



Contents lists available at ScienceDirect

## Journal of Business Research

journal homepage: [www.elsevier.com/locate/jbusres](http://www.elsevier.com/locate/jbusres)

## Mating and marketing

David M. Buss<sup>a,\*</sup>, Pete Foley<sup>b</sup><sup>a</sup> Department of Psychology, University of Texas, 1 University Station, A8000, Austin, TX 78712, United States of America<sup>b</sup> Pete Foley Innovation, Las Vegas, NV, United States of America

## ARTICLE INFO

## Keywords:

Mating  
Marketing  
Mate preferences  
Sex differences  
Gender-specific marketing

## ABSTRACT

Mating motives, informed by an evolutionary perspective, are central to marketing and consumer behavior. Humans have an evolved menu of mating strategies that vary along a temporal continuum anchored by long-term committed mating (e.g., marriage) and short-term mating (e.g., one-night stands, brief affairs). Men and women, although similar in some ways, differ in their psychology of short-term and long-term mating in some respects. The proposed framework yields a four-quadrant matrix useful for more gender-specific and mating strategy-specific marketing—women's long-term, men's long-term, women's short-term, and men's short-term. Mating psychology within these quadrants include mate choice copying, error management, the sexual over-perception bias, cues to sexual exploitation, good-dad mate preferences, temporal discounting, and the psychology of opportunity costs. Discussion focuses on gender-specific marketing, market segmentation, implicit versus explicit mating cues, the importance of context, consumer's long-term interests, and the power of attention-grabbing mating cues for non-mating related products and consumer behavior.

## 1. Introduction

Mating motives are central to marketing. This may seem obvious. It's not terribly subtle when a car manufacturer perches an attractive woman in a cocktail dress on the hood of a car, or when an ad features a woman admiring a man holding a particular brand of beer. This essay argues that mating motives are far more important, with many more diverse and quite subtle manifestations that go far beyond these more obvious applications. They represent an ocean of largely untapped potential for marketing effectiveness. And effectiveness pivots on deep knowledge of our evolved mating psychology. Knowledge of that psychology, in turn, hinges on understanding the evolutionary processes that created that psychology.

When most people think about evolution, they conjure up clichés such as ‘survival of the fittest’ or ‘nature red in tooth and claw.’ Although survival is important, it turns out that its importance is secondary. Evolution by selection occurs through differential *reproductive* success, not differential *survival* success. A person can live to be 100 years old, but if he or she fails to reproduce, their genes perish with them. Reproductive success, in turn, hinges critically on mating success. Humans have adaptations that actually impair their survival, such as risk-taking in males when they enter the arena of mate competition, because those adaptations enhance mating success even at the cost of dying sooner. Those who fail to mate fail to become ancestors.

Each living human comes from a long and unbroken line of ancestors, each of whom succeeded in the many hurdles of mating. Each of our ancestors succeeded in choosing a fertile mate, attracting a fertile mate, being reciprocally chosen by that fertile mate, copulating with sufficient frequency to create successful conception, and often providing resources and protection to ensure successful birth and subsequent child survival. Mating success is the evolutionary bottleneck through which all reproductively successful individuals must pass. As the descendants of this incredibly long line of successful ancestors, stretching back 800 million years since the origin of sexual reproduction itself, each modern human carries with them the mating psychology that led to their ancestors' success. And it is this complex mating psychology that can be harnessed for successful marketing. This essay provides several examples of how this can be achieved. It builds upon, but does not review, the excellent previous work done in this area by pioneers such as Saad (Saad, 2007, 2011), Miller (Miller, 2009), Kenrick and Griskevicius (2013), and Otterbring and colleagues (Otterbring et al., 2018).

## 2. Humans have a menu of mating strategies

A core premise of modern evolutionary theories of mating, notably Sexual Strategies Theory (Buss & Schmitt, 1993, 2019), is that humans have evolved a multifaceted mating psychology consisting of a complex

\* Corresponding author at: Department of Psychology, University of Texas, Austin, TX 78712, United States of America.  
E-mail address: [dbuss@austin.utexas.edu](mailto:dbuss@austin.utexas.edu) (D.M. Buss).

<https://doi.org/10.1016/j.jbusres.2019.01.034>

Received 1 June 2018; Received in revised form 15 January 2019; Accepted 18 January 2019  
0148-2963/ © 2019 Published by Elsevier Inc.

suite of psychological adaptations, each of which evolved in response to evolutionarily recurrent adaptive challenges. Many of these challenges are subsumed under the rubric of sexual selection theory. The two broad adaptive problems that humans faced were (1) preferential mate choice of partners with key fitness attributes, and (2) competing with rivals for desirable mates.

Both women and men have evolved a menu of mating strategies that include long-term committed mating, short-term mating, serial mating, and extrapair mating. Although variable in form and function, long-term matings tend to be characterized by high levels of commitment, pair bonding, and emotional involvement, while short-term matings such as one-night stands, brief hookups, and temporary liaisons tend to lack these features. These ends of the temporal continuum are rough proxies and do not fully capture the psychological complexities of the suite of mating strategies that lie along this continuum.

