reduce the total demand for her own sexual favors, and as a result the price she can obtain will be lower.

Assuming that most men would prefer to have sex with affectionate female partners (as opposed to prostitutes or by masturbating while watching pornography), the women in a community would potentially have a monopoly if they could band together to reduce competition among themselves. A rational economic strategy that many monopolies or cartels have pursued is to try to increase the price of their assets by artificially restricting the supply. With sex, this would entail having the women put pressure on each other to exercise sexual restraint and hold out for a high price (such as a commitment to marriage) before engaging in sex. Economic history suggests that such efforts, as in the case of Organization of Petroleum Exporting Countries (OPEC) are only intermittently successful and may often be undermined as individuals seek to underbid each other. Still, monopolies are sometimes sufficiently successful that most developed nations have found it necessary to enact laws against them. It would therefore not be surprising that economic self-interest would occasionally drive women to work together to restrain the availability of sex.

Competition Among Women

We have said that the sexual marketplace links together the negotiations and sexual activities of all the different couples and will tend to stabilize the price of sex. This process of stabilization will remain incomplete, however, except in rare or extreme cases. Usually the price of sex will vary somewhat within a community. Some women can command higher prices than others for their sexual favors. In this section we consider some of the factors that will contribute to these variations in price.

The more men desire any particular woman, the higher a price she can command. This is true in both senses of the word "more:" more men and stronger desire. Most obviously, her sex appeal will influence how much and how many men want her. An attractive woman can command a higher price than others. To some extent, this reflects the irrevocable facts of physical beauty. Still, beauty can be enhanced by clothing, makeup, dieting, and other factors designed to make her look good. These are again tied to the local culture and community, such that strategies for enhancing sex appeal in one culture might be counterproductive in another (Ford & Beach, 1951), and so the individual

woman will maximize her attractiveness by conforming to local norms and standards in which she is competing for male attention. A woman is analogous to an entrepreneur bringing a new product to market, and so enhancing appeal is a rational strategy. Advertising is also a viable, rational way to increase demand for one's product. Flirting, wearing sexy clothes, and in general creating the impression that sex with her would be especially pleasant and satisfying, would be economically sensible strategies for a woman to pursue.

The importance of stimulating demand helps resolve a seeming paradox that has spawned a long, ideologically complicated debate. Feminists have long objected, with considerable justification, to the fact that women who wear sexy clothes sometimes become the targets of male harassment (or worse). They assert that women should be permitted to dress however they please without attracting unwelcome male attention. Opponents point out that wearing sexually revealing or enticing clothes may convey an impression that some men might reasonably misperceive as indicating that she is sexually available. After all, they say, why dress in such a sexually revealing fashion if she does not want to attract sexual attention? The social exchange analysis makes it understandable that it is fully rational for a woman to seek to stimulate more male desire than she wishes to satisfy. By analogy, a house seller may want to have many different interested parties to bid up the price even though he or she ultimately can only sell a given house to one person. If men could be brought to understand this, they might recognize that a woman may dress in a sexy manner without it meaning that she wants to have sex with all of them or even with any particular one of them. Given her role in the sexual marketplace, she will rationally seek to get many men to desire her, but she does not want to have sex with most of them.

In fact, having sex with different partners would be a problematic strategy for a woman. As social exchange theorists emphasize, the value of any commodity rises and falls with scarcity. Even such fully renewable resources as praise can rise or fall in value as a function of how widely they are distributed (Blau, 1964; Jones & Wortman, 1973). A compliment may have only modest value from someone who praises everybody liberally, whereas the exact same compliment might have much higher value if given by someone who is perceived as rarely praising anyone. By analogy, sex would have high value if the woman has had few lovers or is known to be reluctant to grant sexual favors, whereas the same activity might have less value if the woman is reputed to be loose or to have had many lovers. The amount a man would be willing to give to have sex with the woman would therefore differ as a function of her (perceived) sexual history. In this respect, the woman's sexual favors are not a fully renewable resource and the woman will have some incentive to grant them only sparingly.

Thus, a woman's sexual favors lose value as she distributes them widely. In consequence, she has an incentive to be selective in her sexual partners and to maintain a reputation for having relatively few partners.

Put another way, a woman has two resources to consider. Actual sexual activity is a fully renewable resource, insofar as her ability to engage in sex is not heavily dependent on what she has done previously. In contrast, her reputation is a nonrenewable resource. A fully rational approach to social exchange would therefore cause the woman to care less about what she actually does than about what she is perceived by the community as doing. Whenever she engages in sex, she should seek to keep it somewhat secret and deniable, so that her reputation is that of someone whose sexual favors are highly exclusive and therefore of high value.

Men are far less constrained by these concerns, and so men would be more willing to admit and even exaggerate how much sex they have had. In fact, if low-cost sex represents a loss for the woman, it may be regarded as a gain for the man, and so the man who can boast of multiple lovers without incurring substantial costs (such as having had to marry each sex partner) may lay claim to high respect from other men.

As long as demand is high, competition among women may be confined to showing off one's beauty to best advantage and maintaining a good reputation for sexual exclusivity. When supply is high relative to demand, however, other forms of competition may become necessary. Derogating rivals would be an obvious strategy and this derogation would likely focus on the two main determinants of a rival's sex appeal, namely her attractiveness and her exclusivity. Hence women who wish to derogate other women would portray them as either unattractive or as having had many lovers. In contrast, the accusation of having had many sex partners would not be an insult between men.

Individual and Cultural Differences

Earlier we speculated that sex might be a female resource either for reasons of innate differences in sexual desire or in terms of cultural access to resources. For a woman with any positive sexual desire to refrain from sex can be regarded as irrational, insofar as she denies herself some pleasure, and economic theories loathe assertions of irrationality. However, such refraining becomes rational if she can gain other resources by holding back on sex so as to maintain a high price. In particular, if she lacks alternative means of access to desired resources, sex may become an important resource for her to use to bargain for them. In our view, it is likely that both the milder female sex drive and the lack of access to other resources contributed to creating the market economy for sex, but certainly there is ample room to dispute which factor should be emphasized.

These proposed bases for sexual exchange generate competing predictions that could potentially be tested against each other. If the exchange value of female sexuality arises mainly from the milder sex drive of women, then there should be fairly wide individual variations in the price of sex, as some women go ahead to enjoy themselves without asking too much in return from sexual favors whereas other women want a great deal before they engage in sex. By the same token, variations in male desire should also lead to wide discrepancies in how much a man is willing to invest to obtain sex.

Although these individual differences may produce variations in the price of sex, one should not expect them to have a large impact. The reality of the market should tend to stabilize the price of sex, and so the effect of individual differences will be to produce fluctuations around that standard price. For example, if Mary finds herself dating Jim and having more desire for sex than he does, we should not expect this couple to reverse the usual gender roles, so that she asks him out, pays for his food and entertainment, and brings him gifts, while he holds back and if necessary slaps her hand away. The community sets the gender roles based on the typical conditions in the market, including greater male desire. Put more simply, Mary's greater sexual desire may lead her to offer Jim sex at a significantly reduced price as compared to the average, but it does not seem likely to reverse the exchange so that she ends up giving resources to him.

Individual differences in sexual appetite and other factors may however become more prominent in long-term relationships in one sense: The role of the marketplace that unifies the entire sexual community may be muted. As we noted earlier, many factors may become intertwined in a long-term intimate relationship, as the couple accumulates shared experiences, commitments, jointly owned resources (which are therefore immune to exchange), and the like. They probably rely less on what the community in general is doing about sex and more on their own feelings and desires. Put another way, the difference between Mary's personal level of sexual desire and her partner Jim's may have only a minor impact when they are starting out, because the community norms are powerful, but 10 years into their marriage that difference may be one of the most salient determinants of their sex life and any exchange processes connected with it.

In contrast, if the main factor is women's lack of access to the valued resources in the male sphere, then cultural differences should outweigh individual (intra-cultural) ones. In some societies and some historical periods, women have had hardly any way to gain access to the highly valued goods created by men, including money, food, education, technological devices, and new products. In other societies, especially modern Western ones, women have been given all or nearly all

the rights and privileges that men have, so they do not need to trade sex as their only way of securing these resources. The price of sex may well vary substantially between such cultures, especially insofar as women can work together to restrict men's access to sex. In particular, in early hunter-gatherer societies, sexual economics may have operated in a much less effective manner, simply because there were relatively fewer goods around for women to gain by virtue of sex.

Although we do not have systematic data, our impression is that both individual variation and cultural variations in the price of sex are substantial. Hence for the present it seems most plausible to conclude that sex is a female resource both because of the average gender difference in sex drive and because women have sometimes relied on sex as a principal means of access to a culture's resources.

Additional Implications

Whereas competition between women is complicated by multiple factors, competition among men is relatively straightforward. As buyers in the exchange, men compete against each other simply by offering the desired woman more (i.e., a higher price) for sex.

