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The collective amnesia of marketing scholars regarding consumers' biological and evolutionary roots

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Abstract. *Despite the extraordinary advances in biology in the 20th century, along with the infusion of Darwinian theory across countless domains of human import, marketing and consumer scholars have doggedly forgotten, rejected, or ignored that consumers are biological beings shaped by a common set of evolutionary forces. Accordingly, this collective amnesia has yielded disciplines that largely focus on the disjointed and incoherent cataloguing of empirical findings, all of which operate at the proximate level. A complete and accurate understanding of any biological organism requires that it be studied at both the proximate and ultimate (in the Darwinian adaptive sense of the term) levels. Hence, at best, marketing and consumer scholars generate incomplete accounts of Homo consumericus and at worst they provide erroneous theories that eventually fall by the epistemological wayside. Should the collective amnesia persist, marketing and consumer scholars will further contribute to the sinking of our discipline into the abyss of irrelevant sciences, disconnected from the revolutionary work that is being conducted within the natural sciences.* **Key Words** ● biology ● consilience ● consumer behavior ● evolutionary psychology ● ultimate causation

Marketing is no stranger to 'big new ideas' which purport to be new paradigms for the study of the discipline . . . it is widely recognized that, compared to the natural sciences, the marketing discipline has created relatively little knowledge which can be described as genuinely new. (Palmer and Ponsonby, 2002: 173, Abstract)

In the current paper, I argue that of all possible instantiations of marketing amnesia, none is likely to be as devastating to the intellectual and epistemological integrity of the field than that which seeks to forget, ignore, and/or reject that consumers are Darwinian biological beings. Most scientists agree that evolutionary theory is one of the three most important intellectual breakthroughs in the history of human thought. It surpasses all other scientific theories by several folds in the



number of disparate areas in which it has been applied. Of the three most influential scientists in human history, namely Isaac Newton, Albert Einstein, and Charles Darwin, only the latter has developed a theory that has been applied in areas as heterogeneous as zoology, botany, ecology, agriculture, medicine (psychiatry, immunology, genetics, oncology to name but a few), psychology (developmental, social, and cognitive), computer science, law, art, architecture, history, sociology, anthropology, political science, musicology, literature, international relations, cognitive neuroscience, religion, sexuality, criminology, education, gastronomy, ethics, morality, epistemology, organizational behavior, and entrepreneurship. It is important to note that the latter constitutes a non-exhaustive list of disciplines wherein evolutionary theory has been applied. How then is it possible that marketing scholars have 'forgotten' about the Darwinian heritage of *Homo consumer-icus*, and found it appropriate to conclude that evolutionary theory is somehow irrelevant and unnecessary within their paradigmatic toolboxes? Do consumers exist in a parallel universe where the biological and evolutionary forces that have shaped all living organisms cease to matter in understanding them? The most charitable position taken by marketing scholars regarding biology and evolutionary theory is that these might matter in other human arenas but are largely unimportant and irrelevant in understanding consumption and marketing phenomena.

Close to five decades ago, the Nobel Laureate Nikko Tinbergen proposed that a complete understanding of animal behavior required that it be tackled at distinct levels of analyses. His ABCDEF (Animal Behavior Causation Development Evolution Function) acronym draws a clear distinction between proximate and ultimate explanations. The former refer to *how* and *what* questions (Causation and Development) whereas the latter address the ultimate evolutionary underpinnings of the phenomenon in question (Evolution and Function). In other words, the study of biological organisms, of which humans are one example, cannot be studied solely using proximate-level theorizing, as this would yield an incomplete picture of the phenomenon in question. Given that the marketing and consumer behavior disciplines are void of ultimate explanations, at best they can be construed as incomplete sciences.

Consumers are biological and Darwinian beings . . . I forgot!

Exhaustive reviews of consumer psychology (Tybout and Artz, 1994), consumer behavior (Ekström, 2003; Jacoby et al., 1998; Simonson et al., 2001), and of the history of marketing thought (Shaw and Jones, 2005; Wilkie and Moore, 2003) share one commonality. Biology and evolutionary theory are conspicuous in their absence in each of the latter reviews. More recently, Saad (2006a, 2007) provided extensive analyses demonstrating that the marketing field in general and consumer behavior in particular have developed impressive empirical edifices with a near-complete absence of biology and evolutionary theory. To borrow Carl Jung's term, marketing scholars share a collective unconscious when it comes to biology



and evolutionary theory. More specifically, they all suffer from a collective amnesia, namely they have ‘forgotten’ that consumers, the central agents in any instantiation and/or definition of marketing, are biological beings who have been forged by the dual Darwinian processes of natural and sexual selection.

I begin with a broad overview of the key reasons that biology and evolutionary psychology have been ‘forgotten’ by marketing scholars. I then argue that this collective amnesia has had numerous deleterious consequences on the fields of marketing and consumer behavior including disjointed and incoherent empirical pursuits void of any semblance of consilience, not to mention an accumulated knowledge base that largely consists of banal findings. Whereas I do not wish to imply that all of our field’s epistemological faults can be resolved via the infusion of biology and evolutionary theory within our theoretical toolboxes, many of the ills would be remedied with the ‘unforgetting’ of Charles Darwin’s theory of evolution and its theoretical offshoots that have arisen over the past 150 years.

Causes for the collective amnesia

Several disciplines by the very nature of their paradigmatic outlooks are antithetical to evolutionary-based theorizing and hence are less likely to be accepting of evolutionary theory and biological-based theorizing. These include radical feminism, postmodernism, and social constructivism. Some strands of feminism reject innate sex differences and view much of human behavior as arising from the need of the patriarchy to oppress women, or at the very least construe most sex differences as socially constructed (see Bristor and Fischer, 1993 for an overview of distinct feminist movements). Postmodernism proposes that no truths exist, other than the postmodernist truth that no truth exists. Finally, social constructivism argues that human phenomena are due to socialization, with a corresponding abdication of biology as a relevant force in shaping our human nature. In the ensuing section, I provide a brief discussion of the genesis of the social constructivism movement along with its corresponding antipathy toward biology.