Because different adaptive problems must be solved when pursuing these different strategies, selection has forged a complex mating psychology designed to reap the benefits and minimize the costs of each strategy. In all domains in which men and women have faced similar adaptive challenges in mating, such as solving the commitment problem in long-term mating, men and women will be similar in their underlying mating psychology (Buss, 1995). In domains in which men and women have faced different adaptive challenges recurrently throughout human evolutionary history, the sexes will differ in their mating psychology (Buss, 1995).

Women and men have fundamentally different and complementary forms of reproductive biology. Fertilization occurs within women, not within men. Post-puberty, women are fertile for only a day or two per month; men's fertility is continuous rather than episodic. Women's fertility drops dramatically after age 35; men's fertility declines more gradually over their lifespan. Women and men differ dramatically in the minimum obligatory investment to produce a single offspring: nine months of pregnancy for women versus one act of sex for men. Selection has favored a sex-differentiated suite of adaptations regarding short-term mating strategies and the circumstances in which they are implemented. Access to fertile women has historically been a key constraint on men's reproductive success, so selection has favored a psychology of short-term mating specially designed to overcome this constraint. Elements of this strategy include motivations to access a variety of sex partners, a sexual over-perception bias, and arousal-specific shifts in risk-taking thresholds. Some women in some circumstances are also motivated to pursue short-term mating, and in these contexts they tend to prioritize a mate's physical attractiveness, immediate status, and extravagant display of resources.

The deployment of different sexual strategies, such as short-term and long-term strategies, is highly context dependent (Buss & Schmitt, 2019). These contexts include (1) the individual's mate value; (2) the operational sex ratio in the relevant mating pool; (3) the strategies pursued by others in the mating pool; (4) the costs that might be incurred by the pursuit of each strategy, including sexually transmitted infections, reputational damage, and violence from allies, kin, or extant mates; and (5) ecological variables such as parasite prevalence, scarcity of food resources, intergroup warfare, sex-specific mortality, droughts, and other evolutionary bottlenecks.

Crossing short-term and long-term mating strategies with men and women yields a four-quadrant matrix, as shown in Table 1. This table and the sections that follow highlight just a few of the psychological design features that are highly relevant to mating and marketing, and these are discussed below.

Before we jump to the detailed discussion, we note that this discussion focuses primarily on heterosexual mating. There is a small, but growing, body of knowledge that provides insight into diverse, non-heterosexual mating behavioral and motives, and this work has similar potential to develop evidence based-marketing strategies for relevant consumers (e.g. Lawson, James, Jansson, Koyama, & Hill, 2014). Given space constraints, we have deferred discussion about this important

**Table 1**  
Gender-specific marketing and mating strategy: key features of evolved psychology.

	Short-term mating	Long-term mating
Men	Steep temporal discounting sexual over-perception bias Desire for sexual variety Prioritize body attractiveness Sexual exploitability cues	Delayed temporal discounting Prioritize facial attractiveness Prioritize health cues Prioritize sexual fidelity cues Prioritize good parent cues
Women	Mate copying effect Prioritize physical attractiveness Prioritize immediate resource displays Attraction to masculine features	Delayed temporal discounting Prioritize resource potential Prioritize good partner cues Prioritize good-parent cues Prioritize commitment cues

domain, which deserves a detailed analysis in its own right.

### 3. Temporal discounting—Valuing the present over the future

Every human has a finite resource budget—limited time, attention, money, and effort. Life consists of a series of decisions about how to allocate those resources. A critical allocation decision hinges on investing in the present versus investing in the future—the temporal discounting function. This goes by many names—time discounting, delay discounting, time preference, hyperbolic discounting. People are said to be ‘impulsive’ if they act to maximize current pleasure without thinking about the future. They are said to ‘delay gratification’ when they make sacrifices in current pleasure for a career that will pay off many years down the line, or when they save for college, a house, or retirement. In economic terms, this is sometimes described as the value of receiving a good now versus at some point in the future. A key insight is that temporal discounting can be influenced or manipulated predictably with knowledge of our evolved psychology.

Marketing campaigns in the past sometimes inadvertently hit upon this strategy successfully, presumably in most cases without deep knowledge of our psychology of temporal discounting, instead relying on their intuitive folk psychology. For example, a highly successful beer ad from decades ago adopted this slogan: “*You only go around once in life, so you might as well grab for all the gusto you can.*” This manipulates our discounting function—life is short, so why wait for pleasure at some distant future point when could you could have it now?

