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Peacocks, Porsches, and Thorstein Veblen: Conspicuous Consumption as a Sexual Signaling System

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Conspicuous consumption is a form of economic behavior in which self-presentational concerns override desires to obtain goods at bargain prices. Showy spending may be a social signal directed at potential mates. We investigated such signals by examining (a) which individuals send them, (b) which contexts trigger them, and (c) how observers interpret them. Three experiments demonstrated that conspicuous consumption is driven by men who are following a lower investment (vs. higher investment) mating strategy and is triggered specifically by short-term (vs. long-term) mating motives. A fourth experiment showed that observers interpret such signals accurately, with women perceiving men who conspicuously consume as being interested in short-term mating. Furthermore, conspicuous purchasing enhanced men's desirability as a short-term (but not as a long-term) mate. Overall, these findings suggest that flaunting status-linked goods to potential mates is not simply about displaying economic resources. Instead, conspicuous consumption appears to be part of a more precise signaling system focused on short-term mating. These findings contribute to an emerging literature on human life-history strategies.

Keywords: conspicuous consumption, mating, costly signaling

The Porsche Carrera GT does not qualify for the *Consumer Reports* list of "best buys." The vehicle has very little cargo capacity, has only two seats, gets terrible gas mileage, and is frightfully expensive to repair. Yet for the people who spend over $440,000 to buy one, these considerations are likely irrelevant. Even among individuals of more ordinary means, scrimping on essentials in order to purchase premium versions of more ordinary products, such as fashionable ski outfits, designer shoes, and upscale wines, is ubiquitous (e.g., Frank, 2007; Silverstein & Fiske, 2003). According to luxury marketing consultants Taylor and Harrison (2008), virtually all consumers have bought, or will buy, at least one luxury brand during their lifetimes. As we discuss below, conspicuous consumption is anything but a frivolous behavior; in fact, it appears to be linked to theoretically important individual differences in reproductive life history.

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Conspicuous Consumption, Culture, and Evolution

There are numerous factors influencing people's spending on luxury goods. For example, people may buy expensive products because they feel the components and workmanship are intrinsically superior. However, such purchases often involve considerations beyond the product's quality, such as the desire to fulfill social motivations for status and prestige. Indeed, purchasing especially expensive goods and services has been labeled *conspicuous consumption*, defined as attaining and exhibiting costly items to impress upon others that one possesses wealth or status. Thorstein Veblen (1899) coined the term over a century ago in his classic *Theory of the Leisure Class*. Although his book was regarded as a critique of frivolous consumer behaviors in capitalistic culture, Veblen observed that the flaunting of luxury possessions had occurred across societies and epochs (Veblen, 1899, pp. 1–5). Egyptian pharaohs, for example, displayed their wealth with golden thrones, elaborate artworks, and giant pyramids; Incan potentates dwelled in immense palaces surrounded by gold; and Indian maharajahs built extravagant and ostentatious palaces and kept collections of rare and exotic animals on their expansive estates. Such showy displays of wealth have been documented in cultures as diverse as feudal Europe and Japan and among Polynesian Islanders, Icelandic communities, Amazonian foraging tribes, and Melanesian people of Australia (Bird & Smith, 2005; Godoy et al., 2007).

Given the ubiquity of conspicuous consumption across history and human cultures, it may be useful to examine the motivations for conspicuous consumption from an evolutionary perspective. Although showy spending is often perceived as wasteful, frivolous, and even narcissistic, an evolutionary perspective suggests that blatant displays of resources may serve an important function, namely, as a communication strategy designed to gain reproductive rewards (Miller, 2009; Penn, 2003; Saad, 2007). This perspective suggests that conspicuous consumption mirrors other ostentatious behavioral and morphological traits found across the animal kingdom—traits that, at one level, seem unnecessary and inefficient but that, at another level, serve as important communicative signals advertising the sender's quality as a mate (Zahavi & Zahavi, 1997). Some empirical evidence points to a connection between mating motives and conspicuous consumption. For example, men place a greater emphasis on obtaining wealth after being physically near women (Roney, 2003), and men increase their desire to purchase products that are expensive and luxurious when mating goals are salient (Griskevicius et al., 2007). Saad and Vongas (2009) found that the opportunity to drive a late-model Porsche Carrera led to increases in testosterone, a hormone that has been linked to male dominance displays across species (Dabbs & Dabbs, 2000; Mazur & Booth, 1998). Consistent with the hypothesized link between testosterone, conspicuous consumption, and display, testosterone decreased if men drove a dilapidated old station wagon in a public setting (Saad & Vongas, 2009).

We set out to more fully examine the hypothesis that conspicuous consumption serves as a mating-relevant signal. Drawing on the theories of sexual selection (Darwin, 1871), parental investment (Trivers, 1972), and strategic pluralism (Gangestad & Simpson, 2000), we investigated the precise nature of this system by examining both the display (i.e., communication) and the perception (i.e., interpretation) sides of conspicuous consumption. By ascertaining which people produce such displays and which people do not and identifying contexts that are likely to evoke such displays, we provide insight into the communicative functions of conspicuous consumption.

Sexual Selection, Parental Investment, and Conspicuous Display

An emerging body of theory and research suggests conspicuous consumption may have evolved as a sexually selected mating tactic (e.g., Griskevicius et al., 2007; Miller, 2000, 2009; Penn, 2003; Saad, 2007). *Sexual selection* is a component of natural selection that was originally proposed by Darwin (1871) to address an apparent puzzle in the animal kingdom: Given that natural selection generally favors traits that aid survival, it was initially unclear why some animal traits appear to confer no functional advantages and may even impede survival. For instance, a peacock's large and brilliant feathers not only attract predators; the burdensome tail makes predator evasion more difficult. Darwin reasoned that conspicuous features are selected for because they enhance an individual's attractiveness to the opposite sex (Andersson, 1994; Darwin, 1871; Gould & Gould, 1989; Thornhill & Gangestad, 2008). Accordingly, conspicuous traits such as peacock tails function as costly signals of mate value (Miller, 2009; Zahavi & Zahavi, 1997). The peacocks with the largest, most symmetrical, burdensome, and conspicuous tails attract the most peahens. The tail's size, complexity, and symmetry signal that the peacock has the strength, speed, and immunity to thrive while burdened by such a handicap (Møller & Petrie, 2002). Hence, handicapping traits such as the peacock's tail can efficiently communicate complex and sometimes unobservable information about mate quality.

Darwin (1871) observed that the vast majority of ostentatious animal traits, such as brilliant plumage, were found in males rather than in females. This sex difference was later explained by Trivers (1972) to be a result of differential parental investment between the sexes. *Parental investment* is the contribution that each parent makes to the production of viable (i.e., reproducing) offspring. Parental investment theory emphasizes the typically large sex difference in the *minimum* investment required to produce a viable offspring. Male mammals (including humans) can produce offspring by investing minimally (i.e., in the energy and time it takes to have sexual intercourse). For female mammals, however, the minimum investment is significantly higher: At absolute minimum, females need to invest the considerable time and energy required for internal gestation and nursing. Sexual selection has operated on this asymmetry in minimum investment, leading females (usually the higher investing sex) to generally be choosier in selecting sexual partners, and leading males (usually the lower investing sex) to generally be more competitive for sexual access to females. In line with parental investment theory, in species where males provide especially low levels of investment, it is males, rather than females, that possess conspicuous traits—a pattern that has been documented across a wide range of species (Andersson, 1994; Gould & Gould, 1989).

Applying the theories of sexual selection, parental investment, and costly signaling, some researchers have suggested that conspicuous consumption in humans may serve a function similar to that of the peacock's tail (Miller, 2009; Penn, 2003). This interpretation of conspicuous consumption as a mating-relevant behavior has received some initial empirical support. In examining motives for conspicuous displays of altruism and charity, Griskevicius et al. (2007) found that situational activations of mating motives led men, but not women, to want to conspicuously spend and perform public acts of heroism. This work suggested that men may be similar in some ways to peacocks—whereby inefficient, costly, and ostentatious expenditures may act as analogues to peacocks' inefficient, costly, and ostentatious tails.

Building on this previous work, the current research set out to examine specifically how conspicuous consumption may function as such a signal. As we discuss below, by starting with the theoretically crucial question of how men are and are not like peacocks, we examined which men, in which contexts, would be likely to produce showy consumption displays. We then built on these display-oriented findings by measuring how observers perceive such signals. For example, does driving a Porsche make a man more desirable to women as a mate?