Social constructivism = anti-biology

Franz Boas, the eminent professor of anthropology at Columbia University and founder of the cultural relativism movement, along with several of his students (Margaret Mead, Ruth Benedict, Ashley Montagu, and Albert Kroeber) were instrumental in diffusing the notion that culture and biology were mutually exclusive forces. Below are included several representative quotes (as quoted in Pinker, 2002: 20–25) from eminent anthropologists (and one psychologist) steeped in the traditions of cultural relativism:

I claim that, unless the contrary can be proved, we must assume that all complex activities are socially determined, not hereditary. Franz Boas

Hereditry cannot be allowed to have acted any part in history. Albert Kroeber



With the exception of the instinctoid reactions in infants to sudden withdrawals of support and to sudden loud noises, the human being is entirely instinctless . . . Man is man because he has no instincts, because everything he is and has become he has learned, acquired, from his culture, from the man-made part of the environment, from other human beings. Ashley Montagu

Much of what is commonly called 'human nature' is merely culture thrown against a screen of nerves, glands, sense organs, muscles, etc. Leslie White

Cultural phenomena . . . are in no respect hereditary but are characteristically and without exception acquired. George Murdock

The organism possesses no ready-made reaction to the other sex, any more than it possesses innate ideas. Zing Yang Kuo

In light of the aforementioned quotes, it is not surprising that much of 20th-century anthropology has focused on cataloguing cross-cultural differences while ignoring or rejecting the possibility that human universals could exist (see Brown, 1991 for a listing of human universals and near-universals). Some disciples of Boas (e.g. Margaret Mead) claimed to have found cultures where sexuality was unrestrained and free of taboos. Other cultural relativists purported to have found cultures where the supposed universal understanding of a facial grimace actually varied across cultures. In other words, there did not exist any mantle along which one could hang a human universal. Everything was relative. Sexuality was learned. Facial expressions corresponding to universally held emotions were learned. Aggression and competition were learned behaviors. The desire for social status and the need to ascend the relevant social hierarchy were learned needs. Parental love was learned. Romantic love was learned. Sibling rivalry was a learned conflict. Sexual jealousy was a learned emotion. Thus, all behaviors, emotions, and/or cognitions that were part of the repertoire of the human condition were learned via socialization forces.

Tooby and Cosmides (1992) and more recently Pinker (2002) provide cogent attacks on the central tenets of the Standard Social Science Model (SSSM). For example, social constructivists (i.e. those who view all human behavior as arising from social construction) never provide the genesis of the particular socialization forces. Furthermore, they never explain why some socialization patterns are ubiquitous across all cultures and all of recorded history. Despite the inherent theoretical weaknesses of the SSSM, its strength lies in the utopian albeit unrealistic worldview that it espouses about the equal potentiality of each individual. Specifically, if we are empty receptacles waiting to be imbued with the socialization forces that shape us into the individuals that we are, it should be possible to teach us any arbitrary thing. This is precisely what James B. Watson, one of the founders of behaviorism, claimed when he argued that he could take any 12 children of varying abilities and dispositions and turn any one of them into anything, ranging from a doctor to a beggar-man and thief.

Some of the staunchest rejections of the notion of a human nature steeped in a common biological heritage arose from the founders of sociology. Emile Durkheim, the French sociologist who is often described as the founder of modern sociology, proposed that:



Every time that a social phenomenon is directly explained by a psychological phenomenon, we may be sure that the explanation is false . . . The group thinks, feels, and acts quite differently from the way in which members would were they isolated . . . If we begin with the individual in seeking to explain phenomena, we shall be able to understand nothing of what takes place in the group . . . Individual natures are merely the indeterminate material that the social factor molds and transforms. Their contribution consists exclusively in very general attitudes, in vague and consequently plastic predispositions. (Durkheim, quoted in Pinker, 2002: 23–4)

According to Durkheim, that the group is comprised of individuals does not imply that we should look to the minds of these individuals in understanding their behaviors within the group context. Somehow a culture, a group, or a society, exists on a supra plane of reality, which cannot be reduced to its constituents. This is akin to arguing that to understand human disease, one must holistically explore the body as an indivisible entity rather than ever exploring whether constituent cells might be the culprits. Incidentally, the founding American sociologists pronounced equally sweeping rejections of an innate human nature. Ellsworth Faris, an influential sociologist and former student of George H. Mead, repudiated the notion that humans had any instincts: 'Instincts do not create customs; customs create instincts, for the putative instincts of human beings are always learned and never native' (as quoted in Pinker, 2002: 24). Typically, when it is conceded that humans do indeed have instincts, these are thought to be infinitely malleable. For example, Berger and Luckmann (1967: 49, as quoted by Gannon, 1999: 52) state:

Humanness is socio-culturally variable . . . there is no human nature in the sense of a biologically fixed substratum determining the variability of socio-cultural formation. There is only human nature in the sense of anthropological constants (for example, world-openness and *plasticity of instinctual structure* [italics added]) that delimit and permit man's [sic] socio-cultural formations.

Rather than arguing that a particular set of customs, norms, value system, or belief system might be indicative of an underlying human nature, social constructivists reverse the causal link by arguing that such forces mysteriously arise and subsequently shape our malleable brains. According to this view, advertisers' use of young and attractive women as decorative models in their advertising campaigns is what socializes men to be attracted to such women. The contrary causal effect, namely that advertisers cater to men's evolved preferences, is hardly considered by socialization-based theorists, for this would supposedly connote genetic determinism.