Influencing the psychology of temporal discounting also exploits our mating psychology. The internet dating site, *AshleighMadison.com*, targets married men and women who want to cheat on their spouses. We know that women and men have an evolved desire for sexual variety, albeit one that is stronger in men on average (e.g., Schmitt, 2003). Yet there are countervailing forces—a sense of the immorality of cheating, the desire not to jeopardize our long-term mateship, the fear of getting caught and the reputational damage that might ensue. To tip the scales, *AshleighMadison.com* created a brilliant slogan—“*Life is short; have an affair.*” To paraphrase Steven Pinker, it doesn't make sense to scrimp and save all your life so that you can have one hell of a 90th anniversary birthday bash. Marketing that influences our psychology of temporal discounting to value the present over the future allows some potential customers to overcome their reservations about long-term costs in order to reap short-term sexual gains. An evolutionary lens would have revealed what emerged only later through hackers of the site—that this form of future discounting proved much more appealing to men, given their evolved short-term mating psychology. It turned out that very few actual women were on the site; many of the women's profiles were in fact fake, created to lure in men.

In addition to verbal messages that influence the temporal

discounting, evolutionary psychologists have discovered that images sometimes do the trick. Men exposed to images of physically attractive women engage in sharp future discounting (Wilson & Daly, 2004). They take a smaller sum of money immediately rather than waiting for a larger sum of money later. Men exposed to unattractive women did not discount the future. Nor did women exposed to either attractive or unattractive men. Another study exposed men to photos of women in skimpy swim suits or lingerie (Van den Bergh, Dewitte, & Warlop, 2008). Men in this condition showed temporal impatience—they preferred monetary rewards now rather than in the future.

These examples suggest that although temporal discounting is a pervasive human trait, and one that is common in marketing today, for example via ‘buy now’ or via limited time offers, activating a mating context may provide an additional, and more subtle level of control of this bias. We can potentially dial it up, as in the example of men exposed to images of attractive women, or perhaps turn it down, by presenting images of children or family, depending upon what type of product or service we want consumers to engage with.

Interestingly, individuals with brains possessing especially sensitive reward systems discount the future even more sharply than other men. A possible mechanism through which these effects occur is subjective time perception—sexual cues cause men to perceive the future as unbearably far away (Kim & Zauberman, 2013). Further evidence is provided by Ariely and Loewenstein’s (2006) experiments, which showed that risky and even morally questionable short-term sexual decisions are more likely to be made when men are sexually aroused (see also Jahedi, Deck, & Ariely, 2017).

The fact that men with financial resources and social status are especially attractive to women is also a key part of the explanation (Buss, 1995). Men may unconsciously be seeking to improve their own mate value when cued by attractive mating opportunities. Support for this contention comes from a study that found that men exposed to women dressed in sexy outfits actually *noticed* and *attended to* high-status products such as expensive watches, cars, or home cinema equipment (Janssens et al., 2011; see also Griskevicius et al., 2007, for other studies that find that priming mating motives in men orients them toward luxury products and costly signaling).

Men also show steeper delay discounting than do women for the mere opportunity to view photos of members of the opposite sex (Hayden, Parikh, Deane, & Platt, 2007).

In addition to demonstrating that images can influence future discounting, these findings underscore the conclusion that marketing that uses mating psychology has to be gender-specific. Evolutionary psychologists were the first to discover that men prioritize physical attractiveness in mate selection more than women *universally* across all cultures—a feature of mating psychology that has remained invariant over time, place, political system, mating system, and cultural variation in level of gender equality (Buss, 1989; Buss & Schmitt, 2019). Moreover, no domain of human psychology is more sex-differentiated than the domain of mating (Buss & Schmitt, 2019).

#### 4. Valuing the future over the present

All the above efforts to influence temporal discounting have been geared toward facilitating immediate gratification over long-term delay, to sharply devalue the future compared to the present. Logically, however, the discounting function can be influenced in the opposite direction, causing people to allocate resources to achieve a long-term reward, as is the case with a long-term mating strategy. From an evolutionary perspective, investing in children is a prime example, and tends to accompany long-term mating. The evolutionary payoffs in reproductive currencies do not occur until many years or decades down the line, when children survive to puberty and enter mate competition themselves. No carriers of our genetic cargo are more precious than our children, and parents have evolved adaptations designed to increase their children’s mate value. These insights can be used to sell products

associated with saving, retirement, safety, nutrition, and insurance.

Some ads from the past have capitalized on this psychology, presumably without any knowledge derived explicitly from the science of evolution. A classic ad from Michelin tires exhorted parents to pay for these expensive tires over the cheaper ones: “*Michelin. So much is riding on your tires,*” a phrase situated next to a picture of a cute baby who is sitting within a tire. Other examples centers on ads for organic food for babies and college savings accounts—items that are costly and hence involve forgoing immediate rewards and incurring opportunity costs in the present, but may carry a long-term payoff. The message is clear—pay more now, sacrifice the present, and invest your resources in the future of your children.