Sexual decision making is likely to be more complex for the woman than the man. Faced with a suitor desiring sex, she may feel pulled in conflicting directions. Her own sexual desires, as well as the potential advantage to be gained over other women by underbidding (i.e., offering sex at a slightly lower price to attract the man she wants) would encourage her to consent to having sex without asking for much in return. Meanwhile her desire to get a good price for her sexual favors would counsel restraint, as would her concern over developing a bad reputation and thereby lowering her own individual market value. The man's role is not subject to such competing, contradictory forces, and so men may be able to decide easily, quickly, and consistently whether they desire sex with a particular woman or not.

At the broadest level, a particular couple's sexual negotiations may be linked not only to the sexual norms of the local community but to the socioeconomic position of women in society. In principle, sex is only one of several means by which individual women can obtain resources, but in many societies women's alternative options have been severely limited. When women lack educational, legal, occupational, political, and other economic opportunities, the price of sex may be a major determinant of each woman's lifelong well-being. This too can cut both ways. If sex is women's only ticket to the good life, then it becomes strategically important for women to maintain a high price. However, as individual women find themselves in desperate circumstances, many of them may find it necessary to offer sex relatively cheaply. Although these two

trends may seem opposites, they are probably separated by socioeconomic status. The majority of women, which in modern societies would be in the middle class, should lean toward restraint to ensure that they obtained a good value for sex, whereas the women at the bottom of the economic spectrum would be the ones who would periodically find themselves in circumstances where they considered it necessary to trade sex for whatever they could get.

The sexual importance of women's socioeconomic position in society suggests an important link between the social exchange analysis and feminist theory. Feminists have long treated it as axiomatic that men have sought to oppress and subjugate women, including denying women opportunities to participate freely in the economic activities of society. Indeed, many feminist analyses of sexual behavior (e.g., Brownmiller, 1975) suffer from reliance on the highly questionable assumption that men's treatment of women is motivated by a primary concern with power, with sex being secondary.

In contrast, the exchange analysis offers an explanation for men's pursuit of power over women while allowing the possibility that what men want from women is mainly sex. Men might assume (with some justification) that keeping women in an inferior, dependent position will lower the price of sex. Women who need money would probably be more willing to become mistresses, kept women, call girls, and the like, and by the same token they might be more willing to have sex to retain the interest of a man who is generous with gifts and meals. This strategy would be sufficiently correct to sustain itself. However, the irony is that depriving women of economic opportunities would cause the majority of women and the female community generally to try to sustain a high price for sex, and so at one level the strategy would backfire. Men might not recognize this, however, especially if the economic deprivation of women would result in a steady stream of poor women willing to offer casual sex at a low price.

Review of Empirical Evidence

Having elucidated the theory, we turn now to examine how well it can account for empirical findings. In each section following, the goal is to examine possible gender asymmetries in sexual behavior. Gender asymmetries that indicate men giving women resources in exchange for sex would be consistent with the theory. Those that indicate the reverse (i.e., women giving men resources in exchange for sex), or the absence of gender differences, would falsify it.

Inevitably, some findings can support more than one interpretation. We recognize that sexual behavior is complex and multiply determined. To prevent this article from becoming unworkably long and rambling,

we decided not to present every possible interpretation of every finding, although salient alternative explanations are noted occasionally. We have therefore restrained our presentation to focus on whether findings fit or contradict the social exchange analysis. Thus, our focus is not so much on whether social exchange theory can be proved right while other theories are proved wrong, but rather whether social exchange theory can provide a satisfactory explanation for existing findings and can survive tests of its falsifiable predictions. Also, obviously, the interpretations provided later are necessarily post hoc, because they apply a relatively new theory to previously published findings. If the economic theory can integrate a large and diverse assortment of findings, it would deserve further study and systematic testing.

Prostitution

The most obvious form of sexual exchange involves prostitution, in which one person gives another person sex in return for money. The exchange is thus overt. Clients of prostitutes sometimes assert that paying for sex is simply a more straightforward and less hypocritical version of what happens in courtship and mating (Loebner, 1998; Prasad, 1999). We might add that from the perspective of sexual exchange, the male client of prostitution gets a more certain return on his money, insofar as prostitutes are presumably less likely than other women to refuse sex after he has expended his resources—but perhaps the sex is of lesser value, insofar as prostitutes are not regarded as high-quality sex partners. Social exchange theory would hold that the very fact of their having had sex with many previous partners lowers the value of their sexual favors (see Table 1).

Consistent with the view of sex as a female resource, there is a severe gender imbalance in prostitution: The majority of prostitutes are women, and the vast majority of their clients are men. Male prostitutes do exist, of course, but their clients are almost exclusively men, and so they do not constitute evidence of women paying men for sex. In practice, hardly any man has much chance of supporting a drug habit or paying off his gambling debts by getting women to pay him for sex. Atchison, Fraser, and Lowman (1998) reported results from several multimethod searches for clients of prostitution, and they found only two female clients, both of whom had merely participated in a threesome with a boyfriend and a female prostitute. "We do not yet have a single instance of a woman reporting that she had purchased sex from a man" (p. 198), the researchers reported with disappointment.

A small partial exception was identified by Herold (2000), who reported that some Canadian women travel to the Dominican Republic and have sexual affairs with native "beach boys," affairs that are often ac-

companied by transfers of money from the women to the men. Yet even this exception supports the basic validity of the general pattern. Herold observed that the cash was almost never given in overt exchange for sex (as was typical when vacationing Canadian men had sex with local women). Instead, the (typically young) local man would pretend to fall in love with the (typically older) woman, and she would reciprocate his ostensible feelings, and then he would feign some family emergency or other financial need, whereupon she would give him money as an affectionate gift. Thus, the exchange of money for sex had to be camouflaged, consistent with the view that it violated the basic script by which men give women resources in exchange for sex. Moreover, the coupling is one that would not usually occur, in the sense that it pairs an older woman with a younger man of a different ethnic background. In that sense, women may occasionally pay men for sex (although camouflaging the transaction), primarily when the sex would not be available to the woman otherwise.

Thus, the social exchange theory is consistent with the broad facts of prostitution, although it cannot explain them all. It has little to say about homosexual prostitution. It is, however, quite consistent with the general pattern in which men give women money and get sex in return. Meanwhile, the "beach boy" data suggest that the exchange can work in reverse under unusual circumstances. By and large, the prostitution industry reflects the core principle of sexual exchange theory: Men give women resources in exchange for sex.

There are also some data on prostitution supporting the view that the price of sex is linked to women's general economic circumstances. First, despite the fact that modern, rich countries generally have more permissive sexual atmospheres, so-called sex tourism generally flows in the opposite direction: Men from rich countries travel to relatively poor ones, such as Cuba, southern Asia, and eastern Europe, for low-cost sex. The relative poverty of those countries entails that many women become motivated to engage in occasional prostitution to supplement their income, especially when relatively wealthy foreign tourists offer prices that are high in comparison to other financial opportunities.

Our theoretical exposition noted that when women suffer severe economic disadvantages, there are contrary forces, such that individual women may feel the need to offer sex at a low price to get whatever resources they can, whereas in such circumstances women generally need to maintain a high price of sex because it is their main opportunity to make a good life for themselves. Some historical evidence about Victorian society support that view. Across the society and especially in the large middle class, as is generally known, women maintained relatively high levels of

sexual restraint and virtue, and most couples did not begin having sex until they were at least engaged to be married. However, at the low end of the economic spectrum, many women had to turn to prostitution at some point. Bullough and Bullough (1998) reviewed multiple historical studies that calculated that between 5% and 15% of women in late 19th or early 20th century urban centers engaged in prostitution at some point in their lives. This is a shockingly high figure by modern standards. Evidence suggests that most of these women were not full-time regular prostitutes. More typically, perhaps, they had low-paying office or factory jobs or worked as domestic servants, and they would occasionally supplement their meager incomes by having sex for money.

Sex and Money Outside Prostitution

Outside of prostitution, the exchange of sex for money is typically somewhat disguised, but the influence can still be noted. A large study by Blumstein and Schwartz (1983) interviewed couples in detail about money, power, and sex, and there was some evidence that financial considerations influenced sexual behavior. In particular, women who lacked their own independent means of financial support (i.e., housewives) felt less able or less willing to refuse their husbands' sexual advances, as compared to other women.

An intriguing study by Loewenstein (1987) asked college students to put a cash value on various activities. In particular, they were asked how much they would pay for a kiss from their favorite movie star (presumably of the opposite, or at least desired, gender). The point of the study was to show the cash value of anticipation, which was confirmed by the finding that students were willing to pay more for a kiss 3 days from now than for either an immediate kiss or a long-delayed one. However, there was also a gender difference that supports the exchange analysis. Women were much less willing to offer any substantial amount of money than men (G. Loewenstein, personal communication, October 16, 2002). Thus, even with respect to kissing a celebrity, male sexuality commands much less value than female sexuality.

Infidelity and Divorce

Both men and women desire their partners to be sexually faithful to them, and sexual possessiveness and jealousy are found in all known cultures (Reiss, 1986). The social exchange analysis would, however, propose that there is a gender difference in implications. Female sexual infidelity involves giving away a precious resource that the husband wants for himself, whereas male sexuality has no inherent value, and so male infidelity would mainly be threatening to the wife insofar as it represents a possibility that the man may

give away other resources. Thus, the sex itself is more threatening in cases of female infidelity. Consistent with this, research on perceptions of men and women who engage in extradyadic sex has repeatedly found that women who do so are judged much more harshly and are seen as more guilty for their actions than men who engage in similar practices (e.g., Buunk & Van Driel, 1989; McClosky & Brill, 1983; Mongeau, Hale, & Alles, 1994; Thompson, 1983).