The above passages have provided a brief albeit representative summary of the manner by which much of the social sciences have eliminated the biological sphere in understanding the human condition. Accordingly, it is perhaps not surprising then that marketing scholars revel in cataloguing innumerable cross-cultural differences and identifying socialization forces that apparently shape consumers' minds including culture, parents, advertising, television shows, celebrity endorsers, and peers. Human universals, rooted in a common biological heritage, are simply forgotten, ignored, or rejected.



Ideological drivers of the collective amnesia

The ideological vituperations against Darwinian theorizing predominantly stem from the conflation of Darwinian theory and its misapplication by various miscreants (e.g. Nazis). Social Darwinism as originally espoused by Herbert Spencer (1820–1903) proposed that members of a society engage in a ‘survival of the fittest’ contest (this phrase was coined by Spencer and not Darwin) resulting in various social classes of winners and losers. As such, those in the upper classes, which at the time happened to be white Anglo-Saxon males, were perceived as being at the vertex of a social evolutionary process. Accordingly, this led to the condemnation by Social Darwinists of progressive social policies whose goal was to help the poor and the needy. This type of elitist ideology served as the genesis for several other hideous policy decisions, including racist anti-immigration policies in the United States in the 1920s and 1930s, the eugenics movement (see Carlson, 2001 for a historical treatise of this dreadful movement), and Nazism with its doctrines of racial superiority. Anthropologists in the pre-cultural relativism era had also adhered to a hierarchical view of cultures wherein peoples were viewed as unequal in terms of the evolution of their respective cultures. According to this racist stance, Victorian society was more evolved than that of the ‘savages’ of Papua New Guinea. As a backlash against these misapplications of Darwinian theory, social scientists began developing theories and worldviews that would hopefully eradicate the likelihood of future misuses of evolutionary theory. The easiest way to accomplish such an ideological goal would be to disavow biology as an explicative force in shaping human behavior. As mentioned earlier, this resulted in the founding of the cultural relativism movement, which has had a profound impact on the development of American anthropology.

Several additional academic movements are unsympathetic to evolutionary theory on ideological grounds. For example, some academic feminists propose that all differences between men and women short of their genitalia are socially constructed. Hence, such feminists have developed theories that are congruent with their ideological agendas, which necessitate the eradication of innate sex differences as a viable scientific stance. From a radical feminist perspective, evolutionary-based findings dealing with universal sex differences enable the maintenance of the status quo. The exploration of sex differences within the social sciences, especially if tackled from a biological standpoint, is part and parcel of what is now referred to as ‘forbidden knowledge’ (Kempner et al., 2005). Marketing scholars are some of the staunchest rejectionists of this ‘forbidden knowledge.’ Whenever marketing scholars investigate sex differences, the working assumption is typically that these are due to environmental causes and seldom to biological forces. Representative examples include sex differences in ‘green’ consumer behavior (Grønhøj and Ölander, 2007), in the ethical proclivities of marketing professionals (Lund, 2008), in the responses to emotional advertising (Fisher and Dubé, 2005), in the use of product labels (Mangleburg et al., 1997), in gift-giving practices (McGrath, 1995), in consumers’ body images (Eisend and Möller, 2007), in shopping motives (Noble et al., 2006), and in gender-related advertising (Wolin, 2003).



One highly influential group of anti-evolutionists has yet to be addressed. Creationists and other theologians have played an influential role in stemming the diffusion of evolutionary theory among the masses. Hence, while they certainly have had lesser influence within the scientific community, they nonetheless have been successful in veiling a significant portion of the public from the relevant scientific discourse (e.g. the Kansas Board of Education seeking to eliminate evolution from its curriculum; see also the recent Dover trial). Most of the major religions place man in a privileged position amongst other species, bestowed with an ability to foster a relationship with the Divine. As such, many lay people have been inculcated with disdain for evolutionary theorizing. Typically, the reticence to accept Darwinian theory stems from an inability to accept that a singular process (i.e. natural selection) can equally explain the evolution of the mosquito, the lion, and man. Having barely recovered from the Copernican Revolution, theologians have been unwilling to accept such an affront to their religious world-views and have accordingly resisted Darwinism. Some scholars and theologians alike have sought to reconcile evolutionary theory with a belief in the Divine (cf. Miller, 2000). Typically, the argument is that natural selection is such a parsimonious, elegant, and supremely powerful force of nature that it constitutes the ultimate proof of a Divine Maker. Dawkins (1991) debunked such an attempt at reconciling the religious and natural spheres by arguing that to the extent that natural selection is a 'maker', it proceeds blindly void of any ultimate purpose or grand design. The interested reader is referred to Kitcher (1999) and Pennock (2000) for additional discussions on the incongruity between religion and science.

Epistemological drivers of the collective amnesia

Perhaps the most common epistemological attack hurled at evolutionary psychology is that it supports the notion of genetic or biological determinism. This is an ill founded concern given that the interactionist viewpoint, namely that an organism is shaped by the interaction between biology and the environment, is a central tenet of evolutionary theory (cf. Tooby and Cosmides, 1992). By definition, Darwinian theory explicitly recognizes this point given that natural selection operates within a given environment. Evolutionists have posited on innumerable occasions that organisms are products of their biological heritage, their unique genetic endowments, and their unique environments. As such, the nature–nurture debate is an erroneous and moot schism, given that evolutionists fully recognize that the two forces cannot be extricated from one another. A purée consisting of multiple vegetables is a unitary whole that is otherwise impossible to separate into its independent constituents. This is the position taken by evolutionary psychologists with regard to the nature–nurture dichotomy. Independently of whichever evolutionary movement one speaks of, be it ethology, behavioral ecology, sociobiology, gene-culture co-evolution models, and/or evolutionary psychology, they all explicitly recognize the importance of the environment in shaping behavior. As such, the concern that if a consumption phenomenon is rooted in one's genes necessarily implies that it is impervious to marketers' influence is simply misguided.