This ad likely appeals roughly equally to men and women. Both sexes have an equal stake, on average, in the welfare of their children. Few ads seem to be targeted toward long-term mating. We suggest that this is a missed opportunity for marketers, given that both men and women have evolved long-term mating strategies. Nonetheless, because a child’s survival historically has been more dependent on women than on men, and because men more than women have evolved higher risk-taking proclivities in order to achieve status and mating success, it is likely that women discount the future less steeply than do men. Consequently, more systematic theoretically-driven gender-specific marketing is likely to be the wave of the future, and could represent a more efficient way of spending advertising dollars for goals such as increased savings, insurance protection or other products associated with risk averse behaviors (Ariely & Foley, 2016).

#### 5. Gender-specific marketing

Gender-specific marketing is not new. No one needs to tell marketers that mascara and rouge products are more effectively marketed to women or that muscle-building sports drinks are more effectively marketed to men. Nonetheless, evolutionary psychologists have generated discoveries—some obvious and some more subtle—that could make gender-specific marketing more effective.

##### 5.1. Evolved mate preferences

Evolutionary psychologists have discovered that women, more than men, prioritize a potential mate’s financial resources—gender difference that is universal across cultures (Buss, 1989). Contrary to some expectations, highly successful women who have a lot of resources themselves, and consequently do not “need” a man’s resources, actually tend to value the financial status of a potential mate even more than women with fewer personal resources (Buss & Schmitt, 2019). Indeed, high mate-value women tend to become more exacting and discriminating on many mate attributes (Buss & Shackelford, 2008). Companies trying to influence women capitalize on this long-term mate preference. One is *Millionairematch.com*. Influencing women’s evolved mate preference for mates with resources appears to be so widespread that there exists a site solely designed to advertising and highlighting the “best” among the many millionaire dating sites.

Among the most lucrative of the online dating sites are those that exploit both men’s and women’s evolved mating psychology simultaneously—so-called ‘sugar baby/sugar daddy’ dating sites. Men have evolved desires for young, attractive women who display cues historically correlated with fertility (Conroy-Beam & Buss, 2018; Kenrick & Keefe, 1992). Consequently, the components that go into overall mate value—youth, attractiveness, and economics resources—are weighted differently in women and men. Assortative mating for overall mate value, therefore, should more often pair young attractive women with high resource men—a finding verified by many empirical studies (Buss & Schmitt, 2019). Marketing that harnesses both sets of mate preferences simultaneously should be especially effective.

The explicit exchange of affluence in men with youth and attractiveness in women proves especially effective in sugar baby/sugar

daddy online businesses. The average age of men on [SeekingArrangements.com](#), the most heavily used sugar baby/sugar daddy dating site, is 40 years old; the average age of women using the site is 25. Gender-specific marketing that simultaneously appeals to women's and men's evolved psychology proves to be especially effective.

### 5.2. Mate choice copying

A subtler example of gender-specific marketing centers on a well-documented evolutionary psychological phenomenon known as mate choice copying. In many species, from Japanese quail to the Trinidadian guppy, females use information about the mate choices of other females as critical information about the mate value of the male. They find males whom other females have chosen to be especially attractive. Because females of most sexually reproducing species tend to be very choosy in mating, selecting a male who has been pre-screened by other females presumably provides reliable information about his genetic quality or resource provisioning abilities. Similar effects have been documented in humans (e.g., [Hill & Buss, 2008](#)). The effect becomes especially pronounced when men are surrounded by women who are physically attractive.

An advertisement geared toward selling a beverage to men that surrounded a woman with several men, even if they are attractive men, would likely backfire. Evolutionary psychological research finds that the mate choice copying effect either does not work at all on men's mating psychology, or even reverses; some studies find that men evaluate women surrounded by other men as less, not more, attractive. Without knowledge of the evolved gender-specificity of the mate copying effect, marketers would be led astray.

### 5.3. Error management theory and the male sexual over-perception bias

When making judgments and decisions in uncertain environments, there are two ways to err. If you hear a rustling in the leaves on a dark path in the woods, it may be a poisonous snake or an innocuous noise due to the wind. If you err by thinking it's a snake, but it turns out to be a harmless rustling due to the wind, the costs are trivial—the minor inconvenience of time and energy circumnavigating the what turns out to be harmless. If you err by thinking it harmless but then experience a venomous snake bite, the error could cost you your life. If these situations recur over evolutionary time, selection will favor cognitive biases that function to over-infer danger, thereby avoiding the costlier error. Even if these biases produce errors of inference a hundred-fold more frequent than a perfectly accurate inferential procedure, evolution by selection will favor it. They are cognitive biases in the sense of producing more frequent errors, but they are *adaptive cognitive biases* in that they minimize more costly errors.