Throughout much of history, female infidelity has been punished more severely than male infidelity (Tannahill, 1980), which also fits the view of sex as a female resource. Penalties for female infidelity were often more severe than those for male infidelity, and in some cultures they involved having the interloper compensate the cuckolded man with money or goods (Bullough & Brundage, 1982). One might suggest that this asymmetry simply reflects greater male power, insofar as men make the laws and therefore might want to restrict female behavior while allowing men to do as they please. This suggestion has difficulty accounting for evidence that men mainly target other men with sex laws. Today, even apart from rape, predominantly male police forces who enforce sex laws passed by male-dominated legislatures end up arresting mainly men (Federal Bureau of Investigation, 1998). These facts directly contradict the view that the reason women are punished more than men for infidelity is to be found in a male conspiracy to oppress women while letting men misbehave. Men are fully willing to punish other men. The greater punishment of female infidelity may therefore reflect that it represents a greater violation of the marriage contract than male infidelity—because male sex has no inherent social value, and so a man does not give away anything of value to the couple by having sex with another partner, whereas a woman who has extramarital sex does give away something of value.

Even when cultures have some institutionalized arrangement for extramarital sex by women, female sexuality is still treated as precious. Flynn (1976) reported that in some Eskimo groups, when a husband has a male guest stay at his home, the husband may invite the guest to have sexual intercourse with his (the host's) wife. A refusal of this invitation constitutes a severe insult to the host couple, because it suggests that the woman was not of high enough quality to appeal to the guest. Thus, the sexual invitation was treated as an offer of a valued good, for which the guest was expected to be suitably grateful and appreciative. We have found no reports of the converse, in which women offer their husbands as sex partners to female guests and are insulted if the guests refuse. The asymmetry again suggests that female sexuality is valued by cultures in ways that male sexuality is not.

Some evidence that the physical aspect of infidelity is more central to female than male infidelity was provided by Buss, Larsen, Westen, and Semmelroth

(1992). Women objected more strongly to their partners forming an emotional attachment to another woman, whereas men objected primarily to sexual infidelity. Although subsequent findings have suggested some modification of these findings—men often are quite upset over emotional infidelity and women also seem distressed over sexual infidelity (Buunk, Angleitner, Oubaid, & Buss, 1996; DeSteno, Bartlett, Braverman, & Salovey, 2002; Harris, 2000)—men continue to object more than women to sexual infidelity by their partners, which is consistent with the view that female infidelity gives away an important resource in a sense that male infidelity does not.

The female resource analysis of infidelity receives converging support from recent findings by Wiederman and LaMar (1998) regarding the gender of the interloper. These researchers surveyed heterosexual people as to whether they would be more upset if their partner had sex with a man or a woman. The study was thus set up to detect differences in reactions to heterosexual versus homosexual activity by one's spouse, but that did not prove to be the decisive factor. Both men and women said they would be more upset if their partner had sex with a man than with a woman. This fits the view that, in sex, women give and men take. A male interloper takes something away from the couple in a way that a female interloper does not.

Infidelity sometimes occurs because the interloper seeks to replace someone's mate by inducing the person to leave the existing relationship and form a new partnership with the interloper. If sex is a female resource, then offering high-value sex would serve as a more effective inducement for female interlopers than for male interlopers. Recent findings by Schmitt and Buss (2001) support that analysis. They found that the most effective strategies for a woman to gain another's mate is for the woman to accentuate her own beauty (thereby making sex with her seem more valuable); to disparage the physical appearance of her rival; and (most relevant) to suggest, arrange, and provide the man with sex. Offering sex was much less effective as a strategy by which men might seek to steal another man's partner. Instead, male interlopers were more successful at poaching another man's woman if they concentrated on displaying resources, giving them to her, and developing an emotional tie (which is also a resource that women desire). These patterns fit the view that women contribute sex whereas men contribute material and other resources. Male sex again has no value, and so offering it to a woman does not constitute any inducement or incentive for her to change her behavior and switch partners.

A cross-cultural study of marital dissolution by Betzig (1989) revealed a widespread pattern of gender differences consistent with the social exchange analysis. Adultery was one of the most common grounds for divorce, being accepted in nearly half the 186 societies

in Betzig's sample. Some societies allow either spouse to divorce the other for sexual infidelity, but when only one gender's infidelity was sufficient grounds for divorce, it was far more often the woman's (54 cultures) than the man's (2 cultures). This asymmetry provides important support for the social exchange analysis. Infidelity has greater consequences for the integrity of the relationship if the woman engages in it than if the man does, confirming the notion that female sexuality has a higher exchange value than male sexuality and so giving it to an outside partner is more damaging.

Furthermore, Betzig (1989) found that some societies permitted divorce on the basis of a partner's refusal to have sex or of not being a virgin on the wedding day. In all cases, however, these cultures only recognized these as acceptable grounds for divorce if the wife was the one who refused sex or had had other partners. These patterns reflect the assumption that sex is something the woman provides the man rather than vice versa. Male virginity is treated as having no value, whereas female virginity raises the value of her sexual favors, and providing sex in marriage is regarded as a woman's but not a man's obligation. In contrast, women but not men were permitted to divorce a partner on the grounds of failing to provide other resources, including money, housing, food, and clothing. (The only exception was that in one culture, failure to provide food was a cause for a man to divorce his wife.) Thus, the woman's obligation to provide sex appears balanced against the man's obligation to provide resources for support.

Courtship

To the extent that sex is a female resource, courtship can be seen as a process by which the man seeks to persuade the woman to have sex with him. He may invest material and social resources in her, such as by buying her gifts, paying for her food and entertainment, spending time with her, and declaring himself willing to commit to having a long-term relationship with her. Even though the woman may desire and enjoy sex too, she will typically refuse sex until the man has invested a sufficient amount of resources (according to local norms and personal standards, which may vary widely). In essence, sex is something that she gives to him, and so he must first give her other resources in exchange. In many cases, the woman wants a committed, loving relationship in exchange for her sexual favors, and so she will withhold sex until that relationship has been established or at least offered.

In support of this analysis, an investigation of teenage girls' approach to courtship and dating found that love—or at least a declaration of love—was typically required before a girl would have sex. "Sex without at least lip service to love places the girl in danger of developing a [bad] reputation" (Wilson, 1978, p. 115).

Thus, the girl has to have reason to believe that the boy loves her before she can justify having sex with him. Notably, Wilson found that it is the other girls (not boys) who enforced this code, with girls regulating their social interactions to heighten the importance of this process. Hence, requiring love or declarations of love from a man before a woman will have sex not only wards off an unfavorable personal reputation for her but also upholds the standards of exchange across men and women more generally.

If sex is a female resource, then it will ultimately be up to the woman to decide when and whether sexual relations commence. This view of women as sexual gatekeepers was supported by Cohen and Shotland (1996), who computed correlations between when people thought sex should start in a given relationship and when they actually began having sex. For the hapless men, the correlation was not even significant ($r = .19$), indicating that their wishes and preferences were essentially irrelevant, whereas for women the correlation was very high ($r = .88$), indicating that sex occurred when they preferred. This study also found that men wanted sex to commence earlier than the women. Thus, women decide when sex commences, and the man's role is to invest time, money, attention, commitment, and other resources until the woman is sufficiently satisfied.

The asymmetry in courtship roles can be examined by studying cases in which one person fails to live up to the implicit bargain. Buss (1989) examined the complaints that men and women have about each other, and his results fit nicely with the social exchange analysis. Men reported the greatest anger and upset over women who accepted resources but failed to provide sex in return, such as the flirtatious woman who let a man spend money on her but then rejected his sexual advances. In these men's view, the woman deceived them by seeming to promise sex in exchange for resources but then reneging. Meanwhile, women were most upset and angry about men who seemingly offered a relationship but then reneged after they obtained sex, such as the man who pursued the woman with declarations of love but then abandoned her once his sexual desires were satisfied.

Anthropologists have studied cross-cultural definitions of attractiveness by gender and found asymmetries in the overall importance of attractiveness in a mate. Ford and Beach (1951) found that there was not a universal standard for beauty (except for cleanliness), but physical attractiveness—however it was defined by the society—contributed more to a woman's desirability than a man's (see Table 1). Undoubtedly both men and women prefer their sex partners to be attractive, but insofar as sex is a female resource, her appeal as a mate depends more on her looks than does a man's. In contrast, men appeal to potential mates on the basis of the resources they can offer (Buss, 1994), consistent

with the view that mating consists of an exchange of female sexuality for male resources and status.

According to the social exchange analysis, courtship is not just a purely private process between two individuals but rather is linked to other couples in the same marketplace. One source of support for this view was provided by a team of economists. Akerlof, Yellen, and Katz (1997) used mathematical modeling with time series analyses of national statistics on births and marriages. They specifically drew analogies between modern sexual practices in courtship and the industrial economy. When industrial technology changed the textile industry, some weavers benefited from the new technology, whereas those who stuck with the old hand-loom system suffered a loss of competitiveness and hence of revenue. Advances in sexual technology should have a similar effect, according to the reasoning of Akerlof et al. (1997).

