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Definition

One of the founders of evolutionary psychology, author of *The Evolution of Desire: Strategies of Human Mating* and *Evolutionary Psychology: The New Science of the Mind*.

Introduction

David Buss is one of the founders of the modern field of evolutionary psychology. He is the most heavily cited evolutionary psychologist in the world, according to Google Scholar (48,773 scholarly citations as of December, 2016). He is widely known for his scientific contributions to understanding human mating strategies, subsumed under the label *Sexual Strategies Theory*. He has made contributions to personality psychology, personality and social interaction, adaptive individual differences, tactics of manipulation, sexual conflict, stalking, sexual violence, and homicide. He authored or co-authored three other evolution-based theories: *Strategic Interference Theory* (Buss 1989a), *Error Management Theory* (Haselton and Buss 2000), and *Homicide*

Adaptation Theory (Buss and Duntley 1998; Duntley and Buss 2011). He created these interdisciplinary scientific bridges during an era when evolutionary biology was almost entirely absent from the field of psychology.

Buss's Personal Journey to Evolutionary Psychology

Buss's fascination with understanding human nature – what motivates people and how to characterize their basic mechanisms of mind – began as an undergraduate at the University of Texas at Austin (1971–1976). He opted to major in psychology, believing that this was the discipline that offered the greatest promise for his quest. Over the course of several years, he became discouraged. All existing theories in psychology seemed somewhat arbitrary. Why, for example, would the human mind be designed to experience cognitive dissonance, intolerance of ambiguity, a desire to enhance self-esteem, or any of the dozens of “effects” or phenomena psychologists had documented? The proliferation of dozens of mini-theories in psychology, none connected to any of the others, seemed scientifically unsatisfying. Lacking was a non-arbitrary set of fundamental premises on which a science of the mind could be built. This quest for explanations anchored in deeper origins ultimately led him to evolutionary theory.

Buss first encountered evolutionary theory in an undergraduate geology class, and theories of cosmology and stellar evolution in an astronomy class. They captured his intellectual imagination. He was awed by the fact that there existed theories designed to explain the origins of things, life in the first case and the universe in the second. During this period, Buss read a book called *The Imperial Animal* written by Lionel Tiger and Robin Fox (Tiger and Fox 1971). Although anchored in a now-outdated theory of group selection, Buss saw for the first time that evolutionary theory might offer a non-arbitrary set of foundational premises for the field of psychology. His undergraduate term paper, titled “Dominance/Access to Women” (written in 1975) posited that men have evolved a status-striving motive, the sole reason being that elevated rank gave them increased sexual access to women. Simplistic perhaps, but a start.

In 1976 when Buss sought a PhD program, there existed no evolutionary psychologists and no field called evolutionary psychology. So Buss began graduate school in personality psychology at the University of California, Berkeley, in 1976, believing that this field had as a central goal the development of grand theories of human nature. During his first year, he conducted a study designed to test the hypothesis advanced in his undergraduate paper, although he never published those results. While completing his graduate work at Berkeley, he focused the bulk of his empirical work on developing *The Act Frequency Approach* (with Ken Craik, his main graduate advisor), but also published articles with Jack Block and Jeanne Block (two of his other mentors) on personality development, and as sole-author (on dominance and activity level). He continued in his spare time to read widely in evolutionary biology and population genetics, including E.O. Wilson’s now classic tome *Sociobiology* (Wilson 1975).

His mainstream work in personality psychology made enough of an impact to land Buss his first post-PhD job as assistant professor at Harvard University in 1981. In teaching his first large undergraduate course, *Human Motivation*, he used evolutionary theory as the overarching framework. He also discovered Trivers’

(1972) theory of parental investment and sexual selection (in a book on sexual selection theory that he stumbled across at a used bookstore in Cambridge) and Donald Symons’ (1979) book, *The Evolution of Human Sexuality*. At the time, Buss was designing an empirical study of married couples and decided to test predictions about mate preferences based on Trivers’ theory and articulated in Symons’ book.