Error management biases abound in mating contexts because the underlying psychology of desire can rarely be observed directly, and instead must be inferred from probabilistic cues. Recurrent cost asymmetries proliferate when it comes to mating intentions. Did that sideways glance from an attractive potential mate signal actual romantic interest or fearful nervousness? Did that smile signal sexual potential or merely friendliness? Evolutionary researchers have documented an error management bias in men known as the *sexual over-perception bias*. When witnessing the same ambiguous cues, such as a smile or an incidental touch on the arm, men are more likely to infer sexual interest; women are more likely to infer mere friendliness ([Abbey, 1982](#); [Haselton & Buss, 2000](#); [Murray, Murphy, von Hippel, Trivers, & Haselton, 2017](#)). The reason is that missed sexual opportunities would be extremely costly for ancestral men. So, they set their threshold for inferring possible sexual interest from a women very low to avoid missing even long shots at a chance for a rare and valuable sexual opportunity. The male sexual over-perception bias is likely responsible for some forms of sexual conflict, since it produces unwanted sexual

advances toward women when men act on their erroneous inferences ([Buss, 2016](#)).

Marketing that activates the male sexual over-perception bias can, in principle, be effective in promoting products that are largely or entirely irrelevant to mating. A smiling woman, staring directly into the eyes of the viewer, could cause a man to be more inclined to buy a house, purchase a particular brand of cell phone, or even tilt him toward a particular location of tourism. Neuroscience studies show that these stimuli directly activate the nucleus accumbens, one of the key pleasure centers on the brain. It does so only in male brains, not in female brains ([Cloutier, Heatherton, Whalen, & Kelley, 2008](#)), highlighting again the importance of gender-specific marketing.

### 5.4. Harnessing good-dad preferences

An analog for stimulating female brains would be having a man interacting positively with a baby or a puppy. Evolutionary psychologists have shown that the same man, when interacting in these positive ways toward the young, cute, and helpless, produces an elevation in perceptions of his attractiveness in the eyes of women (e.g., [Brase, 2006](#); [La Cerra, 1995](#)). Male observers are more oblivious to these contexts, and show no shift in attraction contingent on good-parent indicators, such as a woman interacting positively with a baby. An as-yet untested prediction is that influencing women's evolved preferences for good-dad qualities will only be effective for women seeking long-term mates, and be ineffective or irrelevant for women seeking short-term mates. This raises the issue of the importance of temporal context in human mating—a topic to which we now turn. It also raises the question of context, such as where an ad is placed, since programming or web content creates important forms of context.

### 5.5. Sexual exploitability and the temporal dimension of mating strategies

Evolutionary science has documented that the temporal dimension of mating is critically important. Mate preferences shift as a function of whether a woman or man is seeking a short-term casual sex partner or a long-term committed mateship ([Buss & Schmitt, 1993, 2019](#)). In short-term mating, women prioritize cues to masculinity, such as a strong jaw line, a V-shaped torso, a deep voice, and athletic prowess. In long-term mating, women prioritize a man's ability and willingness to invest in her and her children, good dad and good partner qualities such as kindness and emotional stability, and cues to protection such as bravery in the face of danger. Men prioritize cues to sexual fidelity in long-term mating, as well as cues to fertility. And like women, men value good partner and good parent qualities such as kindness and emotional stability. In short-term mating, compared to long-term mating, men are more likely to value cues to body attractiveness; in long-term mating, men prioritize facial attractiveness ([Confer, Perilloux, & Buss, 2010](#)). Even more sharply, men seeking short-term mates are especially attracted to cues to sexual exploitability—women who seem immature, intoxicated, reckless, flirtatious, sleepy, wearing skimpy clothing, and showing an open body posture ([Goetz, Easton, Lewis, & Buss, 2012](#); [Lewis, Easton, Goetz, & Buss, 2012](#)). Importantly, men find these exploitability cues distinctly *unattractive* when seeking long-term mates. Temporal mating context is critical.

This collection of findings has two important implications for marketing. The first is gender-specific. Depending on the products being marketed, ads should target the intersection of gender and temporal context, yielding four somewhat distinct forms of marketing—women versus men in long-term mating and women versus men in short-term mating (see [Table 1](#)). The second implication centers on market segmentation. Evolutionary science has shown that individuals differ in stable ways in the degree to which they pursue a short-term versus a long-term mating strategy (other common labels are fast versus slow life history strategies). An ad or product that appeals to a long-term mating strategist might backfire among those pursuing a short-term

mating strategy, and vice-versa.

## 6. Discussion

Effective marketing depends critically on influencing human psychology. An evolutionary perspective contributes important insights into the nature, design, and functions of the components of human psychology. Past marketers have successfully influenced that psychology, such as influencing the temporal discounting function or harnessing women's or men's evolved mate preferences. But they have often done so through trial and error, through time-consuming market testing, through blind luck, or through folk intuition. An evolutionary perspective, combined with empirical discoveries produced by this perspective, provides a potential path for more efficient, more systematic, and more tightly focused applications. Several future directions appear promising—implicit versus explicit mating cues, using mating cues to command attention versus to influence preferences, targeted marketing placement based on mating context, and market segmentation.