Akerlof et al. (1997) proposed that advances in birth control and abortion benefited some women while simultaneously weakening the position of others. When neither abortion nor highly reliable contraception was available, premarital sex carried a significant risk of creating a baby. Therefore, to persuade women to have sex, men had to assume some of the risk by agreeing to marry them in the event of pregnancy. This male acceptance of risk was backed up by strong social pressures that pushed for so-called shotgun marriages if necessary. Then the birth-control pill reduced the risk of pregnancy, and abortion was liberalized and legalized. These developments greatly reduced the risk of unwanted childbirth. Many women embraced these advances and began to engage in relatively risk-free premarital sex. Some women, however, held moral, religious, or other scruples that prevented them from taking advantage of contraception and abortion. Crucially, however, men could now find women who were willing to engage in premarital sex without committing the men to assume part of the burden of risk. Hence the women who abstained from contraception and abortion found themselves in a greatly weakened position: Their risk of unwanted childbirth remained as high as ever, but to compete for men they could no longer insist on the protection of the shotgun wedding system. The choice was between taking all the risk on themselves or accepting a loss of competitiveness in the sense that they could not attract the same quantity or quality of male interest. As a result, many of these women engaged in riskier sex, and the rates of out-of-wedlock births rose sharply.

Thus, some women lost out in the sexual marketplace despite clear technological and legal advances that were designed to benefit women. It became possible to have sex with much less risk, and so many women did, but those who did not benefit from the technological advances had to compete under the new terms. The social trends seem paradoxical when taken

at face value: Abortion and improved contraception should reduce unwanted births, yet the rate of (often unwanted) out-of-wedlock births actually increased in the wake of these advances, and by a substantial margin. Akerlof et al. (1997) explained that throughout history, technological change has created both winners and losers. The new technology lowers costs for suppliers who embrace it (in this case, the women who used the birth control pill or legal abortion) and these costs are passed along to consumers (in this case, men benefited), whereas those suppliers who fail to adopt the new technology end up being significantly worse off than before. Recognition of the interlinked nature of these trends is valuable confirmation of the view that sex occurs in a kind of marketplace in which the activities of individuals and couples are widely interrelated.

Losing one's virginity is an important event in most lives, and it is highly relevant to this discussion because it signifies the commencement of adult sexual activity and therefore may be an especially important step and choice. Being a virgin has different meanings for men versus women. There are multiple ways to view one's virginity and studies suggest that women's virginity is viewed as having much more positive value than men's virginity. Research by Carpenter (2001) found that women were twice as likely to think about their virginity as a gift of oneself that is given to a significant partner, whereas men were three times as likely as women to view virginity as a stigma that should be discarded as soon as possible. Thus, women's attitudes reflected the view that their sexuality had value, whereas men did not have that self-view (see Table 1). Of particular interest was the fact that this pattern was confined to heterosexual activity: Lesbians were less likely to think of virginity as a gift. This confirms the view that the exchange value of sex is primarily located in heterosexual interactions.

Not incidentally, Carpenter (2001) found that the language of exchange was used quite frequently when virginity was framed as a gift, such that the "giver" seeks to find a "recipient" who will appreciate the value of what is being exchanged. According to Carpenter, who interviewed men and women about virginity and their perceptions of it, those who viewed virginity as a precious gift were "concerned primarily with finding partners who would appreciate the worth of their gift and, more important, reciprocate it with a gift of similar value (typically the recipient's own virginity or increased commitment to the relationship)" (p. 136). Thus, the language of exchange and the framework of gifting is used to describe women's but not men's virginity in the context of a heterosexual courting relationship.

Rape and Coercion

From a social exchange perspective, rape is akin to theft or looting, in that it takes sex from someone

against that person's will and without giving that person anything in return. Rape thus violates the rules of exchange. Thus, sexually coercive men are more likely than other men to view male-female interactions as exploitative in general, and they approach them by seeking to get as much for themselves as they can while giving as little in return.

Other findings suggest that rather than simply being a violation of fair exchange, some rapes (especially courtship and date rapes) may arise from discrepant perceptions as to what is fairly owed. Coercive men believe that using force to obtain sex can be justified in many cases, such as if the couple has been dating for a period of time (so that the woman "owes" the man sex in return for his investment), or if the woman has led the man on (Kanin, 1985). Along these lines, narcissistic men, who have an inflated sense of deservingness and therefore have higher expectations that others will give them what they want, are more prone than other men to engage in sexual coercion (Baumeister, Catanese, & Wallace, 2002; Bushman, Bonacci, Van Dijk, & Baumeister, 2003). Indeed, most empirical findings about rape fit a model that suggests that some men resort to force to obtain sex when their expectations for sexual pleasure have been thwarted (see Baumeister et al., 2002, for review). Deservingness clearly implies a sense of fair exchange: Sexually coercive men often feel that they are being denied what they rightfully deserve and many therefore feel justified in taking sex.

Our analysis should in no way be construed as excusing sexual coercion, and we roundly condemn any such acts. The exchange analysis helps make clear how such a heinous act can occur in what could otherwise be a positive, romantic context. Though rape resembles stealing, it may be regarded by the perpetrator—on the basis of distorted and morally repugnant but subjectively compelling cognitions—as stealing something that is rightfully his, not unlike a man who uses a gun to rob a store that he feels has cheated him in a previous transaction.

As with prostitution, there is a well known asymmetry between men and women with regard to sexual coercion: Men are much more likely to use force to obtain sex. The difference is most pronounced at the higher levels of force. Federal Bureau of Investigation statistics reveal that 99% of the arrests for rape and sexual coercion are of men (Federal Bureau of Investigation, 1998). To be sure, recent findings indicate that women do sometimes pressure men into sex as well, and so the asymmetry in arrest statistics could conceivably reflect prejudices or biases of the law enforcement officers, but sexual coercion of men by women tends to involve the less violent forms of pressure (Anderson & Struckman-Johnson, 1998). Moreover, an asymmetry in victims' reactions supports the view that sex is a female resource. Male victims of sexual coercion by women typically report far less distress or trauma, and they are

more likely to look back on the incident as minor and unimportant (even if distasteful), as compared with female victims of male coercion. In an important sense, the male victims seem less prone than female victims to feel that they have lost something of value—consistent with the view that sex is not a male resource.

Cross-cultural comparisons of rape rates, though methodologically problematic because of variations in definition and reporting, also lend some support to the analysis of rape in terms of sexual economics. As we have said, exchange of sex for other goods is presumably most important in societies where women have little else to use for access to society's goods, and this should be most pronounced when women contribute little to the economy. Sure enough, such societies have the highest rates of rape (Schlegel & Barry, 1986).

An extreme version of the social exchange analysis would insist that women would never rape or sexually coerce men. Clearly this would be false. A milder version thus holds simply that female coercion of male victims lacks an important dimension, namely theft of the resource, and so the trauma and victimization are less severe.

Mate Shortages

The supply and demand for sex are affected not only by local norms but also by the availability of mates, which varies among different cultures and societies. In monogamous societies, marriage by definition involves one man and one woman. If the population does not have equal numbers of men and women, then whichever gender is in oversupply will find itself at a disadvantage in the mating process (see Table 1). Probably anyone who has attended a school with a significantly unequal sex ratio can attest to the social advantages that accrue to being in the minority gender and hence having a larger pool of eligible partners. If the social exchange theory of sex is correct, then women constitute the supply of sex, and so the price of sex will rise when women are scarce and will drop when men are scarce.

A well-known study of sex ratios by Guttentag and Secord (1983) found that sexual norms fluctuate in tandem with the relative proportions of men and women. Their findings lend valuable support to the view that sex is a female resource. They found that when women are in the minority and hence can dictate the terms of romance, the price of sex is relatively high. Shortages of women (such as in the Wild West or in modern-day China) produce relatively prudish societies in which premarital and extramarital sex is relatively rare. In contrast, when there is an oversupply of women relative to men (such as following a major war or in some low-income minority communities today), women are unable to expect much in exchange for sex and instead a permissive sexual climate allows extramarital and

premarital sexuality to flourish. Put another way, the price of sex rises and falls in tandem with the sex ratio in a way that indicates that women constitute the suppliers of sex—precisely as the female resource hypothesis asserts.

Wilson (2001) remarked on one curious difference between communities in the American west during the 1800s, both of which had severe shortages of women. The White American community put women on a pedestal, to the extent that ranch hands would maintain a respectful silence in the presence of a married woman. Women in this community were able to obtain respect, commitment, and access to a high standard of living (via marriage) in exchange for sex. In contrast, the Chinese laborers in the American west put nearly all the women who immigrated with them into work as prostitutes. According to Wilson, the crucial difference was that the Chinese community was rigidly dominated by all-male secret societies who were able to dictate the fate of the individual woman. From the perspective of economic analysis, the difference can be explained as that between a free and an unfree market. In the White community's unregulated sexual marketplace, women could obtain the advantages of their own scarcity, but in the centralized command economy of the Chinese immigrants, women were prevented from doing so.