Human beings are endowed with behavioral plasticity that allows them to achieve the same supra goal via different paths. For example, all men desire social status (human universal) as evidenced by a wide range of disparate research streams (see Barkow, 1989; Campbell, 1999, 2002). Men are much more likely to commit suicide following a loss of status (Zacharakis et al., 2005). Testosterone levels fluctuate in men as a result of gains or losses in social status (Mazur and Booth, 1998). Men are more likely to derogate the status of an intra-sexual rival (Schmitt and Buss, 1996). Women possess a universal preference for men of high status (Buss, 1994). High-status men possess greater reproductive fitness (Betzig, 1986). Men are much more likely to engage in status signaling including physical risk taking, conspicuous consumption, and dominance displays (Saad, 2007). That said different paths could be taken to achieve this supra goal (i.e. of seeking social status). One can achieve social dominance by becoming a rock star, a politician, an academic, an entrepreneur, among countless other options of social ascendancy. Identifying a human universal (e.g. striving for social status) does not doom an individual to a single deterministic overt behavior. Similarly, identifying an innate behavioral disposition (men more so than women prefer a larger number of sexual partners) does not imply that all men will stray from their monogamous commitments. Humans are equipped with numerous Darwinian modules, some of which counter one another. Hence, humans are equipped with a moral conscience that allows them to choose whether or not they wish to succumb to a forbidden temptation. Men and women have universal preferences in terms of the attributes that they seek in their ideal mates (cf. Buss, 1994). Yet few of us will marry presidents and supermodels, precisely because there are too few of these to go around (an example of an environmental constraint). Hence, most individuals will end up engaging in assortative mating (pairing with one of roughly equal mating value) despite their innate and perhaps unmet preferences. Accordingly, behavioral plasticity, competing Darwinian modules, and environmental constraints are but a few of the factors demonstrating that behavioral determinism is a completely misguided concern.

A second and frequent epistemological attack against evolutionary psychology is that it is reductionist. There appears to be disdain among some scholars to reduce the complexity of human behavior to the gene level. This is very much related to the notions raised by various proponents of the SSSM that certain cultural phenomena should not be reduced to smaller units of analysis. This anti-reductionism concern is difficult to fathom since much of science operates by reducing a complex phenomenon into a set of simpler constituents. Even some of the staunchest anti-reductionists (e.g. the late Stephen Jay Gould, and Richard Lewontin, both from Harvard) spent much of their careers conducting reductionist research (see Segerstråle, 2001: 284–92 for an excellent discussion of these issues). Pinker (2002: 69–72) differentiates between good and bad forms of reductionism. In its bad form, reductionism overreaches in collapsing several levels of analyses to the lowest possible level. For example, seeking to understand why Italy defeated France in the World Cup Final in 2006, via a study of the neuronal firings of each of the players on the field would prove to be a failing endeavor. On the



other hand, reductionism in its good form (which is the form that most scientists use) seeks not only to unify a given phenomenon across multiple levels of analyses but also to unify multiple fields in their individual approaches in tackling the phenomenon. This unity of knowledge is what Wilson (1998) has referred to as consilience, a goal that can never be reached without a complete understanding of what reductionism truly entails. It should be said that many of the erroneous views relating to both determinism and reductionism stem from a misunderstanding of a frequently used shorthand expression in the evolutionary literature. Specifically, evolutionists speak of a gene for some behavior, which is taken to mean that the complex behavior can be reduced to a single gene and that having the gene deterministically guarantees that one will engage in the particular behavior. However, countless Darwinists have repeatedly explained that this is merely a useful shorthand for the more cumbersome yet more accurate full statement. Specifically, the phrase actually refers to a probabilistic (hence non-deterministic) average effect of a gene over evolutionary time (cf. Dawkins, 1976; Pinker, 2002: 114).

A third epistemological concern is the just-so stories that evolutionary psychologists are accused of weaving in a post-hoc manner. The popularizer of this viewpoint was the late Stephen Jay Gould. Specifically, Gould claimed that evolutionary psychologists suffered from Panglossianism, namely the over-attribution of adaptive design to every possible animal behavior and/or morphological structure. Additionally, the just-so stories are said to be so creative and fanciful in explaining every possible behavior in adaptive terms that it results in a paradigm that consistently generates unfalsifiable hypotheses and theories. First, the concern that evolutionists construct post hoc theories by virtue of their explaining phenomena that occurred in a distant past is difficult to comprehend, for if this were a valid concern, it would be equally veridical for most geologists, astronomers, paleontologists, oceanographers, and archaeologists. There is nothing that is epistemologically flawed when developing theories about a process that is unobservable in a controlled laboratory setting. One should hasten to add though that evolutionary psychology is not singular in its methodological underpinnings. As described by Buss (1999: 54–60), there are numerous ways to test evolutionary-based hypotheses using a multitude of data collection techniques and data sources. Hypotheses can be tested via comparisons between species, between the sexes within a species, between individuals of a given species, and within a given individual in various contexts using experimental, observational, archival, and archaeological data to name but a few of the possibilities (see Buss, 1999: 54, Table 2.3).