### 6.1. Implicit versus explicit mating cues

Although using explicit mating cues, such as harnessing the mate copying effect by surrounding a man with attractive women, can be effective in certain contexts, its use also has noteworthy drawbacks. Using explicit mating cues makes it easier for marketing competitors to copy, neutralizing the initial advantage over rival products. In contrast, implicit cues are more difficult to deconstruct. These include ads in which status or attractiveness are conveyed by gaze angle, pupil dilation, body language, lumbar lordosis (Lewis, Russell, Al-Shawaf, & Buss, 2015), facial micro-expressions, sclera (the white outer layer of the eyeball), limbal ring thickness or darkness (Peshek, Semmaknejad, Hoffman, & Foley, 2011), flushing and other subtle cues displayed by supporting characters, and so on.

Implicit mating cues have a second important advantage—avoiding backlash if a marketing campaign is perceived as overtly objectifying women. Although this may be less important issue when marketing primarily to young males who heavily motivated toward short-term mating, as in many of the Axe body spray ads, overtly sexual ads may alienate some women and some men. Indeed, many male grooming products are purchased by women, such as girlfriends, wives, or even mothers. The use of implicit mating cues may minimize perceptions of the sexual objectification of women.

Using implicit mating cues may capitalize on a third benefit—avoiding rapid habituation or 'wear out' that occurs with many explicit cues. Some ads lose their effectiveness upon repeated exposure. Moreover, they can become irritating to viewers, flipping an initially positive affective response to a negative one. The use of implicit mating cues may minimize wear-out effects, rendering an ad campaign more enduringly successful.

### 6.2. Using mating cues to grab attention

Marketing communication is not just about driving preference, purchase intent, and actual purchase behavior. It is also about driving familiarity, as in the mere exposure effect, and simply grabbing attention. Seizing attention is essential for any marketing message to stand out and be delivered in a noisy, marketing-dense world. Potential consumers are operating with limited attentional capacity. A marketing concept, meme, or story can be brilliant, but if there is no mechanism to grab attention, and so enable it be told, it is of no value. Mating cues can be used as attentional hooks, even if that hook is not part of the core concept.

Research within evolutionary psychology provides many of attention-grabbing hooks—food, shelter, physical danger, social threats, coalitional camaraderie, and so on. Cues to mate attractiveness

provides a wealth of physical cues, such as symmetrical features, waist-to-hip ratio (in women), shoulder-to-hip ratio (in men), eye-chin ratio, and prominent cheek bones or brow ridges. Other attention-grabbing cues hijack human attention to body language, such as a hair flip, eyebrow flash, coy smile, lip lick, lip pout, short darting glance (Moore, 1985) or the recently discovered backwards glance in a manner that mimics lordosis (Lewis et al., 2015). These cues can act as attentional 'magnets' that provide entrées to additional communication. They pull the viewer into a composition, sequenced story, or curated drama. Moreover, these initial mating-related attention-grabs can be re-applied later in the sequence at the point of purchase, increasing marketing efficiency.

### 6.3. Targeted marketing placement based on mating context

The deployment of different sexual strategies, such as short-term and long-term strategies, is highly context dependent. In cultural contexts in which a sex ratio indicates a surplus of women, for example, strategies shift more to short-term mating (Buss, 2016). In those with a surplus of men, strategies shift more toward long-term mating. Similarly, consumer receptiveness to a concept is also very context dependent. To this end, considerable effort is often geared toward creating a relevant context within an advertisement. For example, a high-end fragrance advertisement will contain numerous references to luxury and celebrity. Likewise, considerable effort is often put toward placing advertisements in a context that is contextually congruent with the product or service being sold. So, a mortgage company may advertise on the page of an online realtor, or Facebook ads will target users with interests that are congruent with products or services that are offered. The mate strategy by gender four-quadrant matrix potentially provides additional ways to more subtly match advertising to media programming content by combining advertising with programming content that sits in the same box. So, if we want to sell a savings or insurance product, place it on a website or within a TV program or movie associated with family and children, where the programming likely activates long-term mating goals. Or if we want to sell a sports car, place it in a dating website or show rather than a car show. Although not literally the same, matching content by mating strategy and gender will likely increase cognitive fluency of the message, and in so doing, increase consumer receptivity to the marketing content.

### 6.4. Market segmentation by gender and mating strategy

The current framework yields a more precise strategy for market segmentation. Unlike many domains of human affairs, mating is the domain of human conduct that is more sex-differentiated than any other. Moreover, individuals differ within-gender profoundly in their preferred mating strategy, with some women and some men pursuing long-term and others pursuing short-term. This well-documented scientific framework yields four very different segments of the market, suggesting four very different strategies for marketing. Ads targeting young males seeking short-term mating, for example, will likely backfire among men pursuing long-term mating and may cause backlash among women seeking either short-term or long-term mating.