Subsequent work has provided converging evidence on the influence of sex ratios on the sexual economy. In two studies of women's clothing fashions spanning 1885 to 1976, N. Barber (1999) found that skirt length covaried with the sex ratio, such that women wore shorter skirts when there were fewer men. Short skirts were also linked to high divorce rates (which also indicate higher female competition for men). Wearing short skirts is analogous to advertising one's wares, as a way of stimulating demand for one's product. It fits the economic analysis to suggest that sellers advertise more aggressively when demand is low.

A cross-cultural survey of 185 countries showed that teen female pregnancy rates (which control for the number of women) are higher when men are relatively scarce (N. Barber, 2000). This pattern may seem paradoxical. Having sex with a man is the principal means by which a woman can become pregnant, and so one might assume that each woman's likelihood of pregnancy would be reduced as there are fewer and fewer men around. Instead Barber found it increased. The most likely explanation is that when men are scarce, women compete against each other by offering sex at a lower price in terms of commitment. This results in a more permissive sexual climate and an increased rate of pregnancy.

Taken together, these findings fit the view that women act in a more sexually accessible manner and offer sex at a lower price in terms of male commitment when there is a shortage of men. To be sure, these findings are correlational, and in principle they cannot rule

out other causal interpretations, such as that short skirts cause men to die off or leave the country, thereby changing the sex ratio—but these seem a priori less plausible than the view that sex is a female resource, the price of which rises and falls with market fluctuations in supply and demand.

Research into sex ratios yielded another relevant asymmetry. Guttentag and Secord (1983) noted that some cultural customs link marriage to payment of a dowry, whereas others invoke the bride-price (also called bride-wealth). Not surprisingly, dowries (paid by the bride's family) were found to be more common in societies that had shortages of men, whereas bride-prices (paid by the groom's family) were more common when women were scarce. In that sense, the flow of money adjusts to the sex ratio to compensate for shifts in supply and demand. The two customs are not quite parallel, however, as Guttentag and Secord noted. The bride-price is a sum given by the groom's family to the parents of the bride, as if they were purchasing a woman for their son. In contrast, the dowry is given by the bride's family to the young couple rather than to the groom's parents, to help them get started. The difference reflects an implicit judgment that male sexuality cannot be "purchased" because it does not have any value. Only female sexuality can be purchased, because sex is a female resource. In other words, regardless of an advantageous sex ratio, a family cannot make money by selling its sons, but it can sometimes make money from selling its daughters—consistent with the view that only female sexuality has exchange value.

Sexual Attitudes

Social exchange theory makes a series of predictions about gender differences in sexual attitudes. First, we proposed that a low price for sex should favor men, because men are the ones who pay the price. Consistent with this view, many studies have found that men hold more favorable attitudes toward casual sex than women. (Casual sex is defined as sex without commitment or other exchange, and so it is an important form of low-cost sex.) A meta-analysis by Oliver and Hyde (1993) found that attitudes toward casual sex were one of the two largest and most consistent gender differences. Thus, a drastic reduction in the price of sex is much more appealing to men than to women.

Behavioral confirmation of this difference was provided by Clark and Hatfield (1989). In this widely cited pair of studies, confederates approached attractive members of the opposite sex on a college campus with one of several offers, the most relevant of which consisted of an invitation to have sexual intercourse that same evening. Three fourths of the male participants assented to that request, whereas not a single female participant did. This study is often cited as evidence of greater male promiscuity, but strictly speaking it was

not a measure of promiscuity, because it involved only one partner. It does however indicate that men were much more willing to have casual sex than women. From the economic analysis, the offer of intercourse constituted a proposal for no-cost sex. The remarkably large asymmetry in responses (75% vs. 0%) is consistent with a strict differentiation between gender roles, comparable to that between buyers and sellers of any product. A suggestion that automobiles should be free, for example, would probably elicit a similar discrepancy, such that nearly all car dealers would say no whereas nearly all buyers would be in favor. Thus, this finding fits the view that in sex, women correspond to sellers and men to buyers.

Widely held attitudes are quite often conveyed in the language that people use, and discussions of sex in North America provide supportive evidence for sex exchange. If men's goal is to obtain sex, then their discussions about sex are likely to be detailed and involved. Conversely, if women are more focused on gaining other benefits such as money, time, or commitment (but not sex), then women would be less likely to talk in a detailed and involved manner about sexually relevant topics. For instance, men have been shown to associate words with intercourse that were focused on the physicality of sex, such as breast and vagina, whereas women have been shown to associate words with intercourse that are focused on relationship and intimacy, such as love and marriage (Robinson, Balkwell, & Ward, 1980).

Evidence on discussions of men and women's genitals also supports the sex exchange idea, with men's genitals being more openly (and less euphemistically) discussed than women's (Braun & Kitzinger, 2001). Women's vaginas, it seems, are especially taboo, with one study of women and their gynecologists demonstrating that the word vagina (or its synonyms) is hardly used even during medical visits (Weijts, Houtkoop, & Mullen, 1993). Ussher (1989) and other researchers (e.g., Braun & Kitzinger, 2001) noted that the euphemisms used to describe women's genitalia do so in such a way as to communicate the value of women's body parts as sexual objects from the perspective of a heterosexual male.

Attitudes toward prostitution and pornography may also be relevant to the economic analysis of sex. A feminist historical analysis by Cott (1979) proposed that Victorian women sought to curtail sexual activity to maintain a high price—and that this lack of men's sexual opportunity resulted in increases in prostitution and pornography because they served as more readily available, low-cost alternatives to the preferred form of sexual gratification. Cott also proposed that Victorian women correctly perceived prostitution and pornography as a competitive threat to their market position and therefore were opposed to them. Cott's analysis is entirely consistent with the social exchange approach,

and it would predict that women in many different eras and places would have the same opposition to low-cost competition (see Table 1). Consistent with her views, 19th-century women were much more supportive than men of the so-called Social Purity movements and other campaigns that campaigned against prostitution, such as by trying to persuade women to renounce their work as prostitutes in favor of other occupations (Wal-kowitz, 1980; see also D'Emilio & Freedman, 1997).

Recent data confirm that women are generally more opposed than men to prostitution and pornography. A statistical sourcebook published by the U.S. Department of Justice (1987) found women disapproved of showing X-rated, sexually explicit films at a much higher rate than men (51% to 34%). Women were also more likely than men to advocate a ban on renting X-rated sex videos (43% to 29%). Likewise, a survey of college students found significantly greater opposition to pornography among women than men (Lottes, Weinberg, & Weller, 1993). In another survey using a national sample, women generally expressed greater opposition than men to nudity in movies (Weiss, 1991).

To be sure, the roots of these attitudes are complex, and understanding their meaning is further complicated by ideology and perhaps rationalization. Some feminists have claimed that prostitution and pornography are inherently degrading or exploitative to women, although these views have been disputed as inconsistent with the fact that nearly all the money comes from men (which would suggest that in economic terms it is men who are exploited, if not degraded; see Loebner, 1998). Our economic analysis can offer some support to the feminist view, however, because it can offer an explanation for the one-sided analysis that otherwise limits the plausibility of saying that pornography degrades women. That is, if an erotic film depicts a man and a woman engaging in sexual intercourse as equals, why should this be degrading to the woman but not to the man? But if sex is a female resource, then a filmed scene of heterosexual intercourse is essentially a depiction of a man getting something from a woman. If there is no implication that he gives her something else in return, then the implication is that her sexual favors command a very low value, which would effectively de-grade her, as the feminist complaint suggests.

Prostitution is likewise opposed more strongly and consistently by women than men. In one survey, over two thirds of women but less than half of men expressed the view that prostitution is always wrong (Klassen, Williams, & Levitt, 1989). Conversely, three times as many men as women said that prostitution is not wrong at all. Again, this fits the social exchange theory's view that sex is a female resource and prostitution is a low-cost alternative that may siphon off some degree of male demand, thereby reducing the non-monetary price that the average woman can obtain for her sexual favors. Prostitution increases the options of

the man, as buyer of sex, but it undercuts the price of the high-quality sellers, namely women who are not prostitutes (see Table 1).

Prostitution is chiefly a female occupation, and so the transactions involve men giving women money, and in countries where prostitution is legal the woman can keep most of the money. In that sense, legalizing prostitution would seem to benefit women, whereas when prostitution is outlawed women must often pay much of their earnings to illegal sources of protection, with the result that much of the women's earnings end up in male hands. There are not many theoretical bases—apart from the economic resource theory of sex—that can offer an explanation for how women in general would benefit from prohibiting a highly remunerative career option for unskilled women. There are even some data to suggest that legal prostitution reduces sex crimes, thereby making women in general somewhat safer from victimization (R. N. Barber, 1969). (Crimes against the prostitutes themselves are indisputably more common when those women work outside the law.) Thus, one might expect that financial self-interest would cause women to be outspoken supporters of legal prostitution, but in fact they are not. Women's opposition to prostitution may therefore be most plausibly understood on the basis of the sexual economy and theory of sex as a female resource. Further research may be desirable to tease apart different possible explanations for the female opposition to prostitution and pornography, but at present the data are consistent with the social exchange analysis.