Around this time (1981–1982), Leda Cosmides, then a graduate student at Harvard in psychology, heard that Buss was teaching a course on human motivation using evolutionary theory. She introduced herself to Buss, and then to her husband, John Tooby, a graduate student in biological anthropology. Cosmides and Tooby were in the process of developing the conceptual foundations of evolutionary psychology, although at the time their only publication was on the evolution of intragenomic conflict (Cosmides and Tooby 1981). Buss’s friendship with Leda and John, and his intellectual connection to them and their magnificent work, endured during the subsequent decades and continues unabated. This friendship, in turn, led to meeting Martin Daly and Margo Wilson when they spent a sabbatical year at Harvard. Buss was influenced by Daly and Wilson’s (1983) book, *Sex, Evolution, and Behavior*, which contained many novel insights and testable hypotheses unknown to mainstream psychologists (Daly and Wilson 1983).

In 1984, Buss published his first paper on evolutionary psychology, entitled “Evolutionary Biology and Personality Psychology: Toward a Conception of Human Nature and Individual Differences” in the prestigious journal, *American Psychologist*. Although naïve and ill-informed in many ways, it signaled Buss’s enduring commitment to understanding species-typical psychology and profound individual differences within a unified conceptual framework.

When Buss was invited to give a talk at Yale in 1984, he decided to take a chance – he presented his first professional talk on the evolution of human mating. In the audience there happened to be the editor of the prestigious journal, *American Scientist*. On his return to Harvard a few days later, he received from him an invitation to write

an article on human mating. This led to the lead article, "Human Mate Selection," published in *American Scientist* in 1985. Requests for reprints of this article poured in from all over the world. Buss responded by inviting scientists from 37 cultures to join him in conducting parallel research under the banner "The International Mate Selection Project." Invitations coming on Harvard University stationary probably helped produce the overwhelming positive response from what ended up to be 50 international research collaborators.

In 1984, Harvard promoted Buss to Associate Professor, but he simultaneously received an offer from the University of Michigan of Associate Professor. At the time, the Michigan Psychology Department was ranked as the best in the country. Buss was mostly known for his work in personality psychology. Had Michigan known that Buss's entire research program was in the process of shifting in an evolutionary direction, it is possible they would not have extended the offer. On the other hand, they were well aware of his evolutionary interests and arranged meetings with key evolutionary scientists at Michigan – Barb Smuts, Richard Wrangham, Dick Alexander, Warren Holmes, Bobbi Low, and Randy Nesse.

Shortly after starting his position at Michigan in 1985, he joined this interdisciplinary group and together they formed the *Evolution and Human Behavior* (EHB) group in 1986, funded with a generous internal grant from a prescient dean. This rich intellectual environment provided Buss with exposure to primatology, evolutionary anthropology, work on nepotism in ground squirrels, and a stream of evolution-minded scientists who saw Michigan as intellectual hub. Yearly EHB meetings became testing grounds for this emerging interdisciplinary science. In 1986, for example, Buss was honored to chair a symposium with the invited speakers W.D. Hamilton, George C. Williams, Mildred Dickemann, Martin Daly, and Napoleon Chagnon. These yearly meetings eventually led to the formation in 1989 of the *Human Behavior and Evolution Society* (HBES) with W.D. Hamilton serving as its first president.

In 1987, Buss was elected to be a fellow at the *Center for Advanced Studies in the Behavioral*

Sciences at Stanford. Elected fellows had the opportunity to spend a year at the center and could, if so inclined, propose a special project involving other scientists. Buss proposed "Foundations for Evolutionary Psychology" and proposed that Leda Cosmides co-lead the project with him. The project was one of only the two approved by the center, and in 1989–1990 it came to fruition with Buss reuniting with Leda Cosmides, John Tooby, Martin Daly, and Margo Wilson. One of our goals was to co-author a book on the foundations of evolutionary psychology, and they made some progress in the form of draft chapters. Although that collaborative book never came to fruition, the project morphed, leading Buss to sole-author the first textbook in the field: *Evolutionary Psychology: The New Science of the Mind* (first published in 1998; its 5th edition was published in 2015). At the center, Buss also began to work on his first book, *The Evolution of Desire: Strategies of Human Mating* (published in 1994; revised editions published in 2003 and 2016). Both books, translated into many languages, continue to be widely used in college courses throughout the world.