### 6.5. A note of caution—The importance of consumer's long-term interests

Some of the mating strategies we have discussed involve increased risk tolerance and short-term focus tradeoff—sacrificing long-term goals in favor of short-term mating success. There are certainly situations where increased risk tolerance and a short-term focus can be highly beneficial to consumers, by enabling them to try new, innovative products and experiences. But many consumer goods are highly dependent upon repeat purchase, good word of mouth, and avoiding buyer's remorse, or negative word of mouth—factors that can negatively impact ongoing sales and hence the long-term success of a brand. It is

therefore important that we use these insights to guide consumers toward products and services that stand up to post-purchase scrutiny, and avoid any temptation to use them to encourage short-term decisions that may not be in a consumer's long-term interest.

## 7. Conclusion

This paper has focused on our evolved psychology of mating, one of the most important and complex domains of human psychology. Over human evolutionary history, reproductive success—the engine of the evolutionary process—requires mating success. Consequently, humans have a rich and complex psychology of mating. Because males and female have recurrently confronted different adaptive problems of mating over the past 800 million years since the origin of sexual reproduction, selection has fashioned a highly sex-differentiated mating psychology. Crossing gender with mating strategies yields a compelling four-quadrant matrix—women's short-term mating, men's short-term mating, women's long-term mating, and men's long-term mating. Deep knowledge of the mating psychology within each of the four quadrants provides a powerful heuristic for the science of marketing and consumer behavior. The examples explored in this article—sex differences in evolved mate preferences, gender-differentiated cues to attractiveness, harnessing attraction to good-dad qualities, temporal discounting and their attendant opportunity costs, risk taking, error management, adaptive cognitive biases, and cues to sexual exploitability—provide good starting points.

## Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

## Acknowledgements

The authors thank the following for helpful suggestions on an earlier draft of this article: Courtney Crosby, Patrick Durkee, Art Markman, Tobias Obberbing, Gad Saad, Anna Sedlacek, and Joy Wyckoff.