Conspicuous Displays and Mating Strategies

As noted earlier, conspicuous features and sex-specific courtship displays are frequent in species in which one sex (usually the males) provides a low level of investment in offspring (Andersson, 1994; Gould & Gould, 1989). In peacocks, for example, after a male mates with a female, his investment is terminated; the preg-

nant peahen is left with the full remaining burden of parental investment. However, many other species are characterized by heavy male investment in offspring and a more egalitarian division of labor between sexual partners. In the great skua (a type of large seabird), for example, a male continues to invest heavily after copulation by foraging for food for his mate and offspring. Given the low survival prospects of chicks that do not receive investment from both partners (Hamer, Furness, & Caldow, 1991), great skua males typically invest heavily in a single partner and do not have short-term, noninvesting reproductive relationships (Catry & Furness, 1997). Consistent with the theories of sexual selection and parental investment, such monogamous and high-male-investing species are less male dominated in their conspicuous traits and ostentatious courtship displays, with such displays more evenly distributed across the sexes (Houde, 2001; Kokko & Jennions, 2003; but see Hooper & Miller, 2008).

Humans generally lie somewhere in between the extremities of the noninvesting, nonmonogamous strategy of the peacock and the ultra-investing, monogamous strategy of the great skua (Li & Kenrick, 2006). Humans invest more on average in mates and offspring than many species, but some people are open to and pursue nonmonogamous, noninvesting short-term relationships (Buss & Schmitt, 1993; Gangestad & Simpson, 2000; Kenrick, Groth, Trost, & Sadalla, 1993; Kenrick, Sadalla, Groth, & Trost, 1990). In contexts where short-term (noninvesting) mating opportunities are salient, we may expect people seeking such partnerships to produce peacock-like conspicuous displays of features, traits, and capabilities the opposite sex finds desirable.

Similar to how peahens choose peacocks with the most brilliant tails, women may use conspicuous, handicapping displays to evaluate men for short-term partnerships (Gangestad, Garver-Apgar, Simpson, & Cousins, 2007; Li & Kenrick, 2006). These displays commonly involve potentially risky intrasexually aggressive behaviors (Gangestad et al., 2007; Gangestad, Simpson, Cousins, Garver-Apgar, & Christensen, 2004; Sadalla, Kenrick, & Vershure, 1987) as well as morphological features that are linked to androgen levels, such as masculine facial structure and voice pitch (Little, Jones, Penton-Voak, Burt, & Perrett, 2002; Puts, 2005). In theory, such traits are particularly attractive in short-term partners because they provide information about difficult-to-observe qualities relevant to short-term mating. Morphological cues to masculinity reflect androgen levels during development, which are metabolically costly and potentially immunosuppressive (Ellison, 2001). Men possessing superior overall genetic quality can better "afford" to develop such traits (Miller, 2000). Similarly, intrasexual aggression may honestly signal a man's ability to withstand the costs of direct competition with other men (e.g., counteraggression).

Such traits appear to be associated with genetic quality (e.g., body symmetry, resistance to infectious disease), which women seek in short-term partners (Gangestad & Thornhill, 2003; Simpson, Gangestad, Christensen, & Leck, 1999; Thornhill & Gangestad, 2006; for a review, see Thornhill & Gangestad, 2008). Conspicuous consumption may provide an easily observable demonstration of underlying qualities in a similar fashion. By spending money wastefully and conspicuously, men demonstrate that they can successfully absorb significant resource costs with little offsetting survival benefits. This may provide a wealth of information about a man's underlying qualities, including intelligence, aggression, and the ability to defend expensive resources from conspecifics. Indeed, financial risk preference in men is positively associated with testosterone levels (Apicella et al., 2008), which are in turn positively associated with a number of traits valued in short-term mates, including social dominance (e.g., Baker & Maner, 2008; Buss, 1989; Gangestad et al., 2004, 2007; Sadalla et al., 1987; Wilson & Daly, 1985). Given a putative correspondence between heritable genetic quality and any of the traits demonstrated by conspicuous consumption, women may preferentially select men who consume conspicuously as short-term partners.

Conspicuously consuming men may also provide nongenetic benefits to women in a short-term mating context. One reason women may seek fleeting relationships is to obtain a short-term provision of economic benefits (Buss & Schmitt, 1993; Hrdy, 1999). Frivolous and extravagant spending by men may signal a willingness to provide substantial economic benefits to women (e.g., extravagant gifts during courtship) in exchange for sexual access. Indeed, "nuptial gifts" are sometimes provided by males to female partners in species that engage in short-term, low-investment mating (Andersson, 1994; Pizzari, 2003). Therefore, conspicuous consumption may be a useful tactic for men to engage interest among women in short-term romantic partnerships by fostering expectations of immediate material or economic benefits.

Life-History Theory and Individual Differences in Resource Allocation

Life-history theory is a powerful set of ideas that are only beginning to be incorporated into psychological theory and research (Kaplan & Gangestad, 2005; Kenrick, Griskevicius, Neuberg & Schaller, 2010; Kenrick & Keefe, 1992). The field of life-history evolution explores how each animal's life cycle—from conception to death—is shaped by natural selection to facilitate reproductive success (Stearns, Allal, & Mace, 2008). A life history is a genetically organized developmental plan: a set of general strategies and specific tactics by which an organism allocates energy to survival, growth, and reproduction (Crawford & Anderson, 1989; Partridge & Harvey, 1988; Stearns, 1976). A key presumption is that all organisms have finite resource budgets, and that they must divide those limited resources between somatic effort (building and maintaining a body), mating effort (choosing and attracting mates), and, in the case of some species, parenting effort (offspring care). Investment of resources in one category implies less to invest in other categories (Kaplan & Gangestad, 2005; Stearns et al., 2008).

Animals differ in mating and parenting effort across species, with some investing highly in a small number of offspring and fewer partners and others investing relatively less in a larger number of offspring and multiple partners (Stearns et al., 2008). There are also individual differences in life history within any given species. As discussed earlier, males and females often differ in line with principles of parental investment theory (females typically invest relatively more in parenting effort; males invest relatively more in mating effort, which includes displaying ostentatious features, such as peacock feathers; Kenrick & Luce, 2000). It is also common to observe differences within a sex. For example, in certain fish species some of the males grow large and attract females, and the remaining males are smaller and female-like in their appearance but attempt to "sneak copulate" (darting in to

spray sperm when a larger male has induced a female to release her eggs; Gross, 1984; Warner, 1984). Such within-sex differences are sometimes linked to ecological variations, such as sex ratios, or to individual differences in size and health that may make one strategy relatively more cost effective (e.g., in species in which females mate only with a few select males, smaller and less healthy males would receive negligible payoffs from developing energetically costly displays).

In developing their strategic pluralism theory, Gangestad and Simpson (2000) reviewed evidence of within-sex individual differences in human life history. People vary in the extent to which they pursue a long-term, high-investing strategy (i.e., a restricted strategy) versus a short-term, noninvesting strategy (i.e., an unrestricted strategy; Simpson & Gangestad, 1991, 1992; see also Jackson & Kirkpatrick, 2007). The sexual strategy a person adopts is contingent on his or her desirability to the opposite sex (i.e., mate value), current economic and environmental conditions, and local sex ratios, among other factors (Gangestad & Simpson, 2000).

Following principles of parental investment, men (on average) are more open to uncommitted sexual relationships than are women. Hence, there is generally more competitive intensity among men than among women for access to uncommitted sexual partnerships with the opposite sex. As argued above, conspicuous consumption may prove an effective display for men when seeking to outcompete other men for short-term mates. Given that men tend to evaluate women as prospective short-term partners based on physical characteristics rather than the behavioral signals such as risk taking and intrasexual dominance (Li & Kenrick, 2006; Sadalla et al., 1987), conspicuous consumption is unlikely to provide women a competitive advantage over other women in the short-term mating market. Hence, we did not expect salient mating opportunities to enhance women's motivation to conspicuously consume.

Regarding any within-sex variation among men in displays involving conspicuous consumption, there are three alternative patterns that could emerge. First, and in line with our earlier discussion, men's conspicuous consumption could be linked with short-term mating goals, rather than long-term mating goals. Consistent with that line of reasoning, conspicuous consumption is associated with self-indulgence and narcissism, implying a willingness to place one's own needs before others (Rose, 2007); such a selfish orientation would be undesirable when seeking a long-term partner willing to share and invest his resources with his mate and their offspring. Conspicuous consumption involves spending money on frivolous luxuries or indulgences today, rather than saving or investing those resources to promote long-term financial stability. For all but the world's wealthiest individuals, the benefits derived today from consuming and displaying expensive status-linked products come at the cost of tomorrow's economic security. A propensity to waste resources on frivolous luxuries (as characterizes conspicuous consumption) might not be an indicator of a reliable, responsible investing partner. Hence, despite containing information about wealth or resource-gathering potential, a conspicuous consumption signal may not serve to further men's long-term mating goals.