Evolved Mate Preferences

Although he found initial support for some key hypotheses about evolved mate preferences based on studies conducted in Cambridge, Massachusetts, Buss was keenly aware that the work, when published, would be controversial. So he delayed publication and spent 5 years gathering additional data from what turned out to be known as the 37-culture study, involving 10,047 participants from six continents and five islands. Participants included those from all major religious groups, political systems, and geographical locations. Although he had advanced the evolution-based hypotheses prior to the study, Buss did not know what to expect. No one had ever conducted a study of that magnitude (now such large-scale studies are more common due to the internet). Prior to the study, when he asked a dozen non-evolutionary scientists from different disciplines to make predictions, not a single one

predicted universal sex-differentiated mate preferences. Most expected that perhaps they might occur in western cultures, or perhaps in capitalist cultures, but certainly not universally. Buss regrets not obtaining signed predictions from these scholars, for once the results were published, one common reaction was “I could have predicted that.”

The first wave of results was published in a target article in *Behavioral and Brain Sciences* in 1989 (Buss 1989a). It received 29 commentaries from diverse scholars. Buss found universal desires for some mate preferences – love, mutual attraction, intelligence, dependability, kindness, emotional stability, and good health. The priority people universally placed on love and mutual attraction surprised Buss, since he had been taught that love was a culture-specific emotion invented by some European poets a couple hundred years ago. This finding was a heart-warming surprise, not predicted in advance of the study, and reinforced the importance of science conducted in the context of discovery in addition to the context of hypothesis testing.

The study also discovered some striking cultural variability. The most variable mate preference was for virginity in a potential spouse. The Swedes and French, for example, did not prioritize virginity at all. The Chinese, in contrast, viewed virginity as indispensable in a spouse. Countries such as Ireland and Japan fell in between these extremes. Although Buss had predicted universal sex difference in the desire for chastity (defined as no prior experience with sexual intercourse), based on the adaptive problem that men, but not women, face regarding paternity uncertainty, men valued it more than women in only 62% of the cultures. The other 38% showed no sex differences. In no cultures did women value virginity more than men. So Buss’s evolution-based hypothesis received only partial confirmation, certainly not robust confirmation, which would have required universality or near universality. The findings also showed that evolutionary psychological hypotheses can be falsified, contrary to the oft-repeated but scientifically inaccurate criticism of evolutionary psychology (see Confer et al. 2010).

By far the findings that received the most attention were the discoveries of universal sex differences, precisely as predicted. Men more than women valued cues to fertility. They placed greater importance on physical attractiveness. Appearance contains a bounty of cues to fertility, which, unlike in chimpanzees, cannot be evaluated directly due to ovulation being relatively concealed or cryptic in women. Men also desired younger spouses, supporting a second evolution-based prediction. Fertility is steeply age graded among women, more so than among men, so youth is a powerful cue to fertility and future reproductive potential. Women more than men universally prioritized financial resources, economic prospects, and nearly universally prioritized cues that lead to resources, such as ambition/industriousness and social status.

These basic findings provided the first massive cross-cultural support for a key set of evolutionary psychological hypotheses. In 1989 when they were published, evolutionary hypotheses were widely regarded as speculative, lacking an empirical basis. These findings rendered that view no longer tenable. Since 1989, these basic findings have been replicating in dozens of other cultures using multiple methods. They remain among the most robust psychological sex differences ever documented across cultures. It was an early “success story” for the emerging field of evolutionary psychology and helped spur others to get into the field. The study became a “citation classic” and as of 2016 has received more than 3,600 scholarly citations.

Tactics of Attraction

Preferential mate choice represents one component of Darwin’s theory of sexual selection. The second is intrasexual competition. Qualities that lead members of one sex to best same-sex rivals gain preferential mating access to the other sex. Although Darwin viewed intrasexual competition as primarily one of “contest competition,” such as two stags locking horns in combat, it is now widely recognized that the logic is more general – whatever qualities lead to success in

intrasexual competition, be they physical brawn or superior social skills, increase in frequency (evolve) because of the preferential sexual access gained by the victors. Moreover, the mate preferences of one sex should theoretically establish the ground rules for intrasexual competition in the other. If women prioritize athletic prowess in a mate, for example, men should compete with each other to beat other men in athletic displays. If men prioritize physical attractiveness and youth, then women should compete with other women to enhance their appearance and display cues to youth.