It is indeed veridical that some scholars have produced evolutionary explanations that resemble just-so stories and that do appear to succumb to Panglossianism. That being said, to deduce that weak scholarship by a few researchers should translate into the condemnation of a whole field is unjustified. As early as Williams (1966), evolutionists have repeatedly made the point that one should follow a rigorous set of steps to protect against weak evolutionary theorizing (cf. Tooby and Cosmides, 1989). For example, evolutionists have taken great care in attempting to differentiate between a possible exaptation (a fitness-enhancing trait that was not selected for its current purpose) and an actual adaptation (cf. Andrews et



al., 2002). Furthermore, there is nothing inherently unfalsifiable about evolutionary hypotheses. Take the parental investment hypothesis (Trivers, 1972) that posits that in any sexual species, the sex that bears the greater parental investment will be sexually choosier. There are very clear patterns of data that would falsify this hypothesis. If an anthropologist were to find either an existing or extinct culture where women are (or have been) consistently less choosy and more indiscriminate in their sexual practices as compared to men, the hypothesis would be falsified. If an ethologist were to find a species where the sex that bears the greater parental investment is less sexually choosy, the hypothesis would be falsified. Hence, there are thousands of possible cultures (both current and past) and innumerable species that could potentially falsify the theory. One could hardly imagine a theory that is more amenable to falsification. That the theory holds across cultures, eras, and species is a testament of it having withstood the highest standards of falsification. The fact that evolutionary psychologists typically posit hypotheses that identify human universals increases rather than decreases the possibility for falsification. The interested reader is referred to Ketelaar and Ellis (2000) for an exhaustive discussion of why evolutionary hypotheses are hardly unfalsifiable, wherein they highlight the fact that many of the existing evolutionary theories are descendants of theories that had been incomplete and/or falsified in their original forms. Conway and Schaller (2002) have argued that while evolutionary theories have been incorrectly framed as unfalsifiable, in actuality the stumbling block lies in the difficulty of accepting that distally distant processes are uniquely verifiable and veridical (notwithstanding the fact that critical relativism would question such epistemological benchmarks; cf. Anderson, 1983). They provide an epistemological analysis of the cognitive biases to which scholars, untrained in conducting analyses at the ultimate level, succumb when evaluating the veracity of evolutionary theories.

Deleterious effects of the collective amnesia

Disjointed, incoherent, and largely irrelevant body of knowledge

Over the past 25 years, numerous marketing scholars have provided acerbic reviews of the marketing and consumer behavior disciplines. Recent pronouncements continue to be as unfavorable. In their review of the consumer research discipline, Simonson et al. (2001) concluded that the field was disjointed, yielding epistemological camps at odds with one another. Holbrook and Hulbert (2002) eulogized the death of marketing whereas McAlister (2005: 131) began his article with the following ominous proclamation: 'I am worried about the field of marketing.' Armstrong (2003) concluded that, based on his extensive analysis of the scientific merits of the marketing literature, there are very few marketing findings that are replicable, useful, valid, and surprising. In contrasting the allocation of research funds across scientific disciplines, Littler and Tynan (2005: 268) concluded:



At least part of the explanation of the low apparent funding of research in marketing and its perceived low status may be that marketing *per se* is an embryonic social sciences' discipline that has yet to develop its own coherent paradigm. (Italics in original)

November (2004: 42) was particularly caustic in his evaluation of the state of affairs of the marketing discipline. He states:

Some academics talk about 'gaps' in the literature as though the literature is a well-built wall with just the occasional gap that needs filling. Each study is, as Pink Floyd would say, another brick in the wall. The reality is that, while we do seem to have an agreed standard as to what a brick is, there is no agreement as to which bricks need to be made first, no foundations, no architect of the final wall, and no idea as to what the wall is expected to do when, if ever, it is built. It is as though we are constructing the Great Wall of China by agreeing that all the bricks will be empirical studies that pass certain statistical tests. However we do not agree on who will build each bit of the wall nor do we agree on when or where we will build it. The consequence is that we have hundreds of well-meaning marketing scholars working very hard at making bricks. Each journal and each conference is just a jumble of bricks with the occasional group cemented together by a short term research fad, fashion or multi-researcher project (3).

In strong disciplines there is a 'natural' organizing framework built into the knowledge itself . . . We have no agreed fundamental structure round which we build knowledge – only a ragbag system of textbook chapter headings. Its absence means that practitioners, with their narrow self-centred perspective on knowledge, are bewildered. What is truly remarkable is that marketing academics seem to thrive with a flimsy rather than a well-grounded structure of knowledge.

To accentuate the point, he continues (p. 47), 'Put another way, over 97% of marketing empirical studies is academic clutter: they have not been independently tested and until they have they are *virtually meaningless and useless*' (italics in original).

Countless scholars have proposed that a hallmark of a mature and well-organized discipline is its ability to replicate its foundational empirical findings (e.g. those findings that constitute the core of the field). For example, Simonton (2006: 98) proclaimed: 'science cannot exist without repetition, or rather replication. If a finding cannot be replicated, it cannot exist as a valid scientific result.' Given that consumer research seems driven by a quest for statistically significant effects void of an organizing meta-theory, do consumer researchers typically verify the generalizability and replicability of their empirical findings? Numerous eminent consumer scholars have concluded that our field is reticent to authenticate the robustness of its amassed findings. This edifice of knowledge, largely consisting of disjointed 'one-shot' empirical findings, is akin to the proverbial house of cards (see Evanschitzky et al., 2007, who demonstrated the very small number of replications conducted in the top marketing journals).