A second alternative is that conspicuous consumption could serve to further a long-term, rather than a short-term, mating strategy. Conspicuous spending requires significant economic resources and as a result also communicates information about wealth (Veblen, 1899). Women across cultures find evidence of a man's economic resources, or his potential to acquire them, highly desirable in a long-term mate (Li, Bailey, Kenrick, & Linsenmeier, 2002; Shackelford, Schmitt, & Buss, 2005). However, indications of a man's willingness to invest his resources wisely and within a committed partnership are crucial qualifiers on the link between resources and long-term attractiveness. A woman seeking a long-term partnership values a man's resources under the assumption that those resources will translate into a reliable stream of investment in her and in any children resulting from that union. If conspicuous consumption's primary function is to signal resource investment rather than other, genetically linked favorable qualities in short-term mates, we would expect this type of spending to enhance a man's desirability as a long-term mate to women and for men seeking committed partners to favor displaying their resources in this manner. Following this logic, we would not expect men with low intended investment (seeking short-term partnerships) to be more motivated to display via conspicuous consumption.

A third alternative is that conspicuous consumption could make a man more desirable as either a short- or a long-term mate. If so, we would expect to find only a sex difference, such that men, but not women, are motivated to conspicuously consume in mating contexts. In this case, we would not expect to find within-sex differences in men's spending behavior based on their sexual strategy. Nor would we expect different types of mating contexts to influence men's conspicuous spending (e.g., when opportunities for uncommitted sexual encounters vs. opportunities for a committed partnership are salient). By examining both individual differences in intended mating investment and different mating contexts (short term vs. long term), we were able to test for each of these possible alternative patterns.

Research Overview

Across four studies we examined the nature of conspicuous consumption as a mating-oriented signaling system. The first set of studies focused on the display side of this signaling system. The first two studies (Study 1 and 2) examined whether conspicuous consumption motivations were enhanced in mating contexts primarily among sexually unrestricted men, as opposed to all men, irrespective of their sexual strategy, or as opposed to only sexually restricted men. To increase the validity and generalizability of the findings, we used a different methodology in the first two studies to activate mating motives and measure conspicuous consumption tendencies. Study 3 examined conspicuous consumption tendencies after either a low-investment (short-term) mating motive or a high-investment (long-term) mating motive was activated. Thus, this first set of studies enabled us to ascertain which men—and in which contexts—use conspicuous product displays as mating signals.

The final study focused on the perception side of the conspicuous consumption signaling system. Building on the display findings from the first set of studies, Study 4 examined the extent to which flashy product displays signal information about the owner's mating strategy. In addition, we examined whether—and how—conspicuous consumption influences the signaler's desirability as mate. In totality, the results of the four studies help to

elucidate the context-dependent function of conspicuous consumption as a social signal.

Study 1: Mating Motives, Sexual Strategy, and Conspicuous Consumption I

In the first study, we examined how the activation of mating motives influences unrestricted versus restricted men's and women's conspicuous consumption desires. Mating motives were elicited using an established priming method, whereby people viewed photographs of attractive and available members of the opposite sex (e.g., Baker & Maner, 2008; Griskevicius et al., 2007; Roney, 2003; Van den Bergh, Dewitte, & Warlop, 2008; Wilson & Daly, 2004). After priming of a mating or a control (neutral) motive, participants allocated a $2,000 budget across several categories of consumer products ranging from low to high conspicuousness.

Method

Participants and design. Students at a large public university ($N = 243$, 152 women and 91 men; mean age = 21.9 years, range 18–46 years) participated for partial course credit. The experiment followed a 2 (participant sex: men/women) × 2 (motive: mating vs. control) between-participants design. In addition, we measured participants' mating strategy (low-investment vs. high-investment) using the attitude items from the Sociosexual Orientation Inventory (SOI; Simpson & Gangestad, 1991, 1992).

Mating manipulation. Participants in the *mating* condition were told that the university was considering establishing a dating service to help ease the transition for students who were new to the area and that the current study was designed to determine how best to develop questionnaires used in that service. Participants were told that the researchers wanted their feedback on the proposed format of the dating service materials and also wanted to learn more about the student population and its needs. Participants in the *control* condition were told the university was establishing a housing placement service to help ease the transition for students who were new to the area and that the department had been asked to assist in designing questionnaires. They were told the department wanted their feedback on the format of the housing placement service materials.

Using a method similar to that of Gutierres, Kenrick, and Partch (1999), we showed participants in the mating condition eight pictures of attractive opposite-sex individuals, who presumably were other students interested in the dating service. Participants in the control condition viewed photos of campus dormitory buildings. All participants answered relevant questions concerning the descriptions and photos they viewed (e.g., the attractiveness of the faces or the buildings) to maintain the plausibility of the cover story.

Dependent measure. After the motive manipulation, participants were asked to provide information about themselves in order to assist the university in learning more about the needs of various segments of students. First, participants were told, "Imagine you have just won $2,000 worth of products and services because a friend entered you into a drawing without your knowledge. You have only today to spend the entire $2,000 and can only spend it on the products and services listed below. If you don't spend all the money today, you will lose it." Participants then allocated this $2,000 budget among 36 possible products and services that varied in conspicuousness (see the Appendix for products and prices).

We assigned the conspicuousness rating of each product using ratings from a separate sample of 160 demographically similar participants. Participants in this validation study were given the following definition of conspicuous consumption derived from Veblen: "Conspicuous consumption involves spending money in a way that shows others you have money. It involves 'showing off' in the sense that you may be buying these conspicuous products and services to gain status and impress others around you." This separate sample of participants then rated each of the 36 products on conspicuousness (1 = *not at all conspicuous consumption* to 9 = *definitely conspicuous consumption*). As expected, conspicuousness ratings were higher for products such as designer sunglasses ($M = 7.94$) and an elaborate car stereo system ($M = 7.69$) and lower for products such as jeans from a lower cost retailer ($M = 2.94$) and a toaster oven ($M = 2.61$).

Using the ratings provided by the independent sample, we created a conspicuousness index for each participant in the current study by averaging the level of conspicuousness across the products to which he or she allocated the $2,000 budget. This conspicuousness score served as the dependent measure.

Mating strategy. At the end of the study, participants completed three items from the SOI (Simpson & Gangestad, 1991, 1992) to assess receptivity to uncommitted sexual encounters. Recent research has demonstrated separate attitudinal and behavioral factors in the SOI (Webster & Bryan, 2007). As our interest was to measure mating investment intentions, we used attitudinal items (Items 5–7 from the original scale) across all of our studies. For these items, respondents agree or disagree (on a 9-point scale) with statements such as "Sex without love is OK." In the current sample, the internal consistency of the scale was found to be at an acceptable level ($\alpha = .84$).

Results and Discussion

To test our hypotheses, we employed a set of planned simple slope tests as recommended by Keppel and Wickens (2004, p. 116; see also Kirk, 1995; Winer, Brown, & Michels, 1991). An initial examination revealed three cases that exhibited large Mahalanobis distances from the centroid of the independent variables; because these distances also were distinctly separated from the rest of the multivariate distribution, they were removed from subsequent analyses (Bollen, 1987; Tabachnick & Fidell, 1996, pp. 66–69).

Following Aiken and West (1991), we first examined the relation between mating condition and conspicuous consumption for males following a low-investment mating strategy (i.e., 1 standard deviation [*SD*] above the mean of the sociosexual attitudes measure). When a two-tailed test was used, this slope was positive and significantly different from zero, $B = 0.45$, $t(232) = 2.60$, $p = .01$, $sr^2 = .03$, indicating that low-investment males spent more conspicuously when primed with mating stimuli than if in the control condition. This finding confirms that men who are interested in short-term mating will be motivated to conspicuously consume, particularly when mating opportunities are salient.

We then examined this relation for males following a relatively high-investment strategy (i.e., 1 *SD* below the mean of the sociosexual attitudes measure). This slope was not significantly differ-

ent from zero, $B = 0.10$, $t(232) = 0.36$, $p = .72$, $sr^2 = .00$, suggesting that the mating prime had essentially no effect on the conspicuous consumption of high-investment males (see Figure 1). This finding suggests that there is little influence of mating context on conspicuous consumption for men who are more sexually restricted.

We also examined the identical simple slope tests for women participants. The simple slope for women adopting a low-investment strategy, $B = -0.26$, $t(232) = -0.83$, $p = .41$, $sr^2 = .00$, was not significantly different from zero. The simple slope for women adopting a high-investment strategy was significant, $B = 0.35$, $t(232) = 1.98$, $p = .05$, $sr^2 = .02$. Though this latter finding was unexpected, the pattern of data for women was the opposite of the pattern for men. Further, this finding does not contradict our expectations that conspicuous consumption would provide women with no competitive advantage in the short-term mating market. We return to this finding in Study 3 and in the General Discussion.

Study 2: Mating Motives, Sexual Strategy, and Conspicuous Consumption II

Our goal in Study 2 was to address potential alternative explanations for Study 1's results for men as well as to conceptually replicate the pattern of findings using a different mating motive manipulation and measure of conspicuous consumption. In Study 2, mating motives were elicited by having participants read a short romantic story (e.g., Griskevicius et al., 2007). Participants then indicated their desire to purchase a product (wallet) that would be perceived by others as being either high status or low status.