Buss tested these hypotheses, not in 37 cultures, but in more limited studies involving college students and married couples. The results again robustly confirmed the hypotheses. Moreover, Buss developed the first taxonomy of tactics of mate attraction, which includes 23 distinct tactics, including displays of kindness, devotion, resources, grooming, physical strength, and so on (Buss 1988a; Schmitt and Buss 1996). These studies also discovered unpredicted tactics, such as the display of humor, a topic that has subsequently receive much research attention and theorizing. Although the key sex-differentiated hypotheses received robust support, the unpredicted findings intrigued Buss as well and convinced him of the importance of conducting studies in a “bottom-up” manner in the context of discovery, in addition to the “top-down” manner in the context of testing a priori hypotheses.

Derogation of Competitors

Because mate competition is a zero-sum game in which one person’s gain in mating comes at a loss to a rival, one can conceive of two general strategies – enhancing one’s own attractiveness relative to rivals (tactics of attraction) and rendering rivals less attractive to mates relative to oneself. This logic led Buss to conduct the first empirical studies of derogation of competitors – the tactics that people use to impugn the desirability of their rivals. He developed the first taxonomy of derogation of competitor tactics, which included 28, such as questioning a rival’s

fidelity, spreading false rumors about sexually transmitted infections, derogating a rival’s intelligence, and questioning a rival’s sexual orientation (Buss and Dedden 1990). The studies supported the evolution-based predictions about sex-differentiated tactics. Men more than women derogated their rival’s resources (e.g., “He drives a poor car.”) and physical prowess (e.g., “He told others that his rival was physically weak.”). Women more than men derogated their rival’s physical appearance (e.g., “She made fun of the size and shape of her rival’s body.”) and ability to remain sexually loyal (e.g., “told others that her rival slept around a lot”).

Other interesting findings, however, were not predicted in advance. Women were more likely than men, for example, to call their competitors emotionally unstable. Men were more likely than women to question their rival’s hygiene. Again, this reinforced for Buss the utility of conducting studies simultaneously in a bottom-up manner that allowed discoveries unanticipated, as well as a top-down manner to test a priori hypotheses.

Tactics of Mate Retention

Mates gained must be retained to reap the reproductive potential inherent in long-term mate selection. While reading a book called *The Evolution of Insect Mating System* (Thornhill and Alcock 1983), Buss got the idea to study the tactics by which humans guard and retain mates once they have successfully attracted them. This led to the first set of studies on tactics of mate retention in dating couples and married couples, as well as the first taxonomy of mate retention tactics (Buss 1988b; Buss and Shackelford 1997). Tactics ranged from *vigilance* (e.g., “He called her at unexpected times to see who she was with.”) to *violence* (e.g., “He hit the guy who made a pass at his girlfriend.”).

Studies of the use and perceived effectiveness of mate retention tactics supported evolution-based predictions about sex differences. Men more than women retained mates through resource displays and gifts; women more than men retained mates by enhancing their physical

appearance. But Buss also discovered unexpected and unpredicted findings. Men (both in dating couples and in married couples), for example, were more likely to use the submission and self-abasement tactic, contradicting the stereotype that women are generally more submissive than men. Moreover, tactics involving displays of commitment, love, kindness, and caring were perceived as much more effective at mate retention for men than for women. These two early publications, the first to break ground on human tactics of mate retention, have received more than 1,000 scholarly citations. A short form of the Mate Retention Inventory (Buss et al. 2008) is now widely used in scientific studies and has been translated into other languages (e.g., de Miguel and Buss 2011).