Lack of consilience in psychology

Since psychology is the cognate discipline that has historically been most influential within the consumer behavior discipline, its disunity and lack of consilience is indicative of a similar if not worse state of affairs within the latter field. Numerous psychologists have written profusely about the lack of unification in the psycho-



logical sciences, few of whom have been as dogged about this issue as Arthur W. Staats (cf. Staats, 1983, 1991, 1999, 2004). Paul Meehl, who is perhaps best known by consumer researchers and behavioral decision theorists for his work on the relative accuracy of clinical versus actuarial judgments, poignantly stated:

It is simply a sad fact that in soft psychology theories rise and decline, come and go, more as a function of baffled boredom than anything else; and the enterprise shows a disturbing absence of that *cumulative* character that is so impressive in disciplines like astronomy, molecular biology, and genetics. (Meehl, 1978: 807; italics in original)

Note that congruent with the established hierarchy of the sciences, Meehl hails the natural sciences (including biology) as hallmarks of mature and influential disciplines in part due to their ability to create a codified, coherent, and cumulative body of knowledge. Along the same lines, Henriques (2003: 177–8) proposed:

A well-defined subject matter, a shared language, and conceptual agreements about the fundamentals are key elements that constitute a mature science. The physical and biological sciences have reached maturity. The psychological sciences have not. Instead, students of psychology are given choices to be or not to be radical behaviorists, cognitive psychologists, evolutionary psychologists, social constructivists, feminists, physiological psychologists, or psychodynamic psychologists, among others. The lack of a shared, general understanding has had unfortunate consequences. Paradigms are defined against one another, and epistemological differences justify the dismissal of insights gleaned from other approaches. The result has been a fragmented field and a gulf between the natural and social sciences.

This conclusion is equally applicable to most fields of inquiry within the social sciences. For example, social psychology, a subdiscipline that has historically been relied on by consumer scholars, appears to be equally disjointed. The evolutionary social psychologists Douglas Kenrick and Jeffrey Simpson recently stated:

Why are the minitheories in one chapter of a social psychology text often discontinuous with minitheories presented in other chapters? Why does such an important field in the social and behavioral sciences – one that studies so many significant topics that are vital to understanding human behavior – not have a metatheory, one capable of tying different research areas and disparate findings together? (Kenrick and Simpson, 1997: 14)

Each of the latter three quotes is just as relevant when describing the consumer behavior and marketing disciplines.

Sternberg and Grigorenko (2001) proposed that the disunity in psychology is in part due to what they refer to as methodological fixation and field fixation. The former refers to being fixated on a methodological paradigm (e.g. memory priming or brain imaging) while the latter addresses the adherence to a strict delineation of subdisciplines such as social, cognitive, educational, or clinical specializations. Accordingly, graduate students typically receive training that guarantees that they will be disconnected from other paradigms and disciplines, thus maintaining the disjointed and disorganized nature of psychology as a scientific discipline. Sternberg and Grigorenko (2001: 1074) state: 'Instead of allowing students to be driven by substantive issues, the system encourages students to search for a phenomenon for which they can use their tools, much in the way a carpenter might seek objects for which he or she can use a hammer.' Hence, rather



than recognizing the fact that a given issue (e.g. social comparison processes) can be investigated along several lines of inquiry within a wide range of subdisciplines, the graduate student is taught to have a myopic view of the issue at hand.

Why do the marketing and consumer behavior disciplines have difficulty in generating universal, robust, relevant, and predictive findings? I propose that in part this is due to the fact that no supra-theory exists that organizes and guides the research agendas within the various subdisciplines of consumer behavior and marketing. The ensuing quote, which was written in the context of evaluating the field of social psychology, applies equally to the consumer behavior and marketing disciplines:

We believe that the intermittent 'crises of confidence' in social psychology as well as its slower 'cumulative character' can be traced to the same fundamental source: the failure to develop or adopt a powerful theoretical perspective, one capable of *integrating* existing findings across different domains and *guiding* researchers toward new empirical hypotheses. What is ironic is that the general framework of such a grand, integrative theory – Darwin's theory of evolution by natural selection – has been around for more than 130 years, yet, until recently, it has been largely ignored or overlooked by most social psychologists. (Simpson and Kenrick, 1997: ix–x, Preface; italics in original)

The natural sciences have been successful in generating a cohesive body of knowledge precisely because they operate under the guidance of supra-theories. For example, while biologists tackle both proximate and ultimate-based questions whilst focusing on different levels/units of analyses (e.g. molecular, cellular, organismic, group, population, ecological, species), they agree that Darwinian theory permeates through all biological phenomena. A biologist need not be an evolutionary biologist in order to recognize the importance of Darwinian processes in shaping organic life. Similarly, physicists have been equally adept at generating universal laws of nature that serve as organizing frameworks for the relevant subdisciplines. Most scientists who have theorized about the unification of the social and behavioral sciences recognize that evolutionary theory/biology is the unifying framework (Gintis, 2007; Kanazawa, 2004; Saad, 2007).

Consumer and marketing researchers come in many distinct varieties including feminists, social constructivists, postmodernists, and cultural relativists. One way by which these disparate groups have coexisted is by creating a semblance of academic pluralism, whereby each group recognizes the right of all others to exist, while erecting its own paradigmatic walls and singular worldviews. The problem is that the varying worldviews are oftentimes contradictory with one another yielding a confused and chaotic discipline. Non-consensus in the consumer behavior discipline takes place at all epistemological levels, including at its most elemental and foundational starting points. Chemists do not differentiate themselves as a function of whether or not they 'believe' in the periodic table. Astronomers are not divided into those that believe that the earth is flat and those that do not. Academic pluralism cannot exist within the core knowledge of a discipline, for by definition this would imply that no accepted core exists. The epistemological reality is that the consumer behavior discipline does not have an established and accepted core of knowledge.



Hierarchy of the sciences and consilience

Pleasants (2003: 69) recently noted:

Natural scientists are far less prone to crises of professional identity than their counterparts in the social sciences. Because the scientific status of social science is so frequently brought into question, social scientists tend to pay far more attention to philosophers of science than natural scientists do.