The dependent measure addressed a potential alternative explanation of the initial findings, whereby mating motives might have led men to want nicer, conspicuous products simply because owning such products might make them feel better about themselves (i.e., by enhancing self-esteem). We argue, in accordance with our framework, that the pattern of findings for men in the first study resulted from a mating-driven desire to signal to others via products. To test between these two possibilities, we utilized a designer replica (counterfeit, or knockoff), a product that the owner would know was lower in status but that would still appear to others as high in status. Thus, if activating a mating motive would lead short-term-focused men to want to purchase the counterfeit status product, this would provide support for our conceptualization of mating-induced display rather than the alternative (i.e., that the purchase was designed solely to enhance personal well-being or self-esteem).

Finally, to address the possibility that the findings of the first study may be somehow related to the specific content of the control condition, we used two different control conditions, for which we expected no differences. Our specific predictions for Study 2 were conceptually similar to the findings in Study 1: For men pursuing a low-investment mating strategy, mating motives (a) should increase desire for the apparently high-status product but (b) should not increase desire for a comparable low-status product. (c) For men pursuing a high-investment mating strategy, mating motives should not influence desire for either type of product.

Method

Participants and design. Undergraduate men ($N = 107$; mean age = 23.8 years, range 19–38 years) at a large, diverse public university participated in exchange for partial course credit. The experiment followed a 2 (motive: mating vs. control) × 2 (product type: high-status vs. low-status) mixed-model design. The motive manipulation was between participants, and product type was within participants. As in Study 1, we measured participants' mating strategy using the attitude items from the SOI ($\alpha = .81$).

Procedure. Participants were recruited from undergraduate courses to participate in an online survey. Participants were told the purpose of the study was to better understand the value of different product characteristics and assess values and lifestyle choices. To decrease the possibility of suspiciousness, we told

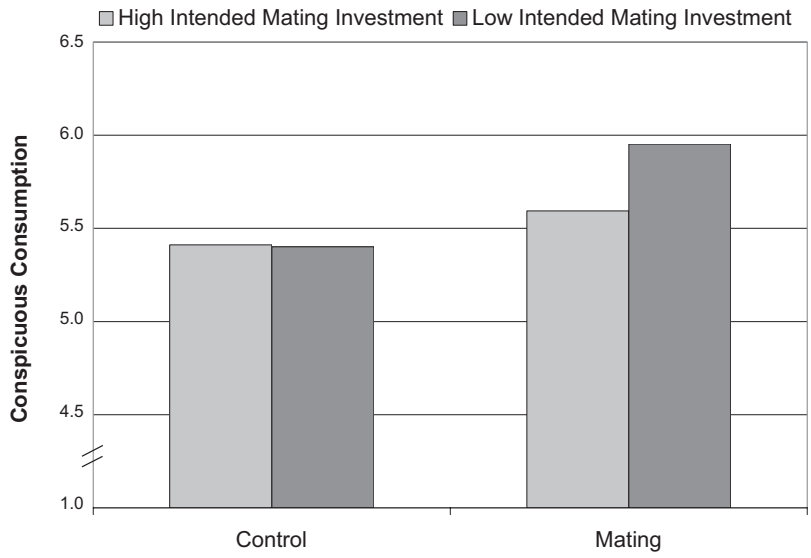

Figure 1. Men's conspicuous consumption as a function of motive and intended mating investment, Study 1.

participants the study would use a standard marketing research procedure, whereby at the start everyone would read the same short story to ensure that everyone is in a similar state of mind.

To activate mating motives, we used a procedure identical to that used to prime mating motives by Griskevicius and colleagues (Griskevicius et al., 2007; Griskevicius, Goldstein, et al., 2009) in which participants read a short romantic story. Participants imagined themselves meeting a desirable person and spending a romantic afternoon with him or her during the last day of vacation. The scenario ends as the two lovers are passionately kissing on a moonlit beach.

The control scenario—involving the search for a lost item in one's household—was similar to the romantic story in length and devoid of romantic content (Griskevicius, Tybur, et al., 2009). In the other control condition, participants did not read any scenario and instead simply started the study with the product task. It was expected that the two control conditions would not differ in their influence on the dependent measure, but the inclusion of both control conditions ensured that any effects of the mating prime were not driven by the content in the control scenario. As expected, the two control conditions did not differ in their effect on the dependent measures ($ps > .60$), so they were combined for the analyses.

Dependent measures. After the motive manipulation, participants were asked to rate three sets of products: the focal product set (wallets) and two filler product sets (toaster ovens, glasses) that served to decrease potential demand characteristics. In the focal product set, participants were asked to consider that they were in the market for a new wallet and had $30 to spend. Participants then considered two wallets they liked, which were similar in style and price but differed in whether others would perceive the product as being of high or low status.

The first (low-status) wallet was from a large, low-cost retailer's website; it was described as nearly identical in appearance to a prestigious brand wallet, but it had the low-cost retailer's brand on the front of the wallet. The second (high-status) wallet was available from an Internet retailer that specializes in designer replicas, or knockoffs. It was described as nearly identical in appearance to a prestigious (Coach) brand wallet and as displaying the prestige brand name on the front. Participants were assured that because the high-status wallet was technically not an exact copy of the Coach-brand wallet (although to the vast majority of people, it would appear to be the Coach-brand wallet), purchasing it was completely legal. The price of the two wallets was the same at $29. Participants then rated how likely they would be to purchase each wallet option (1 = *Not at all likely* to 9 = *Very likely*).

Results

Because we had specific predictions following the results of Study 1, we employed a set of planned simple slope tests that incorporated the within-subjects nature of the two wallet ratings. An initial examination revealed three cases that exhibited large Mahalanobis distances from the centroid of the independent variables; because these distances also were distinctly separated from the rest of the multivariate distribution, they were removed from subsequent analyses (Bollen, 1987; Tabachnick & Fidell, 1996, pp. 66–69).

Recall that following Study 1 results, we anticipated the mating prime to influence only the men following a relatively low-investment mating strategy (vs. a relatively high-investment strategy) when they considered purchasing a high-status wallet (vs. a low-status wallet). To test these hypotheses, we followed Aiken and West (1991) and first examined the relation between mating condition and conspicuous wallet purchase for men following a low-investment mating strategy (i.e., 1 *SD* above the mean of the SOI). When a two-tailed test was used, this slope was positive and significantly different from zero, $B = 1.45$, $t(200) = 2.22$, $p = .03$, $sr^2 = .02$, indicating that low-investment males had higher intentions to purchase the conspicuous product when primed with mating stimuli than if in the control condition. We then examined this relation for males following a relatively high-investment strategy (i.e., 1 *SD* below the mean of the SOI). This slope was not significantly different from zero, $B = -1.05$, $t(200) = -0.91$, $p = .36$, $sr^2 = .00$, suggesting that the mating prime has essentially no effect on the conspicuous purchase intentions of high-investment males (see Figure 2).

Identical slope tests were conducted for the lower status wallet to ensure that the effect of the mating prime was not simply to enhance spending generally. Neither simple slope was significant: first, for lower investing men in the mating condition relative to the control condition, $B = 0.29$, $t(200) = 0.38$, $p = .70$, $sr^2 = .00$, and second, for higher investing men in the mating condition relative to the control condition, $B = -0.15$, $t(200) = -0.19$, $p = .85$, $sr^2 = .00$. Therefore, the mating prime did not influence spending on the low-status wallet for men, regardless of their intended mating investment.

Discussion

Building on previous work that demonstrated an initial link between mating motives and men's conspicuous consumption (Griskevicius et al., 2007), the first two studies in the current research showed that the influence of mating motives on conspicuous consumption depends critically on the type of mating strategy being pursued by the man. Activating romantic desire had a different effect depending on whether a man was relatively more interested in pursuing a short-term mating strategy associated with low expected investment or a long-term mating strategy associated with high expected investment (Buss & Schmitt, 1993; Gangestad & Simpson, 2000).

Across the first two studies, conspicuous consumption tendencies for men following a lower investment (peacock-like) mating strategy were significantly influenced by the elicitation of a mating motive: Seeing photos of attractive women led these men to allocate more money to conspicuous products (Study 1), and reading a romantic story led these men to desire an apparently high-status (but not low-status) product (Study 2). However, in neither study did the elicitation of a mating motive influence conspicuous consumption tendencies among men following a high-investment (great skua-like) mating strategy.