Mate Poaching

Mate poaching – attempting to lure someone who is already in a mating relationship for either a short-term sexual encounter or a long-term relationship – turns out to be quite common (Schmitt and Buss 2001). This should not be surprising in that desirable potential mates are often the objects of intense interest, and so often end up in relationships. Relationship status, however, does not seem to deter all others from attempting to attract them. Together with David Schmitt (Buss’ student, then colleague in a collaboration that has now spanned more than two decades), they conducted the first studies of human mate poaching and developed a taxonomy of its main tactics. Many tactics turned out to be similar to tactics of attraction. But some are unique to the mate poaching contexts, such as befriending the couple in a platonic guise. Another is derogating one partner to the other (e.g., “He doesn’t appreciate you.” or “You are too good for him.”), implying a mate value discrepancy. Mate poaching represents a domain previously unexplored prior to the Schmitt and Buss (2001) study, and the term “mate poaching” has now entered the mainstream scientific lexicon (http://tierneylab.blogs.nytimes.com/2009/08/27/why-poach-anothers-mate-ask-an-expert-or-brangelina/?_r=0).

The Emotion of Jealousy

Jealousy is a commonly experienced emotion in romantic relationships. Yet it was largely ignored by emotion researchers when Buss began studying it. The pioneer emotion researcher Paul Ekman told Buss that jealousy was not really a “basic emotion,” such as fear, anger, and disgust. Instead, it was a “blend” of different emotions. Moreover, jealousy lacks a distinctive facial expression, and this criterion was central to Ekman’s theory of emotions, a view that can be traced back to Charles Darwin himself. Buss argued that criteria for an emotion being “basic” should not require a distinctive facial expression. Indeed, only emotions whose function is signaling or communication should have distinct facial expressions (Buss 2013). Moreover, if an emotion evolved for specific functions, that of contributing to the solution to specific adaptive problems, and shows convergent evidence of “special design” for those functions, then it should qualify as “basic.”

The hundreds of prior studies published on jealousy contained two key problems, according to Buss. First, most scientists viewed jealousy as a character defect, a sign of neurosis or insecurity, or as a profound pathology. Second, almost none of the hundreds of studies on jealousy had explored whether its psychological design differed between men and women. The two exceptions were the writings of Donald Symons (1979), who argued that sexual jealousy was a universal and obligate emotion in men, whereas it was “facultative” or context dependent in women (e.g., less strongly activated in the context of polygyny due to the need to get along with co-wives). And Daly et al. (1982) argued that men’s jealousy should focus heavily on the sexual aspects of a partner’s infidelity, whereas women’s should focus more on cues to the loss of commitment and resources.

Following these functional views, Buss sought to test hypotheses about different functional design of jealousy. He collaborated with Drew Westen, Randy Larsen, and Jennifer Semmelroth, and together they discovered strong evidence for hypothesized sex differences in the weighting

given to triggers of jealousy. They posited that emotional infidelity was a cardinal cue to the loss of a partner's commitment for women, whereas sexual infidelity as a key cue to compromised paternity certainty. Although both sexes are clearly upset about both sexual and emotional infidelity in a partner, when forced to choose which is more upsetting the predicted sex differences emerged. Moreover, men showed greater physiological distress to imagining a partner committing sexual infidelity, whereas women showed greater physiological distress to imagining a partner committing emotional infidelity (Buss et al. 1992).

The publication created a firestorm of reactions. Some proposed alternative theories, although the original author of one later abandoned his alternative theory and instead argued that the sex differences were methodological artifacts. Another offered an incoherent "social cognitive" theory that failed to explain known findings, failed to generate novel predictions, led to no new empirical research, and failed to generate any empirical support subsequently. The sex differences in the design of jealousy have been replicated using multiple methods – forced choice, continuous, physiological, fMRI, and behavioral, and among individuals who have and who have not experienced an actual infidelity in their relationships (Buss and Haselton 2005). The sex differences even show up in verbal interrogations of partners suspected of cheating, such as "Do you love her?" and "Did you have sex with him?" (Kuhle 2011). It remains among a small handful of the most robust psychological sex differences ever documented across multiple methods and multiple cultures. The original 1992 article has become a "citation classic" and currently is one of the 30 most heavily cited article over the past 30 years in all *Association for Psychological Science (APS)* journals.