Sex as Benefit

If sex is a female resource, then men will be more likely than women to regard obtaining sex as a positive benefit. A relevant study by Sedikides, Oliver, and Campbell (1994) surveyed young people about the costs and benefits of romantic relationships. Consistent with the social exchange view, they found that men were more likely than women to describe sex as a benefit of participating in such relationships. In fact, women generally did not rate sex as a benefit at all. Thus, although romantic relationships yield sexual satisfaction to both men and women, only men regard it as one of the principal benefits of such relationships.

Women did not rate sex as a cost in the Sedikides et al. (1994) study either. In other words, sex was a benefit for men but neither a cost nor a benefit to women. This must be kept in mind, lest one exaggerate the dimensions of social exchange. Women certainly desire and enjoy sex too, especially within relationships. The principle of least interest is relevant: Both men and women desire sex, but because sex is more readily available to women and hence not a scarce good, they are less likely than men to perceive it as an important benefit of relationships.

Converging findings were obtained in data on cross-sex friendships. Men reported that having sexual access or the potential for sexual access to their female friends was a high-ranking benefit of having cross-sex friendships (Bleske & Buss, 2000). Women, conversely, did not consider the possibility of sexual activity with a male friend constituted an important benefit of cross-sex friendships. Furthermore, when only one member of a cross-sex friendship became romantically attracted and was willing to have sex, only male partners took advantage of this opportunity to have sex, consistent with the view that the female offer of sex was itself quite appealing whereas a male offer of sex has little or no value.

Similar to the data on cross-sex friendships, research on unrequited love has found that targets of unrequited love (i.e., rejectors) generally reported almost no positive aspects to the experience of being loved (Baumeister & Wotman, 1992). There were, however, some indications that male rejectors would sometimes engage in sexual activity with the women who loved them, even if the men did not want to pursue a relationship any further. In contrast, female rejectors did not seem to perceive being loved as an opportunity to engage in sex. This asymmetry is again consistent with the view of sex as a female resource, because the availability of a sexually willing but otherwise undesired partner has asymmetrical appeal: Men will sometimes exploit it to obtain sex from women, but women do not act as if they would gain anything by having sex under the same circumstances.

Sexual Experiences as Source of Prestige or Disgrace

According to the social exchange analysis, the woman gives sex and the man gets it. Accumulating a large number of sexual experiences may therefore amount to a positive, impressive tally of gains for the man, whereas for the woman it lacks that dimension. For a woman, it may even come to seem unappealing to have had many partners. Social exchange theorists have emphasized that social rewards tend to lose value as they are given out more widely (Blau, 1964). For example, praise has relatively little value coming from a person who praises everyone frequently, whereas identical praise from someone who rarely gives praise would have much more impact. Hence, to maximize the value of one's praise, one should give it only sparingly. By the same token, a woman would have an incentive to maintain the high value of her sexual favors by distributing them only sparingly.

Consistent with this analysis, a multiplicity of sexual experiences has long had different implications for men and women. Men who have had sex with many women have gained status and were admired by other men. Women who had sex with many men typically

lost status and were derogated, even despised by other women (see Table 1). In many cultures, women sought to preserve their virginity until marriage, and nonvirgin women were perceived as less desirable mates or even as unworthy of marriage (Betzig, 1989). In contrast, male virginity has not generally been valued by most societies and cultures.

Although virginity has lost much of its allure in modern Western cultures, the asymmetry of status implications from sexual experiences remains in force to some extent. In a survey of people's motives for engaging in casual sex, Regan and Dreyer (1999) found that men were significantly more likely than women to claim that they gained status and prestige in the eyes of their peers by having such brief sexual encounters. Women hardly ever reported that brief sexual experiences enhanced their status or prestige.

Converging evidence comes from the legal system. The concept of an age of sexual consent entails that a person below that age is legally unable to agree to have sex, and so if that person engages in sexual intercourse it is rape. Though in recent years there have been occasional uses of this law to prosecute adult women who have sex with boys, both the historical record and the modern applications overwhelmingly restrict it to adult men who have sex with underage girls. According to Friedman (2002), the age of consent in British common law remained at 10 for many centuries, but around the beginning of the 20th century American states raised it, usually to 16 or 18. As Friedman explained, "This meant that, when two teenagers had sex, the male was by definition a rapist, the female by definition a victim—even if they both were completely willing or even eager to do the deed" (p. 99). This asymmetry is quite revealing, because it is incompatible with any view of sex as an act shared between equal partners: Even though both the boy and girl agree to have sex, the female is legally a victim and the male a criminal, consistent with the view that by sexual intercourse he takes something of value away from her. Although some may deplore the inequality in legal attitudes toward the two genders, we think that this set of laws simply shows that the legal system too has recognized that sex is a female resource. The culture sees the need to protect girls from having their valuable resource infringed on, whereas the sexuality of boys does not have exchange value in the culture and therefore does not require legal protection.

The difference in status implications may be relevant to one of the enduring paradoxes of sex research, which is the inequality in tallies of sex partners. In a population with equal numbers of men and women, the mean number of heterosexual partners must be the same for both men and women. Yet almost every study has found that men report more sexual partners than women (e.g., Janus & Janus, 1993; Laumann, Gagnon, Michael, & Michaels, 1994). Recent studies seeking to

unravel that paradox have concluded that men and women count differently: Men estimate and round up, whereas women enumerate and omit some (Brown & Sinclair, 1999; Wiederman, 1997), and men are more likely to count borderline cases such as oral sex (Sanders & Reinisch, 1999). These different strategies probably reflect different motivations, insofar as men desire to report a high tally and women desire to report a low one, and so each gender selects a mode of counting that gives it the sort of result it prefers. In short, men want to report a higher number than women, which fits the view that a high number of sexual experiences has more positive implications for a man's status than for a woman's.

Aggression Between Women

The sexual exchange analysis emphasizes that the value of a woman's sexual favors, relative to her rivals, depends on two factors, namely her physical attractiveness (or other signs that she would be a satisfying sex partner) and how widely she has distributed them. The highest value would be commanded by a very attractive woman with minimal sexual experience. Moreover, women compete against each other, and if a woman cannot improve her own attractiveness or reputation, she can disparage those of her rivals.

Among men, competition for women sometimes leads to overt physical aggression, but indirect forms of aggression are more common among women. Chief among these are efforts to derogate a rival by spreading rumors and gossip about her. The most common content of these aggressive, derogatory rumors consists of the two dimensions we have identified, namely derogating the rival's appearance and asserting that the rival has had many sexual partners. In fact, when antagonism among women does lead to physical aggression, it is most often preceded by such comments, with the most common insult being an accusation of sexual impropriety and another common one involving derogation of the rival's physical attractiveness (Campbell, 1995). In contrast, fights between young men are almost never preceded by accusations of promiscuity. Moreover, the competitive impetus for such aggression is evident from the finding that female-female aggression is more common when there is a relative shortage of available men (Campbell, 1995) and in conditions under which women are economically disadvantaged (Campbell, Muncer, & Bibel, 1998), both of which increase the pressure among women to compete earnestly to attract a desirable man.

Unequal Status

Social scientists have long observed two seemingly contradictory patterns in human mating. One is assortative mating, according to which people end up with

partners similar to themselves. For example, spouses show relatively high correlations in intelligence, physical attractiveness, and other qualities (Jensen, 1978; Murstein & Christy, 1976). This trend toward matching is partly offset, however, by the so-called marriage gradient (e.g., Bernard, 1982), by which husbands typically outrank their wives on various measures of status, including socioeconomic background, education, age, and income. It is tempting to dismiss the marriage gradient as simply an artifact of the pattern that men have higher status than women generally, but actually the marriage gradient is greater than that difference, as evidenced by the fact that high-status women and low-status men tend to be left out and have considerable difficulty finding partners (Bernard, 1982). If the gender difference in status fully explained the marriage gradient, then the two genders could match up perfectly, with no one left out of the marriage market. But it does not.

The marriage gradient can be explained on the basis that sex is a female resource. In that view, if a man and a woman were perfectly equal in all respects and went on to engage in sexual intercourse, the result would be inequitable, because the sex itself is a contribution of the woman that is not matched by anything from the man. Hence the man must normally contribute something more than the woman. If he brings higher status to the relationship, this could compensate for her contribution of sex.

The status differential is not confined to marriage and may even be more marked in short-term sexual relationships. At the extreme, groupies are able to interact with celebrities whose status is so far above that of the groupies that the two would not normally have any chance for interaction—except that if the female groupie contributes sex, the male celebrity will be willing to spend time with her (e.g., Des Barres, 1987). Although both men and women often fantasize about having sex with celebrities, actual opportunities are heavily asymmetrical, consistent with the female resource view of sex. That is, male fans of female celebrities have almost no opportunity to interact with them, whereas female fans of male celebrities can obtain attention, interactions, and in some cases even relationships by offering sex (see Table 1).