Overall, it appears that men who are interested in short-term mating are motivated to conspicuously consume in mating contexts. A short-term mating strategy is directly associated with low male parental investment and is the type of strategy followed by peacocks and many mammalian species that manifest sex-specific mating-related conspicuous displays. Furthermore, both studies

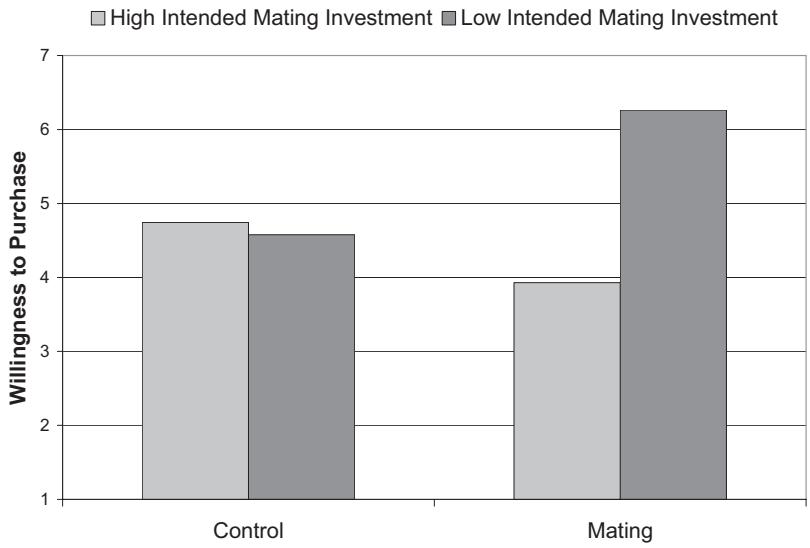

Figure 2. Men's willingness to purchase a status product as a function of motive and intended mating investment, Study 2.

suggest that showy product displays are not simply a general male mating tactic designed to convey a high level of economic resources.

Study 3: Short-Term vs. Long-Term Mating Motives and Conspicuous Consumption

Studies 1 and 2 expanded upon results from Griskevicius et al. (2007) by showing that conspicuous consumption is not used as a mating display by all types of men but is used specifically by men oriented toward pursuing short-term mates. Thus, consistent with strategic pluralism in mating, men following a low-investment mating strategy appear interested in spending their money on luxury goods as a form of mating display, whereas men following a high-investment mating strategy do not.

Just as mating primes increased conspicuous consumption only among some men (unrestricted men), only some contexts may trigger conspicuous consumption. In particular, conspicuous consumption may be triggered by cues specifically relevant to short-term mating opportunities, analogous to what triggers other displays such as the fanning of the peacock's tail. Study 3 explicitly manipulated key features of mating contexts to examine which types of cues do and do not trigger the desire to woo with waste. On the basis of theories of sexual selection, parental investment, and strategic pluralism, we examined two mating contexts, each of which is associated with a qualitatively different type of mating motive: a *short-term* mating motive (associated with low-investment and uncommitted romantic flings) and a *long-term* mating motive (associated with a high-investment committed relationship). Thus, we examined how each type of mating motive influenced conspicuous consumption for people following a low-investment versus a high-investment mating strategy.

Considering the three focal theories and the results in Studies 1 and 2, we predicted the following in terms of how mating motives should influence desire to spend money on conspicuous products. (a) For men following a low-investment mating strategy, conspicuous consumption should be triggered by a short-term mating motive (b) but not by a long-term mating motive. That is, for men following a peacock-like mating strategy, a committed relationship may be less desirable and therefore fail to elicit the motivation to conspicuously display. (c) For men following a high-investment mating strategy, we expected that neither type of mating motive would increase conspicuous consumption. That is, if conspicuous consumption signals quality as a short-term mate, such displays should not benefit men who are uninterested in pursuing uncommitted partnerships. Finally, given the unexpected finding in Study 1 for women following a high-investment mating strategy, we included women to determine whether this effect was reliable.

Method

Participants and design. Students at a large public university ($N = 240$, 93 women and 147 men; mean age = 18.9 years, range 18–25 years) participated in exchange for partial course credit. The design was between participants: 2 (participant sex: men/women) $\times$ 3 (motive: long-term mating vs. short-term mating vs. control). As in the first two studies, we measured participants' mating strategy (low-investment vs. high-investment) using the attitude items from the SOI ($\alpha = .85$).

A cover story was used to minimize potential demand characteristics. Participants were told that they were going to participate in several studies, the first of which concerned memory. Consistent with this cover story, participants read a short story and were told that they would be asked to recall information about the story later in the session. Because it was important to let some time pass before the memory recall task (ostensibly to allow for memory decay), participants would work on another survey regarding product preferences. Detailed poststudy interviews with participants during pilot testing did not reveal any indication of suspiciousness or any indication of a connection between the reading task and product survey.

Procedure. Following identical procedures from Griskevicius, Cialdini, and Kenrick (2006), we primed the short-term and long-term mating motives by having participants read one of two types of short stories that were similar in length and style. In the short-term story, participants imagined spending a romantic afternoon with a highly desirable opposite-sex person during the last day of vacation on an exotic island; the story ends as the two lovers are passionately kissing on a moonlit beach, and the story emphasizes that the two people will likely never see each other again. In the long-term mating story, participants imagined meeting someone on the university campus and spending a romantic evening together, including a candlelit dinner and a sweet kiss goodnight. Throughout the long-term story, it is emphasized that this person is likely to be a good committed relationship partner. Both stories have been shown to elicit positive feelings, arousal, and romantic desire for both men and women. However the short-term story focuses on an uncommitted romantic fling, whereas the long-term story focuses on a long-term committed relationship. In the control condition, participants read the same control story as in Study 2, which was similar in length and style to the mating stories but devoid of romantic content (Griskevicius, Tybur, et al., 2009).

Dependent measure. After the motive manipulation, participants indicated how much money they would spend on conspicuous products that in pilot testing were appealing to men and to women. Participants were asked, "Compared to the average student on campus, please indicate how much money you would want to spend on _____." The eight products were a nice dinner with friends, new car, new watch, new cell phone, dress shoes, new pair of sunglasses, new jacket, and nice shirt. Responses were provided on a 9-point scale (1 = *much less than the average student,* 5 = *about average,* 9 = *much more than the average student*). The eight items were combined ($\alpha = .86$) into a conspicuous spending index for the dependent measure.

Results

To examine our hypotheses, we again used a series of planned simple slope tests. An initial examination via regression revealed two cases that exhibited large Mahalanobis distances from the centroid of the independent variables; because these distances also were distinctly separated from the rest of the multivariate distribution, they were removed from subsequent analyses (Bollen, 1987; Tabachnick & Fidell, 1996, pp. 66–69). Our first two predictions were that men's mating investment intentions would be negatively associated with conspicuous spending (a) in the short-term mating condition (b) but not in the long-term mating condition.

To test these hypotheses, we again followed Aiken and West (1991) and first examined the relation between the short-term mating prime (relative to the control condition) and conspicuous spending for males following a low-investment mating strategy (i.e., 1 *SD* above the mean of the SOI). When a two-tailed test was used, this slope was positive and significantly different from zero, $B = 0.97$, $t(226) = 2.97$, $p = .003$, $sr^2 = .03$, indicating that lower investment males had higher intentions to spend conspicuously when primed with short-term mating stimuli than if in the control condition. We then examined the same relation for males following a relatively high-investment strategy (i.e., 1 *SD* below the mean of the SOI). This slope was not significantly different from zero, $B = -0.29$, $t(226) = 0.73$, $p = .46$, $sr^2 = .00$, suggesting that the short-term mating prime did not increase the conspicuous purchase intentions of high-investment males.

Next, we examined the relation between the long-term mating prime (relative to the control condition) and conspicuous spending for males following a low-investment mating strategy (i.e., 1 *SD* above the mean of the SOI). This slope was not significantly different from zero, $B = 0.51$, $t(226) = 1.60$, $p = .11$, $sr^2 = .01$, indicating that lower investment males did not report higher intentions to conspicuously consume when primed with long-term mating stimuli versus when in the control condition. We then examined the same relation for males following a relatively high-investment strategy (i.e., 1 *SD* below the mean of the SOI). This slope was also nonsignificant, $B = -0.03$, $t(226) = -0.07$, $p = .94$, $sr^2 = .00$, suggesting that the long-term mating prime did not increase the conspicuous purchase intentions of high-investment males (see Figure 3).

As in Study 1, we conducted an analogous set of simple slope tests focusing on women's spending. None of these tests produced significant findings. For the short-term mating prime relative to the control condition, neither lower investment women, $B = -0.45$, $t(226) = -0.63$, $p = .53$, $sr^2 = .00$, nor higher investment women, $B = -0.60$, $t(226) = -1.54$, $p = .13$, $sr^2 = .00$, exhibited significant slopes. Similarly, for the long-term mating prime relative to the control condition, neither lower investment women, $B = -0.33$, $t(226) = -0.55$, $p = .58$, $sr^2 = .00$, nor higher investment women, $B = -0.38$, $t(226) = -0.99$, $p = .32$, $sr^2 = .00$, exhibited significant slopes.