Strategic Interference Theory

Buss saw the functional emotion of jealousy as part of two larger theories. The first was strategic interference theory (Buss 1989b). He proposed

that emotions such as jealousy, anger, and upset become activated when a person's strategy for achieving a goal was impeded or blocked. A strategy of securing a partner's sexual fidelity, for example, was impeded by attempts by mate poachers or rivals trying to lure one's partner for sex or romance. To take another example, a woman's strategy of exercising "female choice" about when and with whom she consents to having sex would be impeded by a man who pursued a strategy of sexual force or aggression. Strong negative emotions such as anger, jealousy, and upset serve several key functions, according to strategic interference theory: (1) they alert someone to the source of the interference, (2) motivate action to curtail the interference, (3) help to store interfering events in memory, which in turn functions to (4) avoid future episodes of strategic interference.

Error Management Theory

Jealousy turned out to be illuminated by error management theory (EMT), originally developed by Martie Haselton, Todd DeKay, and Buss (Haselton and Buss 2000). EMT is a theory of selection, so it can be applied to any domain of psychology from perception to social interaction. EMT logic can be stated syllogistically as follows:

1. We live in an uncertain world.
2. We experience cues that are only probabilistically related to cost-inflicting or benefit-bestowing events.
3. There are two ways to err – by inferring the existence of an event when it has not in fact occurred and by inferring the nonexistence of an event when it in fact has occurred.
4. If there are recurrent cost-benefit asymmetries in making these two types of errors, selection will favor adaptively biased inference procedures that function to minimize committing the more costly error, even at the cost of experiencing more frequent inferential errors of the less costly variety.

Jealousy illustrates EMT logic. Buss argued that the cost of missing a sexual infidelity that has occurred is typically greater than the cost of mistakenly suspecting an infidelity when none has occurred (Buss 2000). Because infidelities are typically conducted underneath a cloak of intentional secrecy, their existence must be inferred from probabilistic cues. Empirical evidence supports EMT logic applied to jealousy and infidelity (e.g., Buss 2000; Andrews et al. 2008). Haselton and Buss also used EMT to illuminate design features of the male sexual over-perception bias and the female commitment skepticism bias (Haselton 2003; Haselton and Buss 2000). And EMT logic has been used to illuminate a raft of other psychological phenomena, such as the auditory looming bias, the vertical descent illusion, and adaptive biases in a number of domains of social functioning (for a recent review, see Haselton et al. 2016). EMT logic has also been invoked to explain inferential biases about homicidal intent (Buss 2005).

The Evolution of Aggression and Murder

Because differential reproductive success necessarily hinges on reproductive competition, conspecifics are necessarily rivals, albeit in the context of some levels of intertwined reproductive fates and win-win situations (“gains in trade”) that select for adaptations for cooperation in certain contexts. Enhancing oneself relative to rivals is one generic strategy. A second is inflicting costs on rivals. Buss documented these two generic strategies in the context of mate competition – tactics of attraction and derogation of competitors. In collaboration with Joshua Duntley, Buss extended this argument to murder. They argued, contrary to the Daly-Wilson claims that murder is a by-product of adaptations designed for nonlethal ends (Daly and Wilson 1988), that humans have adaptations for murder (Buss 2005; Buss and Duntley 1998; Duntley and Buss 2011).

Homicide Adaptation Theory (HAT) proposes that humans have evolved a number of distinct homicide adaptations, such as infanticide,

intrasexual rival murder, and coalitional killing (warfare). Simply put, killing a rival, killing a rival’s offspring, or killing a rival’s kin have been extremely effective ways of inflicting massive costs on intrasexual competitors. The accumulating evidence of adaptations for conspecific killing in chimpanzees (Wrangham 1999) leads to the conclusion that some of these homicide adaptations predate the evolution of *Homo sapiens*.

Being killed inflicts severe costs on rivals, far more than merely harming them nonlethally. It terminates any future access to their current mates and future mating opportunities. It harms their children, since lack of an investing parent leaves children vulnerable to abuse and exploitation, sexual and otherwise. It harms the entire kin group of the victim, which becomes weakened. So as soon as homicide entered the human arsenal of strategies of reproductive competition, selection would immediately favor adaptations to prevent becoming a homicide victim. HAT argues that this set into motion a dramatic coevolutionary arms race, with finely fashioned anti-homicide defenses evolving in ratcheting fashion with ever more sophisticated adaptations to commit murder and ever more sophisticated defenses to prevent being murdered.