Anna Kournikova, a female tennis star who is widely regarded as one of the most attractive tennis players, recently commented that although she has many would-be suitors, few are qualified to date her: "I'm like an expensive menu. You can look at it, but you can't afford it" (Newsweek, April 30, 2001, p. 23). Thus, because Kournikova is a woman with high status and attractiveness, most men cannot provide the commensurate benefits. Male sport celebrities would not likely make the same comment, and some of them are far more open than Kournikova toward sharing their bodies with their admirers. At the extreme, basketball

star Wilt Chamberlain claimed that he had sex with 20,000 women (see Baumeister & Tice, 2000), and even if that figure is somewhat inflated, it is apparent that he was far less choosy than Kournikova.

Kournikova's anecdote brings up the broader issue of sex with athletic stars. An HBO special program called "Playing the Field: Sports and Sex" (December 26, 2000) made clear that being a sex symbol is a central part of sports stardom for both men and women. The athletes' attitudes differed by gender, however. The female athletes objected to sexual attention. They resented that male fans came to games to look at their legs and that some promoters wanted them to wear sexy outfits. They complained about how the pretty athletes attracted more attention even if they did not win the competition. They thought that Brandi Chastain's celebratory ripping off her shirt after winning the World Cup soccer shootout should not have been considered sexual. In contrast, male athletes were quite comfortable with their sex appeal status. They spoke with pleasure about how women sent them flowers with female undergarments entwined in the bouquet, how women were always available, how an athlete could have sex before and after every game. Instead of objecting to being seen as sex objects, they seemed quite happy about what they portrayed as a permanent low-key sex orgy throughout their careers.

Although the HBO report is journalism rather than science, its findings suggest that the same phenomenon (athletic success bringing sexual attention) elicits opposite reactions from men and women. Both patterns and their oppositeness make sense if one assumes that sex is a resource that women give to men. The sports stars perceive that they contribute to the fans by their efforts on the playing field. For men, to be offered sex in return seems an appropriate reward. For women, being asked for sex in addition to athletic performance seems like an unfair and excessive imposition.

Sadomasochistic relationships provide further converging evidence of sex in the context of unequal status. Both men and women engage in relationships characterized by enacting scenes of unequal power, with one person dominating the other by means of symbolic actions, speech, bondage, and physical chastisement. In a comparison of male versus female masochism, Baumeister (1988) found a rather large difference in frequency of genital intercourse: Most female submissives had intercourse with their dominant male partners, but only a small minority of male submissives had intercourse with their dominant female partners. Other observers have also noted this difference (e.g., Scott, 1983) and recorded that participants explain it on the basis that it somehow feels inappropriate for the male submissive to penetrate his dominant female partner. The asymmetry in intercourse seems most consistent with the social exchange analysis. Women give sex to men, so genital intercourse is consistent with female

submission but not with male submission, because the latter would imply the dominant giving herself to the submissive and thus would contradict the symbolic meaning of the scene and relationship.

Cultural Suppression of Female Sexuality

Many cultures have sought to control and stifle female sexuality. Typically, a network of informal pressures has been directed at young women to refrain from sexual activity and even to avoid enjoying sex. In some instances, these informal pressures have been augmented by overt sanctions and interventions, the most extreme of which are probably the surgical practices that remove the clitoris or impair the vagina so as to curtail the woman's capacity to enjoy sex.

But why? Most treatments have proposed, with minimal evidence, that men have engineered the suppression of female sexuality for their own benefit. For example, Sherfey (1966) argued that the inherently voracious and insatiable character of female sexuality was socially disruptive, and so men sought to stifle it to enable them to build an orderly, civilized society. Others have proposed that men may stifle female sexuality as a way of reducing the likelihood that their spouses will seek sexual encounters with other men (Buss, 1994). Wood and Eagly (2002) rejected Buss's views, but they too concluded that the control of female sexuality is mainly by men and for men—specifically, that men want to stifle female sexuality because of their concern to reap the economic benefits of having children and to ensure patrilineal inheritance.

Contrary to those views, the social exchange theory would suggest that women have more to gain by the suppression of female sexuality. The laws of supply and demand operate with social resources just like with economic ones. As with any resource, the price goes up when the demand exceeds the supply, and so it is always *within the best interests of an oligopoly of sellers* to restrict the supply of its product. By restraining each other's sexuality, women can raise the amount of resources that men will give them for sex. Women's management of female sexuality would thus resemble other rational economic strategies, such as OPEC's efforts to drive up the world price of oil by inducing member nations to restrict their production.

A literature review by Baumeister and Twenge (2002) found that the proximal sources of influence that restrain female sexuality are primarily and indeed almost invariably female. That is, women, rather than men, are the main proximal agents who restrain female sexuality. The evidence can be summarized briefly as follows. Restraining influences on adolescent female sexuality are mothers rather than fathers, and female peers rather than male ones. The bad reputation that punishes promiscuous girls is maintained and enforced

mainly among the female peer group. Indeed, the only male who has any significant influence on female adolescent sexual behavior is the boyfriend, and he typically pushes for more sex rather than less. In adulthood, again, women rather than men are the main sources of pressure on women to refrain from sex. Women consistently express more disapproval than men of women who engage in premarital sexual activity. The so-called double standard that recognizes premarital and other sexual activities as acceptable for men but not for women is supported more by women than by men (Oliver & Hyde, 1993). Even modern women who do not endorse the double standard themselves believe that it still exists and perceive other women as more likely than men to enforce it by condemning women for sexual activities that are acceptable among men (Millhausen & Herold, 1999).

In other cultures, surgical interventions that curtail women's capacity for sexual pleasure are supported, performed, and initiated by women rather than men (e.g., Boddy, 1989; see Baumeister & Twenge, 2002, for review). Moreover, it is consistent with the social exchange analysis that these practices are mainly found in societies where women are at severe economic, legal, educational, occupational, and political disadvantage compared to men. As we have emphasized, women need to maximize the exchange value of sex when it is their primary resource for obtaining a good life. In contrast, when women can support themselves, they do not need to restrain female sexuality as rigorously, and so they soon abandon the genital surgery and similar practices.

The female suppression of female sexuality is consistent with the view that sexual exchange processes link together the sexual activities of all couples in a community. The local community operates as a marketplace in which sexual favors have a fairly standard price. The so-called "cheap" woman (the common use of this economic term does not strike us as accidental), who dispenses sexual favors more freely than the going rate, undermines the bargaining position of all other women in the community, and they become faced with the dilemma of either lowering their own expectations of what men will give them in exchange for sex or running the risk that their male suitors will abandon them in favor of other women who offer a better deal. Hence the women collectively condemn the cheap woman and pressure her to change.

Another important aspect of this analysis is that each woman is subject to competing pulls with regard to sex. On one hand, she may feel pulled to go farther into sex, based on the man's sexual advances and influence, on her own sexual desires and pleasure, and on the competitive advantage that she may gain over other women by offering a little more sex than they do. On the other hand, she benefits from the restraint that all the other women exert, and so she has a stake in up-

holding the general pattern of restrictions on sex—not to mention the ostracism and other sanctions from the female community that she risks by violating their norms. The dilemma is not unlike what OPEC has repeatedly faced in its efforts to extract the maximum profits by manipulating the world supply (and hence price) of oil, and the uneven success of OPEC is likely to be matched by instability in sexual norms. This brings up the biggest shift in sexual norms in recent history, namely the Sexual Revolution.

The Sexual Revolution

It is well documented that sexual attitudes and behaviors underwent a significant shift toward greater permissiveness during the third quarter of the 20th century. Moreover, the shift was much larger among women than among men (e.g., Bauman & Wilson, 1974; Croake & James, 1973; Sherwin & Corbett, 1985). This change, called the Sexual Revolution, undoubtedly had multiple causes, including the invention of oral contraceptives for women. Still, the birth control pill is not a full explanation, because it cannot easily explain the shift toward greater acceptance of practices that do not risk pregnancy, such as oral sex.

If sex is a female resource, then the Sexual Revolution was a "market correction" in which the exchange price of sex was significantly reduced. In terms of social exchange theory, a likely reason is that changes in women's circumstances reduced their dependency on sex as their most valuable resource. In the 1860s, for example, American women had relatively few options for securing a comfortable life for themselves, being unable to vote, own property, initiate lawsuits, pursue a profitable career, and the like. A century later, women's liberation had progressed to the point by which women had all those rights and could provide for themselves reasonably well. Hence their need to get the highest possible price for sex was greatly reduced, and they could begin to offer sex more freely (and enjoy it themselves).

Even though the Sexual Revolution occurred in the context of many positive changes for women overall, this analysis would still regard the change in sex itself as disadvantageous to women, insofar as one of their resources (sex) was devalued. Consistent with that view, polls and studies consistently found that women regarded the Sexual Revolution more negatively than men and had more doubts and regrets about it (Smith, 1994; also Rubin, 1990). Thus, even though the Sexual Revolution has often been presented as a boon to women (and in some ways was), many women have recognized it as a costly sacrifice or at best a mixed blessing.