Discussion

Whereas previous research suggested that men's conspicuous consumption might be related to a general desire for mates (Griskevicius et al., 2007), we instead found that expected spending on showy products is driven specifically by a motive for short-term mating (i.e., uncommitted romantic flings). That is, even for men following a low-investment (peacock-like) mating strategy, conspicuous consumption was triggered only in the context predicted by the theories of parental investment and strategic pluralism, namely, when primed with a desire for short-term mates. In contrast, these men did not alter their reported conspicuous spending when primed with the prospect of a loving, committed relationship. Further support for the underlying mechanism of conspicuous consumption pertains to the specificity of these effects. Men following a high-investment mating strategy and women (overall) failed to enhance their intended spending on showy products as a function of being reminded of short- or long-term mating opportunities. Note that the unexpected effect observed in Study 1 for high-investment women was not replicated in Study 3.

By revealing which people in which contexts strategically turn to flashy product displays in mating, these findings provide important insights into the function of conspicuous consumption. Conspicuous consumption among men seems aimed at signaling desirability as a short-term mate. If so, such signals may enhance a man's desirability as short-term romantic partner. However, because the studies reported thus far have focused on the display side of the signaling system, it is unclear whether men's conspicuous consumption does signal mating-relevant information to the

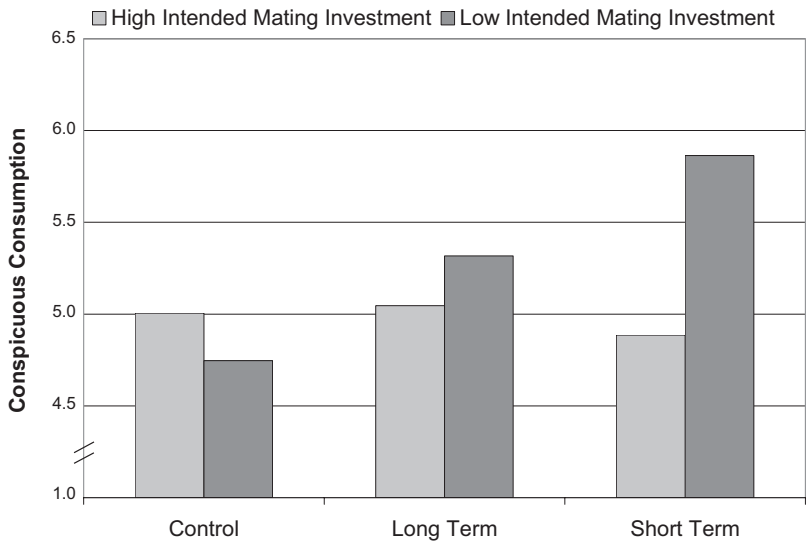

Figure 3. Men's conspicuous consumption as a function of specific motive and intended mating investment, Study 3.

opposite sex or anything at all. We turn to this question in the next study.

Study 4: Perceptions of Conspicuous Consumers

Studies 1, 2, and 3 indicated that conspicuous consumption has a signaling function for men relevant to short-term mating. If a signaling system is to work effectively, however, perceivers need to accurately interpret such signals. For example, a peacock's elaborate plumage is useless as a signal of mate quality unless it is perceived as attractive by potential mates. Similarly, male hummingbirds' brilliant feather displays had to coevolve with female hummingbirds' visual sensitivity to the color red. Conspicuous consumption will not be an effective mating signal for an unrestricted man to send unless it increases his desirability as a short-term mate.

Study 4 investigated observers' reactions to conspicuous consumers. Men and women were asked to indicate the desirability of an opposite-sex individual who had recently purchased either a conspicuous or a nonconspicuous car. It is well documented that women across cultures place a high value on wealth and resources in a mate, particularly when evaluating a man as a long-term mate (Baumeister & Vohs, 2004; Li et al., 2002; Shackelford et al., 2005). If conspicuous consumption functions mainly as a display of resources and wealth, one would expect that such displays would enhance men's general desirability as mates. However, our earlier studies suggested that conspicuous consumption is used as a signal specifically in short-term mating contexts. Because flashy product displays appear to be used in mating specifically by men following a low-investment mating strategy and specifically in contexts affording short-term mating opportunities, we predicted that conspicuous consumption would enhance men's desirability as a short-term relationship partner (i.e., a date) but not necessarily as a long-term relationship partner (i.e., a marriage partner). Further, we predicted that if men indeed use conspicuous consumption to attract short-term mates, then women should perceive men who engage in this form of conspicuous display as more inclined to follow an unrestricted (short-term) mating strategy.

Because health and fertility (appearance-related) cues are more highly valued than status, intrasexual dominance, or resource cues by men in mate choice, we did not expect the purchase of a conspicuous product to enhance men's judgments of a female target as either a short-term or a long-term partner. Nor did we expect perceptions among men of a woman's sexual strategy to be influenced by whether the woman engages in conspicuous spending, as the prior studies found no consistent link between women's intended mating investment and conspicuous consumption.

Method

Participants and design. Students (N = 408, 252 women and 156 men; mean age = 21.4 years, range 18–57 years) attending a large public university participated in exchange for partial course credit. The experiment used a 2 (target sex: men/women) × 2 (car type: conspicuous vs. nonconspicuous) × 2 (relationship type: short-term vs. long-term) mixed design. Participants evaluated target individuals as potential dates and marriage partners: Female participants evaluated male targets (and male participants evaluated female targets) who had recently purchased either a conspicuous or a nonconspicuous car.

Procedure. Participants were informed they would be making evaluations of contemporary businesspeople and then read a description of an opposite-sex person. The description included information about the target's age (32), education (MBA), occupation (senior analyst for a *Fortune 500* company), income ($80,000 per year), hobbies (biking), and leisure activities (going to movies, listening to music).

Embedded within the person's description was the key manipulation. The description noted that the person had just purchased a new car. It was either a nonconspicuous car (Honda Civic; retail price = $15,655) or a conspicuous car (Porsche Boxster; retail price = $58,000). The cars were prerated by two independent

samples of students who were demographically similar to the experimental participants, to ensure that these cars were perceived as intended. One group rated the cars on status (1 = *very little* to 9 = *very much*; for further information, see Sundie, Ward, Beal, Chin, & Geiger-Oneto, 2009). The conspicuous car was judged as having significantly more status ($M_{\text{Porsche}} = 8.12$ vs. $M_{\text{Honda}} = 4.07$), $t(74) = 15.18$, $p < .001$. Another group (22 women and 18 men) rated the cars on the extent to which purchasing the car would be considered conspicuous consumption (1 = *not at all* to 9 = *definitely*), according to the definition of conspicuous consumption that was derived from Veblen and provided to raters in the first study (Study 1, Method). The Porsche was rated as more indicative of conspicuous consumption than the Honda ($M_{\text{Porsche}} = 7.72$ vs. $M_{\text{Honda}} = 3.03$), $t(38) = 15.36$, $p < .001$. There were no sex differences in either of these ratings.

Dependent measures. The target's desirability as a mate was assessed with two items asking the extent to which the person was (a) desirable for a short-term relationship (a date) and (b) desirable for a long-term relationship (marriage). Responses were provided on a 1 to 9 scale (1 = *not at all desirable* to 9 = *very desirable*).

The target's mating strategy was assessed with the SOI items used in Studies 1, 2, and 3. In this current study, however, participants were asked to answer the items as they thought the target person would answer them. For instance, participants were asked to rate the extent to which they thought the target would agree or disagree with the statement "I can imagine myself being comfortable and enjoying 'casual' sex with different partners." Response was on a 1 to 9 scale (1 = *strongly disagree* to 9 = *strongly agree*).

Results

We first examined the desirability of the target as a mate based on whether he or she owned a conspicuous or a nonconspicuous car. As predicted, a conspicuous car enhanced a man's desirability to women for a potential short-term relationship, $F(1, 404) = 5.92$, $p = .02$, $d = 0.29$ (see Figure 4). However, information that a man owned a conspicuous car did not enhance his desirability to women as a potential marriage partner, $F(1, 404) < 1$, $d = 0.02$. The female target's desirability to men did not differ across product types or relationship contexts: desirability as a potential short-term partner, $F(1, 404) < 1$, $d = 0.13$; desirability as a potential long-term partner, $F(1, 404) < 1$, $d = 0.08$. In sum, a conspicuous car enhanced the desirability of the male target as a short-term relationship partner but did not enhance his desirability as a long-term partner, and conspicuous consumption was unrelated to the female target's desirability for either relationship.

Three participants did not complete one or more of the items necessary to compute the perceived sociosexual attitudes dependent measure and thus were excluded from two tests presented below. A comparison aimed at testing impressions of a man's sexual strategy as a function of which car the man drove was conducted. As expected, the male target who engaged in conspicuous consumption was perceived as having a less restricted (more short-term-oriented) approach to mating ($\alpha = .82$ for the three SOI items). Women perceived the man with the Porsche as opposed to the Honda as significantly more interested in short-term, uncommitted sexual relationships, $F(1, 401) = 32.56$, $p < .001$, $d = 0.71$ (see Figure 5). This finding suggests that women indeed accurately perceive men who conspicuously consume as more sexually unrestricted than men who spend frugally.