Buss and Duntley recognized that their theory is controversial; that the existence of coevolved homicide and anti-homicide adaptations does not rule out the likely possibility that some homicides are by-products of “slips” as Daly and Wilson put it, and that the current empirical evidence cannot definitively determine the precise number and full design of homicide adaptations. Nonetheless, they believe that there is sufficient evidence – from the paleontological skulls and skeletons riddled with unmistakable marks of murder to the psychological and behavioral footprints of “special design” for murder – to conclude that it is far more likely than not that humans have experienced a long coevolutionary arms race that created adaptations for murder and defenses to prevent being murdered.

The Evolution of Personality and Individual Differences

Although most evolutionary psychologists have focused on universal or species-typical adaptations, Buss has made contributions to understanding personality and individual differences within the broader metatheory of evolutionary psychology. He has argued that humans have evolved difference-detecting adaptations, personality assessment mechanisms, that help to solve problems such as determining who will be a good cooperater (e.g., those high on agreeableness), coalition member (e.g., bravery), or hierarchical ally (e.g., those high in surgency or dominance). These difference-detecting adaptations also help individuals to avoid those who are dispositionally cost inflicting, such as those low on agreeableness or high on dark triad traits such as Machiavellianism or narcissism. Those high in narcissism and impulsivity, for example, are more likely to inflict the costs on their partners through infidelity and costs on their friends through poaching their mates. The personalities of other individuals, in short, partly define the “social adaptive landscape” that must be navigated (e.g., Buss 1991; Buss and Penke 2014).

Buss was among the first to highlight the possibility that personality traits might represent “adaptive individual differences” (Buss 1991; Buss and Greiling 1999), reflecting variation over time and space of which strategies are effective. High sensation seekers, for example, might thrive in migratory or novel environments, whereas low sensation seekers might thrive in more sedentary environments.

Finally, two key issues have eluded mainstream personality psychology – how to define “situations” and how to conceptualize “person-situation interactions.” Buss contributed to both of these issues by defining situations as adaptive problems, the only non-arbitrary way to define situations from an evolutionary perspective (Buss 2009a). The “situation” of confronting cues to a partner’s infidelity can be illuminated by identifying those cues, detecting the presence of a mate poacher, gauging the relative mate value of the mate poacher compared to self, and so

on. In short, situations are defined as the adaptive problems encountered and the corresponding evolved psychological mechanisms that render some clusters of cues psychologically salient and other information invisible.

This formulation, in turn, provides a powerful way to conceptualize person-situation interactions. Person-situation interactions come in two main forms: (1) the ways in which person variables, through the processes of selection, evocation, and manipulation, lead to nonrandom exposure to different suites of adaptive problems and (2) individual differences in the strategies deployed toward solving the adaptive problems that people nonrandomly encounter. Buss believes that a more comprehensive evolutionary psychology must include a deep understanding of the evolution of personality and individual differences and anticipates that these formulations may provide starting places for doing so.

Authored Books

In an effort to reach a broader audience for evolutionary psychology, Buss has authored several books. These include *The Dangerous Passion: Why Jealousy is as Necessary as Love and Sex* (2000), *The Murderer Next Door: Why The Mind is Designed to Kill* (2005), and *Why Women Have Sex* (2009, co-authored with Cindy Meston) (Meston and Buss 2009). His two most influential books are *The Evolution of Desire: Strategies of Human Mating* (1994, 2003, 2016) and *Evolutionary Psychology: The New Science of the Mind* (1998, 2004, 2008, 2012, 2015).

The Evolution of Desire. This book represented the culmination of a decade of research by Buss and a conceptual synthesis of hundreds of studies on human mating by other scientists. It elaborated on Sexual Strategies Theory (Buss and Schmitt 1993) and included chapters on what women and men wanted in long-term and short-term mates, strategies of casual sex, tactics of attraction, causes of sexual conflict and breakups, mating over the lifespan, and harmony between the sexes. The book was first published in 1994; two new chapters were added to a new edition

published in 2003; and the book was totally revamped in a thoroughly updated and revised edition, published in 2016. It has received more than 2,000 scholarly citations, has been translated into ten languages, and continues to be widely used in college courses worldwide.