Sex and Violence

Recent decades have seen increasing recognition of spousal violence as a significant social problem. A

meta-analysis by Archer (2000) found that men and women initiate such violence at almost equal rates (actually women are slightly more likely to do so), although men caused more serious injuries. It is therefore possible to examine possible links between sexual activity and male, female, or reciprocal abuse. The sexual behavior of violent couples was studied by DeMaris (1997). Although sex was relatively rare during the violent episodes, overall he found that these couples had more frequent sex than nonviolent couples. DeMaris concluded that this high rate of sex reflected a pattern in which the victim would attempt to appease or placate the violent partner by offering sex (as opposed to making up after fights or other possible explanations). There was, however, an important asymmetry in the patterns of sexual appeasement in DeMaris's findings. When he broke his sample down according to which person was violent, he found that the elevated sexuality was only observed in cases in which the husband was violent. Marriages with violent wives did not have elevated rates of sex.

This asymmetry fits well with the view that sex is something that women give to men. A female victim of violence can sometimes placate or appease her abusive husband by offering him extra sex. In contrast, a male victim cannot escape violence by offering his wife sexual favors. Thus, even in the context of deplorable actions such as domestic violence, female sexuality has value for social exchange whereas male sexuality does not.

A smattering of other observations have pointed to institutionalized versions of the exchange of sex for reducing violent victimization. Australia was for many years primarily a penal colony, in which a small force of guards attempted to preside over a large number of convicts and released convicts. According to Hughes (1988), severe public whipping was a common form of punishment for major infractions. Female convicts sentenced to flogging were often given the option of having the number of strikes reduced by half if they would agree to be naked during the punishment. Presumably the sight of their nude bodies would bring pleasure to the onlookers. No such option was offered to the male prisoners who received the same sentences, of course.

In the modern United States, some youth gangs have become integrated by gender (though most gangs are same-gender). One custom of many such gangs is that new members are initiated by being beaten up by the members of the gang. Female initiates, however, are sometimes offered the option of being "sexed in"—having sex with everyone in the gang (or all who wish to participate)—as a substitute for the group beating (Miller, 1998). We do not wish to enter into a moral debate about such practices and the implications of treating men and women differently in this way. Our point is only that these practices depict sex as a female re-

source. Men have no alternative but to suffer the physical beating because they have nothing else to offer, whereas the exchange value of female sexuality gives women the opportunity (should they choose) of using it to reduce the number of blows they must endure.

Discussion and Conclusion

This article had two purposes. First, it sought to elaborate a theory of sexual interaction based on social exchange, with sex as a female resource. Second, it sought to review empirical findings relevant to the theory. The development of the theory was treated as a separate task from the empirical assessment, and we developed some aspects and predictions that were not able to be tested against the available data.

The theory treated sex as a valued good for which there is a marketplace in which women act as sellers and men as buyers. The initiation of a sexual relationship corresponds to a transaction in which men offer women other resources in exchange for sex. Those resources correspond to the price of sex, which rises and falls with multiple factors, including the balance of supply and demand across the marketplace, the competitive position of the woman (especially her sex appeal relative to others), and how exclusive she has been in terms of other sexual partners. The theory applies best to heterosexual interactions. It is less applicable to same-gender sexual activity (because of the lack of marketplace-defined roles) and sex in marriage (because commitment has already been made, because material property is jointly owned and therefore not available for exchange, and because the marital contract regarding sex removes the couple from the competitive marketplace).

The analysis of sexual interactions as social exchange, with sex itself as a female resource, appears capable of supporting a broad range of testable predictions. It is also a potentially useful link between nature and culture. That is, we followed Symons (1979) in suggesting that evolutionary arguments can furnish a plausible basis for predicting that sex will be a female resource, but the theory itself is essentially cultural in the sense that it specifies how the sexual negotiations and behaviors of many couples within a social system will be meaningfully interlinked and organized. Like social exchange theory itself, the exchange theory of sex draws on economic theory and its understanding of marketplace dynamics, supply and demand, advertising, competition, and even monopolistic tactics. In this way, our analysis is similar to other recent approaches to understanding the dynamics of human mating behavior (Kenrick et al., 2003). Thus, ours is essentially a cultural theory, because it proposes that social networks will operate on the basis that men's and women's sexuality are valued differently and that these

differences will organize the behavior of most individuals in the society.

The second part of the article presented a broad range of empirical findings and they were generally consistent with many aspects of the exchange theory, though some aspects of the theory remain essentially untested. We identified gender asymmetries consistent with the view that sex is a female resource. Thus, in prostitution, men pay women for sex, but women rarely pay men for sex. In courtship, men offer women commitment and display or expend material resources on them, but the reverse is rare. Women typically are able to attract sex partners who have slightly higher levels of social status than the women's own, suggesting that the status increment reflects a male contribution to offset the female contribution of sex. Marital infidelity by the wife is treated as if it were a misappropriation of a valuable resource, whereas infidelity by the husband is mainly condemned if other (especially material) resources accompany it. The price of sex rises when women are scarce but falls when women are abundant, relative to men, consistent with the characterization of women as supply and men as demand (see Table 1). The cultural suppression of female sexuality appears to be mediated by women collectively, and it is most common in societies where women are most dependent on the price of sex to obtain opportunities and resources, all of which corresponds to how oligopolies try to drive up market prices by restricting the supply. Widespread loosening of sexual norms (most notably the Sexual Revolution) are most likely when women obtain other avenues to support themselves and therefore do not need to maintain an artificially high price of sex. Sexual favors can be bartered to placate an abusive husband but not an abusive wife.

In general, the data suggest that male sexuality has little or no exchange value, whereas female sexuality commands a significant but fluctuating price. Most of the findings pertain to the beginning of a sexual relationship, and it seems reasonable to conclude that that social exchange processes do operate with regard to the decision about whether to begin having sex. There is far less evidence to indicate that social exchange processes continue to be relevant to sexual decisions within an established relationship, though some findings (such as involving infidelity and lack of sex as grounds for divorce) do suggest that the economic roles are still relevant in marriage, even if muted. In a sense, the marriage contract specifies exclusive sexual obligations and sharing of resources, and the married couple is essentially removed from the broader sexual marketplace, so the economic processes of that marketplace are somewhat less relevant to married than unmarried people.

Perhaps the most interesting question to emerge from the review process for this article was why, if the

economic analysis is correct, people are reluctant to acknowledge the exchange processes overtly? This reluctance extends from the refusal of dating partners to talk specifically about how much the man should spend to have how much sex, to the low prestige accorded prostitutes (who explicitly trade sex for money) in nearly all cultures, and even to any widespread reluctance to entertain the theory and analysis we have proposed. Even the most obvious examples are concealed: For example, these days most single people are aware of a supposed obligation that a wedding engagement should be marked by the man giving the woman a ring costing 2 months' worth of his salary, with no corresponding gift from her to him. Believers in gender equality are rightly offended by this practice, but in our view it simply indicates tacit acceptance that underlying all the fancy rhetoric about liberation and equality, the man is still essentially paying for sexual access. No one wants to acknowledge this, however.

One might simply say that cultural ideals of love and romance are incompatible with exchange analyses, hence the reluctance, but that response fails to indicate why cultural ideals should favor high-flown concepts of romantic love over practical and concrete discussions of sexual exchange. However, incompatibility might arise because antagonistic exchange relationships are divisive whereas sexual relationships are often sought as positive, even communal bonds. Explicit acknowledgment of exchange processes in sexuality would certainly raise a set of difficulties that could well make people reticent. Few couples will exactly match the average going rate for sexual exchange, and so one or the other of them is getting a poor deal. To acknowledge that would reveal the man and woman as having an essentially antagonistic relationship at precisely the moment when they are presumably trying to form a united partnership, and so downplaying the exchange process would be valuable for avoiding the divisive recognition of exchange. A too-precise negotiation of how much the man should contribute might also force the woman to acknowledge that she will charge one man more than another, more attractive man, thereby striking a blow to his ego. Her prestige could also be at stake, especially if to make explicit negotiations she came under pressure (comparable to the disclosures required of house sellers) to reveal what she was offering in terms of willingness to perform various acts, actual physical traits undisguised by clothing and makeup, and extent of prior sexual activity. In any case, however, the reluctance to acknowledge sexual exchange is itself an intriguing challenge for further research.

A limitation of this project was that it did not specifically undertake to pit social exchange theory against other theories. Indeed, we have proposed that in most respects the social exchange analysis is compatible with other theories, such as social constructionist approaches and evolutionary theory. We may conclude

that social exchange may account for a great many empirical findings and that it has survived many tests that could have falsified it, but we cannot claim that the social exchange theory has been proven to be correct or even more correct than other theories. This article should be seen as more of a beginning than an end.

Sex is a precious good for which demand generally exceeds supply and so it would be surprising if marketplace dynamics and economic principles were utterly absent. We do not seek to replace all other theories of sexual behavior with this economic one, and indeed we have noted that the economic analysis does not apply equally well to all sexual behavior. We propose only that the economic analysis deserves to be included as one important dimension of sexual activity and one useful approach for understanding the interpersonal and collective aspects of sexuality—especially the large-scale, cultural organization of sex. In view of how well the social exchange theory has fared in this review, we think it appropriate that researchers who are interested in the cultural aspects of sexuality can begin conducting more prospective and explicit tests of it.

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