We next examined men's perceptions of female conspicuous consumers. A comparison identical to the one reported above, but for men's ratings of the female target, was marginally significant, $F(1, 401) = 3.18$, $p = .08$, $d = 0.30$.

Discussion

Whereas the first three studies examined the display side of conspicuous consumption, the current study examined the complementary perception side of this signaling system. Results from Studies 1, 2, and 3 suggested that conspicuous consumption is used

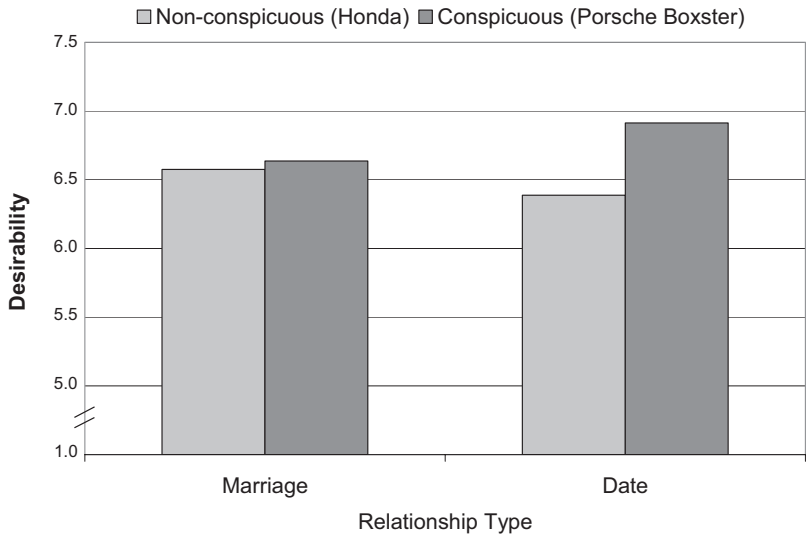

Figure 4. Women's perception of a man's desirability as a long-term versus a short-term mating partner as a function of the man owning a conspicuous versus non-conspicuous car, Study 4.

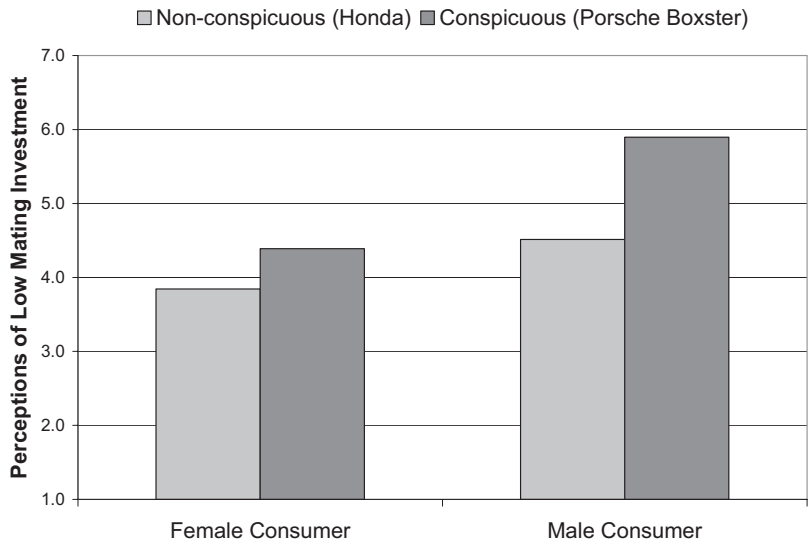

Figure 5. Perception of a target individual's openness to short-term mating as a function of target sex and owning a conspicuous versus non-conspicuous car, Study 4.

by unrestricted men as a mating signal. However, for the signal to be effective, women must find men who conspicuously consume to be attractive as short-term mates. Study 4 demonstrated that this is indeed the case: A physically attractive, successful man who chose to purchase a luxury product was more desirable to woman as a short-term partner (date) than the same man portrayed as instead having chosen to purchase a nonluxury product.

Additionally, Study 4 showed that female observers believe that male conspicuous consumers are inclined toward a short-term (low-investment) mating strategy. Women inferred that a man described as having purchased a flashy car, as compared to a less flashy car, was more open to uncommitted sexual partnerships. Together with the findings from first three studies (which showed that conspicuous consumption is a mating tactic used primarily by men following a low-investment strategy), women appear to be accurate in their interpretation of what a flashy car says about its male owner's romantic intentions.

Men judging a woman on desirability as a short-term and a long-term mate were unmoved by her purchase of a conspicuous versus frugal automobile. The overall pattern of findings in the present research indicates women's conspicuous consumption does not function primarily as a mating signal directed at men (unrestricted women's conspicuous consumption is unresponsive to a mating prime), though men did view a woman with a conspicuous car as marginally more sexually unrestricted.[1] Men's conspicuous consumption appears to be more strongly related to perceptions of mating investment intentions, evidenced by the difference in effects sizes for perceptions of men versus women (d = 0.71 vs. 0.30).

General Discussion

What do peacocks have to do with Porsches and Thorstein Veblen? The current research suggests that conspicuous products such as Porsches might serve, for humans, an analogous function to that served by conspicuous tails for peacocks. Despite being wasteful, frivolous, and even narcissistic, conspicuous consumption appears across human cultures and eras. Emerging theory and research suggest that conspicuous consumption serves a central function: These displays represent an adaptive communication strategy aimed at obtaining reproductive rewards (Griskevicius et al., 2007; Miller, 2000, 2009; Penn, 2003). Just as peacocks have evolved to flaunt their wasteful tails before potential mates, men might similarly woo with wasteful expenditures to charm potential mates.

Recent research indicated an initial empirical link between mating motives and men's conspicuous consumption, positing that men might use costly products to display their wealth to potential mates (Griskevicius et al., 2007). Building on this work, we examined more carefully the precise nature of conspicuous consumption as a signaling system. Taking a life-history theory perspective on individual differences in resource allocation and leveraging the theories of sexual selection (Darwin, 1871), parental investment (Trivers, 1972), and strategic pluralism (Gangestad & Simpson, 2000), we investigated (a) who sends such signals, (b) which mating contexts trigger them, and (c) how signalers are perceived by observers. As we discuss below, the present studies suggest that conspicuous consumption is linked to individual dif-

[1] A pilot study examining perceptions of men's and women's mating strategy found the identical pattern of results when observers compared targets who owned a standard Honda Civic four-door sedan versus an Acura four-door sedan enhanced with conspicuous features such as leather seats and alloy wheels. Using a similar methodology as the current study, the pilot study found that women observers perceived male targets with the more conspicuous Acura as following a more unrestricted mating strategy (M_{Acura} = 5.25, M_{Honda} = 4.13; p = .02, d = 0.54). Male observers, however, perceived the woman with the conspicuous Acura as only slightly more (nonsignificantly) unrestricted (M_{Acura} = 4.76, M_{Honda} = 4.51; d = 0.14). Thus, the findings from the pilot study suggest that the current findings pertaining to the Porsche are unlikely to be a result of the specific car model examined in the current study.

ferences in life-history strategy (i.e., it is linked to men's short-term mating goals and not to the achievement of long-term mating goals).

Conspicuous consumption does not simply parallel the sex difference in conspicuous display found in peacocks, for instance, because peacocks are of a species in which all males make low parental investments. Rather, our findings are consistent with a nuanced understanding of how human mating strategies reflect general principles of parental investment and different life-history trajectories. Unlike peacocks, human males can and do follow different sexual strategies. Some men follow a low-parental-investment (peacock-like) strategy by investing in the pursuit of multiple short-term sexual partners. Other men follow a (non-peacock-like) high-parental-investment mating strategy by investing more effort, time, and money in a primary mate and any offspring resulting from that partnership. Accordingly, we might expect human males with peacock-like intended mating investment to exhibit costly and showy behavioral displays such as conspicuous consumption in mating contexts.

Consistent with this notion, we found that mating motives triggered conspicuous consumption among men following an unrestricted, low-investment strategy (Studies 1 and 2). In contrast, mating motives did not influence spending on or desire for flashy products for restricted, high-investment men. Hence, increases in conspicuous consumption in response to mating motivations are not universal among men; instead, they follow a theoretically sound pattern as a function of individual differences in reproductive strategy. Individual differences in men's intended reproductive investment influence their allocation of economic resources; in the present research, to the consumption and display of status-linked products.

Conspicuous consumption displays also vary in theoretically predicted ways as a function of the type of mating context. When primed with mating-related stimuli, unrestricted, low-investment men displayed an enhanced motivation to conspicuously consume (Studies 1 and 2), likely because such men interpret these contexts as opportunities for short-term mating. However, when explicitly primed with a desire for long-term mates, these unrestricted men did not increase in their conspicuous consumption tendencies (Study 3). Given that (a) such men are, by their nature, less likely to pursue and invest in a single, committed relationship and (b) wasteful displays are likely not attractive to potential long-term partners, this complementary pattern found in Study 3 further enforces the specificity of conspicuous consumption as a mating display found in Studies 1 and 2.