Many of the eminent philosophers of science of the 20th century have provided unfavorable evaluations of the social sciences. For example, Imre Lakatos, in writing to his colleague and friend Paul Feyerabend stated 'the social sciences are on a par with astrology,' while Thomas Kuhn viewed the social sciences as being in a pre-paradigmatic stage. Lodahl and Gordon (1972) asked scholars from physics, chemistry, sociology, and political science to quantify the level of consensus in the latter fields in addition to three other fields (economics, biology, and psychology). There was unequivocal accord among all four groups of scientists regarding the hierarchy of consensus across the various disciplines. Physics was first, psychology was fifth, and sociology and political science were last. Additionally, the authors found evidence that high-consensus fields, which have more fully developed paradigms, facilitate both teaching and research endeavors. One could conceivably predict how consumer behavior might fare in the latter hierarchy given that psychology, one of its 'parent' disciplines, was ranked so poorly.

More recently, Simonton (2004, 2006) used several metrics to quantify the comparative prestige of scientific disciplines. Of the five fields that he investigated, three were natural sciences (physics, chemistry, and biology) and two were cognate disciplines in the social sciences (psychology and sociology). Simonton, a psychologist, found that the fields are ranked reliably in the following descending order of prestige and influence: physics, chemistry, biology, psychology, and sociology. One of the key metrics used was the ratio of universal laws that a field generates as a proportion of all knowledge subsumed within the particular discipline. As already discussed, marketing and consumer behavior have very few (if any) universal laws, as such one could extrapolate their respective ordinal rankings on Simonton's continuum. In seeking to map various disciplines along a 'hardness' continuum, Smith et al. (2000) argued that graph use within a given discipline is a strong correlate to its 'hardness'. They reported a correlation of 0.97 between graph use and 'hardness' of seven sciences with the following descending order of 'hardness': chemistry, physics, biology, medicine, psychology, economics, and sociology. Interestingly, they found a correlation of 0.93 between graph use and 'hardness' within 10 subdisciplines of psychology. Hence, the rankings seem to apply equally both across and within disciplines. The psychology subdisciplines that were closer to the natural sciences were rated as 'harder'. For example, *Behavioral Neuroscience*, *JEP: Animal Behavior Processes*, and *Journal of Comparative Psychology* were ranked first, second, and fifth respectively among the sampled journals. All of the latter three journals scored higher in 'hardness' than the *Journal of Personality and Social Psychology*, undoubtedly the most frequently cited



psychology journal by consumer researchers, which was ranked seventh. The latter ranking of subdisciplines within psychology is tantamount to establishing the conceptual distance between a given subdiscipline from biology. The closer that a subdiscipline is to biology, the 'harder' it is perceived to be. Given that the consumer behavior discipline is currently largely disconnected from biology, its perceived 'hardness' would likely lie on the lower end of the Smith et al. continuum.

I propose that the robust and invariant ranking of the various scientific disciplines is tantamount to classifying these as a function of the level of consilience that they have achieved. Whereas one of the holy grails of physics is to develop a Grand Unified Theory, which would subsume the four forces of nature (i.e. electromagnetic, gravitational, strong nuclear force, and weak nuclear force) under one consilient umbrella, consumer researchers generate countless disconnected and at times contradictory research programs. I shall use here the proverbial tree of knowledge in defining the maturity of a scientific discipline. Buss (1996: 10) provides such a structure in explaining the hierarchical nature of the knowledge subsumed within evolutionary theory including a supra-theory, which branches out into a set of middle-level theories, which in turn generate multiple levels of hypotheses and predictions. That a field is able to map its contents onto a tree structure is epistemologically crucial for two related reasons. A tree implicitly assumes a hierarchical structure of knowledge while ensuring that any two nodes A and B are connected via a continuous path. The latter statement implicitly provides a formal epistemological definition of consilience. The marketing and consumer behavior disciplines are comprised of independent and disjointed paradigms, theories, and frameworks, yielding fields with much scientific rigor but minimal consilience.

Advantages of Darwinizing consumer research

As mentioned earlier, evolutionists recognize that a complete understanding of a given phenomenon must be tackled at both the proximate and ultimate levels. To the extent that marketing scholars have strictly operated at the proximate level, they have provided at best incomplete accounts of consumption phenomena. A few concrete examples might further clarify this point. Conspicuous consumption is a phenomenon that has been studied by numerous marketing scholars. However, none have explored the biological underpinnings of the universal desire to engage in status signaling. An evolutionary perspective recognizes that certain forms of conspicuous consumption, such as the purchase of luxury sports cars, are instantiations of sex-specific sexual signaling. Hence, the splendor of a peacock's tail is equivalent to the sexiness of the Ferrari in the human context. This is precisely the reason that men constitute 99% of Ferrari owners in North America, albeit I suspect that this demographic reality applies across any cultural setting. Saad and Vongas (2007) demonstrated that men's testosterone levels increased subsequent to having driven a Porsche. Given that men's testosterone levels fluctuate as a function of social outcomes, this provides compelling evidence of the



sexual signaling nature of this form of conspicuous act (see Griskevicius et al., 2007, for a recent exploration of conspicuous consumption from an evolutionary perspective). By definition, this line of investigation requires an understanding of the evolutionary process of sexual selection, which incidentally manifests itself across countless other consumption contexts including the consumption of beauty, an example to which I turn to next. Beautiful endorsers are frequently used in advertising and accordingly this advertising copy decision has been studied by several generations of marketing scholars. However, few have provided an ultimate explanation for the universally consistent reactions toward beautiful endorsers. First, beautiful endorsers always possess facially symmetric faces irrespective of whether the advertisement was produced in Peru, Bulgaria, Niger, or Japan. Second, symmetry is a universal marker of beauty because it serves as universal advertisement of genetic and developmental fitness. Third, infants that are otherwise too young to have been socialized nonetheless display a preference for beautiful faces, suggesting that this universal penchant is an innate preference and hence likely serves an adaptive purpose. Thus, advertising images including the use of beautiful endorsers occur in universally recurring forms because they cater to adaptive sensorial preferences (see Saad, 2004, and Saad, 2007, Ch. 4, for additional details).