Evolutionary Psychology: The New Science of the Mind While evolutionary psychology began to emerge as a cogent metatheory for psychology in the late 1980s and early 1990s, professors began to offer courses in it. There existed no textbook. One was urgently needed. After getting encouragement from a handful of people to write such a text, and being approached by publishers, Buss signed a contract. He produced the first textbook in the field in 1998. The text provided historical reviews of evolutionary theory and psychological science that converged on their synthesis (Chapter 1: The Scientific Movements Leading to Evolutionary Psychology) and a chapter on the conceptual foundations of this new science of the mind, heavily influenced by the theoretical work of Leda Cosmides and John Tooby (Chapter 2: The New Science of Evolutionary Psychology). Subsequent chapters were organized logically around adaptive problems – challenges of survival, mating, parenting, kinship, and social group living (e.g., cooperation, aggression, status hierarchies). The final chapter called for the evolutionizing of all subdisciplines within psychology, such as cognitive, social, personality, developmental, and clinical; reviewed evolutionary empirical work within each; and ended with a call for a unified field of psychology that eventually could dissolve these somewhat artificial subdisciplinary boundaries.

Adoptions of this text increased with each successive edition, despite roughly a dozen competing texts appearing since 1998. Buss' *Evolutionary Psychology* text remains the most widely used textbook in evolutionary psychology worldwide. It has entered into its 5th edition in 2015 (Buss 2015), with a 6th edition underway. It has been translated into half a dozen languages, including German, Chinese, and Arabic. And it has become a citation classic, with more than 4,000 scholarly citations as of 2016. Through

this text, Buss helped the field of evolutionary psychology to grow and flourish, educating undergraduates, informing professors, and attracting new scholars to the field.

Edited Volumes

Buss has edited six volumes, including *Personality Psychology: Recent Trends, Emerging Directions* (Buss and Cantor 1989); *Biological Approaches to Personality* (Buss 1990); *Sex, Power, Conflict: Evolutionary and Feminist Perspectives* (Buss and Malamuth 1996); and *The Evolution of Personality and Individual Differences* (Buss and Hawley 2011). His most influential edited volume, however, is *The Handbook of Evolutionary Psychology* (Buss 2005), logging in at more than 1,000 double-column pages and some 35 chapters. This led to a 2nd edition of the *Handbook* (Buss 2016), which expanded to more than 50 chapters. Both editions contained a foreword by Steven Pinker, a special essay by Don Symons, and an afterword by Richard Dawkins.

The *Handbook* documented the rapidly expanding use of evolutionary psychology in empirical research. It has received nearly 1,000 scholarly citations and helped to document the utility of evolutionary psychology in leading to insights and discoveries about the human mind previously unknown to social scientists. It also documented the utility of evolutionary psychology for far-reaching branches of sciences and humanities, including business and marketing, literary analysis, political science, and the legal profession.

Teaching and Mentoring PhDs in Evolutionary Psychology

Throughout his career, Buss has devoted considerable effort to mentoring the future generation of scientists. Of his 27 PhD students, roughly two-thirds have obtained tenured or tenure-track professorial positions. The Association of Psychological Science (APS) honored Buss with the

2017 *Mentor Award for Lifetime Achievement*. His former students such as Todd Shackelford, Martie Haselton, and David Schmitt, in turn, have produced a number of PhDs in evolutionary psychology and themselves have made major contributions to the field.

Conclusion

The quest for a true science of the human mind has been Buss' lifetime mission. Although more about the human mind remains unknown than known, some of the key foundations for a science of the mind are now in place. Buss likes to believe that he has contributed to the emergence of evolutionary psychology through his conceptual and empirical work, his authored and edited books, and, importantly, through his students.

Cross-References

- ▶ [Act Nomination Method](#)
- ▶ [Error Management Theory](#)
- ▶ [Homicide Adaptation Theory](#)
- ▶ [Sexual Strategies Theory](#)
- ▶ [Strategic Interference Theory](#)
- ▶ [The Evolution of Desire](#)
- ▶ [The Handbook of Evolutionary Psychology](#)

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