Transmission and Reception of Mating Signals

Finally, the flaunting of status-linked products appears to have the desired effect on female observers: Men who purchase luxury goods are perceived as more attractive specifically as short-term, but not long-term, partners (Study 4). This final finding is crucial to our hypothesis that conspicuous consumption functions as a mating display. If peahens did not find the peacock's tail attractive, the tail would not and could not have been selected for as a mating display—those peacocks who invested the somatic energy into growing and maintaining the tail would have paid high costs for the tail without gleaning reproductive benefits. Similarly, if women did not find men who display flashy and expensive goods to be more attractive as short-term mates, conspicuous consumption would be ineffective as a sexual signal. Those men who frittered away their resources on conspicuous display would have wasted resources that could have gone to necessities with no offsetting reproductive advantage.

The findings from four studies indicate that conspicuous consumption functions as part of the mating signaling system. This work builds upon recent findings showing that mating motives trigger a variety of male conspicuous displays, such as public benevolence and generosity (e.g., Griskevicius et al., 2007; Iredale, Van Vugt, & Dunbar, 2008; Miller, 2007), aggression (Griskevicius, Tybur, et al., 2009), creativity (e.g., Griskevicius, Cialdini, & Kenrick, 2006; Miller, 2000), and nonconformity (Griskevicius, Goldstein, Mortensen, Cialdini, & Kenrick, 2006). The present research takes a more nuanced approach than previous investigations of conspicuous consumption in mating contexts by going beyond the examination of straightforward sex differences in display. The current studies explore the theoretically relevant roles of differences in individuals' mating strategies and the effects of different mating contexts (short-term vs. long-term) as influences on the motivation for such displays.

The present data imply that individual differences in mating strategy may underlie male–female differences in conspicuous spending. Although Griskevicius et al. (2007) found that men were prompted to spend more conspicuously than women in a mating context, the present data suggest that considering individual differences in life-history trajectory is crucial for gaining a sufficiently nuanced understanding of the motivations to engage in costly displays. Here, the interplay among a person's sex, mating strategy (low vs. high parental investment), and the type of mating context (short-term vs. long-term) is in fact a key determinant of the motivation to conspicuously consume and perhaps a variety of other mating-oriented conspicuous displays.

Alternative Explanations and Limitations

Alternative theories might be used to advance hypotheses about sex differences in conspicuous consumption. One alternative, a social roles perspective, might predict that as in American culture men more than women are socialized to emphasize economic achievement, men would be generally more motivated to conspicuously consume to declare their economic success. Indeed, we found in a pilot study that when men and women were asked to describe a time they witnessed someone conspicuously consuming, both were significantly more likely to recall a man behaving in this manner. But at the same time, men and women in our pilot study overwhelmingly recalled a woman as the canonical sex when asked to think of someone they know who enjoys shopping or as the person they know who spends the most time shopping. A social roles perspective may have predicted across-the-board gender differences in conspicuous consumption. However, it would not have predicted the specific pattern of results obtained in the present research, in which only men following a low-investment mating strategy engaged in conspicuous consumption and only in a short-term mating context—a pattern that follows from considerations of sexual selection, differential parental investment, and strategic pluralism.

It is important to note that not all conspicuous purchases are linked to the pursuit of a low-investment mating strategy. Indeed,

conspicuous consumption is a rather novel behavioral manifestation in the context of evolutionary time, made possible by larger, exchange-based economies and the ability to accumulate and store resources. The current research investigates just one way that conspicuous displays involving spending may be a path to enhanced reproductive success.

In Study 1, in a pattern opposite to that observed for the men, women following a relatively high-investment mating strategy displayed an unexpected link between mating context and conspicuous consumption. Though we did not expect women to gain an advantage in attracting short-term mates via conspicuous spending, neither did we expect that women who are relatively disinterested in short-term sexual relationships would spend more conspicuously in response to active mating motives. We argue, however, that interpretation of this effect would be premature, as the effect was not replicated in Study 3 under highly similar conditions. Indeed, Study 3 suggested that women spent similarly on conspicuous items irrespective of both mating condition and investment strategy. Future research is needed to elucidate women's motives for conspicuous spending and possible effects of women's sexual strategies on their consumption choices. Though not consistently linked with managing men's impressions in a mating context here, women's conspicuous consumption may instead be driven by other goals, such as impressing other women.

The participant samples in the present studies were drawn from undergraduate student populations at two major public universities in the southeastern and southwestern United States. One potential limitation of student samples is the generalizability of the results, although the characteristics of these specific student samples might mitigate this concern. Both universities are located in major urban areas (two of the five most populous cities in the nation). The southeastern university is known for having one of the most ethnically and demographically diverse undergraduate populations in the country. The southwestern university provides a counterpoint to the other in that it comprises college students who are relatively younger and less ethnically diverse. There is a wide range of student academic preparation and background (e.g., high school grades, college entrance scores, socioeconomic status) at both universities. Despite the diversity of the backgrounds of participants in these studies, future research could benefit from testing specific populations in terms of age, ethnicity, demographic, and psychographic variables.

Conclusion

This set of studies presented an interdisciplinary bridge between research on evolutionary biology, the social psychology of self-presentation, and the psychology of consumption by testing hypotheses guided by life-history principles about the motivation to conspicuously consume and display products. Life-history principles have been widely applied in biology, but psychological researchers have only recently begun to incorporate this potentially powerful explanatory framework, and have focused mainly on sexual behaviors, per se. Thus, this research represents a novel contribution in that it leverages life-history theory and principles to enhance understanding of how people make trade-offs in allocating scarce economic resources to consumption choices.

Darwin's theory of sexual selection links conspicuous displays to an advantage over romantic competitors in a mating context. The biological principle of differential parental investment further links costly displays to low investment by males in any offspring that result from sexual encounters with the opposite sex. The present experiments demonstrate that the motivation to conspicuously consume and display, to the extent that it is evoked by a mating context, may be most prominent among men pursuing a sexual strategy that involves low parental investment. Conspicuous consumption was pronounced among men interested in short-term mating liaisons and was perceived accordingly by women.

When this interdisciplinary perspective is applied, however, the connections go beyond the links among peacocks, Porsches, and Thorstein Veblen. An evolutionary perspective on consumer motivation takes a different frame of reference than do perspectives that focus exclusively on cognition, learning, or culture. This different viewpoint is beneficial insofar as multilevel analyses aid in gaining a complete understanding of human behavior. Indeed, many novel findings with relevance to consumer and economic decision making are being generated by considering the interactions between and among these different levels of analysis (e.g., Baker & Maner, 2008; Baumeister & Vohs, 2004; Ermer, Cosmides, & Tooby, 2008; Griskevicius, Goldstein, et al., 2009; Griskevicius, Tybur, & Van den Bergh, 2010; Kenrick et al., 2009; Miller, Tybur, & Jordan, 2007; Wilson & Daly, 2004). The current research adds to the body of work employing adaptationist logic to generate novel hypotheses about the social implications of consumption and demonstrates the utility of evolutionary theory for building bridges between and among consumer, economic, and social psychology.

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(*Appendix follows*)

Appendix

Product Categories and Products in Study 1 Dependent Measure

1. Clothing (Ralph Lauren shirt, $139; Old Navy jeans, 2 pair, $55; Abercrombie & Fitch shirt, $40)
2. Clothing accessories/shoes (Kenneth Cole shoes, $125; Revo sunglasses, $210; JanSport backpack/bookbag, $40)
3. Car accessories/stereo equipment for car (Sony car stereo CD/MP3, $1,000; Pioneer CD/car stereo, $250; car wash and detail package, $100)
4. Home appliances/services (6 house cleanings by a maid, $570; Maytag Neptune washer, $1,300; Black & Decker toaster oven, $40)
5. Personal care products (Acqua Di Gio fragrance, $80; MAC cosmetics/skin care, $180; Oral B electric toothbrush, $60)
6. Televisions (Sony 43-in. projection high-definition TV, $1,700; RCA 13-in. TV, $90; Panasonic 27-in flat-screen TV, $500)
7. Personal electronics (Motorola cell phone, $300; Kodak Advantix camera, $120; Apple iPod portable MP3, $500)
8. Sportswear (Polo jersey and track pants, $160; Nike athletic shoes, $130; Old Navy athletic pants and sports shirt, $50)
9. Food and entertainment (Grocery voucher [food only], $100; dinner for 2, Ruth Chris, $200; dinner for 4, TGI Friday's, $80)
10. Computer equipment (Compaq handheld PC, $600; 17-in. iMac or 20-in. Dell, $2,000; basic eMac or basic Dell, $900)
11. Watches (Timex, $40; Fossil, $100; Tag Heuer, $1,900)
12. Treating others to drinks (Starbucks with 1 friend, $10; Four Peaks with 3 friends, $50; Cajun House with 10 friends, $300)

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