## References

- Abbey, A. (1982). Sex differences in attributions for friendly behavior: Do males misperceive females' friendliness? *Journal of Personality and Social Psychology*, 42(5), 830–838.
- Ariely, D., & Foley, P. (2016). *Using insights from behavioral economics to benefit the financial health of low- to middle-income families*. Filene (Publication #406 (8/16)).
- Ariely, D., & Loewenstein, G. (2006). The heat of the moment: The effect of sexual arousal on sexual decision making. *Journal of Behavioral Decision Making*, 19(2), 87–98.
- Brase, G. L. (2006). Cues of parental investment as a factor in attractiveness. *Evolution and Human Behavior*, 27(2), 145–157.
- Buss, D. M. (1989). Sex differences in human mate preferences: Evolutionary hypotheses tested in 37 cultures. *Behavioral and Brain Sciences*, 12(1), 1–14.
- Buss, D. M. (1995). Psychological sex differences: Origins through sexual selection. *American Psychologist*, 50(3), 164–168.
- Buss, D. M. (2016). *The evolution of desire: Strategies of human mating*. New York, NY: Basic Books.
- Buss, D. M., & Schmitt, D. P. (1993). Sexual strategies theory: An evolutionary perspective on human mating. *Psychological Review*, 100(2), 204–232.
- Buss, D. M., & Schmitt, D. P. (2019). Mate preferences and their behavioral manifestations. *Annual Review of Psychology*, 70, 1–23.
- Buss, D. M., & Shackelford, T. K. (2008). Attractive women want it all: Good genes, economic investment, parenting proclivities, and emotional commitment. *Evolutionary Psychology*, 6(1), 134–146.
- Cloutier, J., Heatherton, T. F., Whalen, P. J., & Kelley, W. M. (2008). Are attractive people rewarding? Sex differences in the neural substrates of facial attractiveness. *Journal of Cognitive Neuroscience*, 20(6), 941–951.
- Confer, J. C., Perilloux, C., & Buss, D. M. (2010). More than just a pretty face: Men's priority shifts toward bodily attractiveness in short-term versus long-term mating contexts. *Evolution and Human Behavior*, 31(5), 348–353.
- Conroy-Beam, D., & Buss, D. M. (2018). Why is age so important in human mating? Age preferences and their influences on multiple mating behaviors. *Evolutionary Behavioral Sciences*.
- Goetz, C. D., Easton, J. A., Lewis, D. M., & Buss, D. M. (2012). Sexual exploitability: Observable cues and their link to sexual attraction. *Evolution and Human Behavior*, 33(4), 417–426.
- Griskevicius, V., Tybur, J. M., Sundie, J. M., Cialdini, R. B., Miller, G. F., & Kenrick, D. T. (2007). Blatant benevolence and conspicuous consumption: When romantic motives elicit strategic costly signals. *Journal of Personality and Social Psychology*, 93(1), 85–102.
- Haselton, M. G., & Buss, D. M. (2000). Error management theory: A new perspective on biases in cross-sex mind reading. *Journal of Personality and Social Psychology*, 78(1), 81–91.
- Hayden, B. Y., Parikh, P. C., Deaner, R. O., & Platt, M. L. (2007). Economic principles motivating social attention in humans. *Proceedings of the Royal Society of London B: Biological Sciences*, 274(1619), 1751–1756.
- Hill, S. E., & Buss, D. M. (2008). The mere presence of opposite-sex others on judgments of sexual and romantic desirability: Opposite effects for men and women. *Personality and Social Psychology Bulletin*, 34(5), 635–647.
- Jahedi, S., Deck, C., & Ariely, D. (2017). Arousal and economic decision making. *Journal of Economic Behavior & Organization*, 134, 165–189.
- Janssens, K., Pandelaere, M., Van den Bergh, B., Millet, K., Lens, I., & Roe, K. (2011). Can buy me love: Mate attraction goals lead to perceptual readiness for status products. *Journal of Experimental Social Psychology*, 47(1), 254–258.
- Kenrick, D. T., & Griskevicius, V. (2013). *The rational animal: How evolution made us smarter than we think*. New York: Basic Books.
- Kenrick, D. T., & Keefe, R. C. (1992). Age preferences in mates reflect sex differences in human reproductive strategies. *Behavioral and Brain Sciences*, 15(1), 75–91.
- Kim, B. K., & Zauberman, G. (2013). Can Victoria's secret change the future? A subjective time perception account of sexual-cue effects on impatience. *Journal of Experimental Psychology: General*, 142(2), 328–335.
- La Cerra, M. M. (1995). *Evolved mate preferences in women: Psychological adaptations for assessing a man's willingness to invest in offspring*. (Doctoral dissertation, ProQuest Information & Learning).
- Lawson, J. F., James, C., Jansson, A. U. C., Koyama, N. F., & Hill, R. A. (2014). A comparison of heterosexual and homosexual mating preferences in personal advertisements. *Evolution and Human Behavior*, 35(5), 408–414.
- Lewis, D. M., Easton, J. A., Goetz, C. D., & Buss, D. M. (2012). Exploitative male mating strategies: Personality, mating orientation, and relationship status. *Personality and Individual Differences*, 52(2), 139–143.
- Lewis, D. M., Russell, E. M., Al-Shawaf, L., & Buss, D. M. (2015). Lumbar curvature: A previously undiscovered standard of attractiveness. *Evolution and Human Behavior*, 36(5), 345–350.
- Miller, G. (2009). *Spent: Sex, evolution, and consumer behavior*. New York: Penguin.
- Moore, M. M. (1985). Nonverbal courtship patterns in women: Context and consequences. *Ethology and Sociobiology*, 6(4), 237–247.
- Murray, D. R., Murphy, S. C., von Hippel, W., Trivers, R., & Haselton, M. G. (2017). A preregistered study of competing predictions suggests that men do overestimate women's sexual intent. *Psychological Science*, 28(2), 253–255.
- Otterbring, T., Ringler, C., Sirianni, N. J., & Gustafsson, A. (2018). The Abercrombie & Fitch effect: The impact of physical dominance on male customers' status-signaling consumption. *Journal of Marketing Research*, 69–79 (LV (February)).
- Peshek, D., Semmaknejad, N., Hoffman, D., & Foley, P. (2011). Preliminary evidence that the limbal ring influences facial attractiveness. *Evolutionary Psychology*, 9(2), 137–146.
- Saad, G. (2007). *The evolutionary bases of consumption*. Hillsdale, NJ: Lawrence Erlbaum.
- Saad, G. (2011). *The consuming instinct: What juicy burgers, ferraris, pornography, and gift giving reveal about human nature*. Prometheus Books.
- Schmitt, D. P. (2003). Universal sex differences in the desire for sexual variety: Tests from 52 nations, 6 continents, and 13 islands. *Journal of Personality and Social Psychology*, 85(1), 85–104.
- Van den Bergh, B., Dewitte, S., & Warlop, L. (2008). Bikinis instigate generalized impatience in intertemporal choice. *Journal of Consumer Research*, 35(1), 85–97.
- Wilson, M., & Daly, M. (2004). Do pretty women inspire men to discount the future? *Proceedings of the Royal Society of London B: Biological Sciences*, 271(Suppl. 4), S177–S179.

**David M. Buss** is currently Professor of Psychology at the University of Texas. After obtaining his PhD at the University of California, Berkeley, he served on the faculties of Harvard University and the University of Michigan. Buss has published more than 300 scientific articles and six books, including *Evolutionary Psychology: The New Science of the Mind* and *The Evolution of Desire: Strategies of Human Mating*. He has consulted for Fortune 500 companies such as Proctor & Gamble as well as internet dating sites and groups of business entrepreneurs. Buss has been named as one of the 30 most influential living psychologists in the world. He gives keynote talks nationally and internationally on mating and marketing.

**Pete Foley** PhD is an independent researcher based in Las Vegas, NV, USA, and the retired Associate Director of Procter & Gamble's Behavioral Science Organization. His interests include the application of psychology, behavioral economics and perceptual science to marketing and innovation challenges within the consumers goods, hospitality, retail and finance industries. He can be reached at [pete.mindmatters@gmail.com](mailto:pete.mindmatters@gmail.com)