A second benefit of evolutionary theory is that it serves as a universal meta-theory of consumption that transcends time and space, and that is applicable across a wide range of functional areas of relevance to consumer scholars including perception, attitude formation, decision making, motivation, emotion, and personality (Saad, 2007, Ch. 2). In other words, rather than having non-overlapping theories for each of the key functional areas of consumer research, evolutionary theory serves as a common and consilient thread. Saad (2007, Ch. 3) demonstrated that most important consumption acts could be mapped onto one of four key Darwinian modules, namely the survival, reproductive, kin, and reciprocity modules. Hence, instead of relying on intuitively appealing albeit empirically falsified frameworks such as Maslow's hierarchy of needs, the latter four modules are rooted in universal motivational systems that are valid not only across cultural and temporal settings but also across a wide range of mammalian species.

Evolutionary theory permits for the positing of hypotheses and research questions that could not have been otherwise generated. Milinski and Wedekind (2001) found that individuals' self-preferences of perfumes (i.e. those that they might prefer to wear) were typically those that would magnify their body odors and hence reveal their unique immunogenetic profiles. In other words, perfumes are used in part by consumers as an advertised mating cue in a manner similar to that used by countless other species that utilize olfaction as an integral element of their mating rituals. It is difficult to imagine how such a finding might have been uncovered void of an understanding of the evolutionary forces that shape mating preferences. As a second example, I turn to differential grandparental solicitude, namely the finding that maternal grandmothers and paternal grandfathers typically invest the most and least in their grandchildren respectively. Evolutionary



theory provides the sole parsimonious explanation for this phenomenon (see Pollet et al., 2007, for a good overview of the literature). Specifically, whereas maternal grandmothers face no parental uncertainty (i.e. they are certain that the grandchildren are their kin), paternal grandfathers face two layers of paternal uncertainty. Accordingly, from a kin selection perspective, it is expected that individuals' investment patterns are in part shaped by genetic relatedness and 'genetic assurance'. In the consumer context, grandparental differential solicitude could potentially be explored within the gift giving ritual. That said, gift giving is also used within the human courtship ritual in ways that are driven by evolutionary forces (cf. Saad and Gill, 2003). In a recent paper, Cronk and Dunham (2007) found that the amount spent by men on engagement rings reflected the mating quality of both the prospective grooms and brides. In other words, the pattern of gift giving expenditures was in this case largely driven by an evolutionarily crucial metric, namely one's mating quality. The third and final example deals with a physiological-based situational variable. A consumer's situational mood has been frequently studied by marketing scholars. Yet one of the most influential drivers of a woman's mood, namely her menstrual cycle, has yet to be explored within the marketing literature. Evolutionists have long understood that the menstrual cycle has a profound effect on a woman's preferences, attitudes, and behaviors including her sexual receptivity and her food consumption. In two recent studies of relevance to consumer behavior, Haselton et al. (2007) found that women altered their dress attire as a function of their menstrual cycles, whereas Miller et al. (2007) found a relationship between the menstrual cycle and tips earned by female dancers in a gentleman's club. Both of these studies could never have been conceived or carried out without an understanding of the relevant biological and evolutionary forces.

Evolutionary theory serves as an epistemological sieve in gauging the veracity of a proposed theory and/or hypothesis. To highlight this point, I briefly discuss two examples, namely eating disorders and the selectivity hypothesis. Social constructivists have proposed that television and related media are the causative factors both for obesity as well as anorexia nervosa. The broad shoulders of socialization seem capable of explaining two diametrically opposed phenomena, namely too much as well as too little eating. An evolutionary perspective recognizes that the increased incidence of obesity is largely due to the incongruence of our evolved gustatory preferences with the modern environment of plentiful calories and minimal food foraging. In other words, obesity has little to do with fast food ads and much to do with our evolved sensorial preferences for such foods (Saad, 2006b). Hippocrates, the founder of modern medicine, had identified the prevalence of eating disorders close to 2500 years ago. In fact, numerous contemporary scholars have established the universal pattern that women are overwhelmingly more likely to suffer from eating disorders irrespective of time and place. One should also mention that of 100 women that might be exposed to the 'pernicious' effects of the media, a very small minority develops eating disorders (in the order of 1 to 3%). Hence, one would have to explain why the 'media cause eating disorders' mantra seems to be operative on so few women. Several evolutionary



explanations rooted in an understanding of our evolved biology have been proposed to account for the universal sex difference in eating disorders including that it is a manifestation of reproductive suppression, an evolved mechanism found across a wide range of female mammalian species (see Saad, 2007, Ch. 6, for additional details). Thus, such disorders are largely driven by our biology, with socialization forces playing a minimal (if any) role in their etiology.

In exploring sex differences in information search, consumer scholars have relied most heavily on the selectivity hypothesis. It purports that irrespective of the context in question (e.g. purchasing a financial investment, a candy, or a car) women are comprehensive processors of information whereas men tend to be selective in their acquisition of information. According to the consumer scholars in question, the patriarchy is to blame for this particular sex difference (Meyers-Levy and Sternthal, 1991: 94). A rudimentary understanding of biology and related Darwinian forces would quickly rule out this hypothesis, as no selection pressures could yield such a sex difference across all decisional contexts. In other words, evolutionary theory recognizes that the human mind has evolved domain-specific computational systems and hence, to the extent that the selectivity hypothesis provides a sex difference that is rooted in a domain-general ethos of the human mind, it is likely to be incorrect (as has been shown empirically).

Finally, evolutionary theory provides unique actionable solutions to challenging practical problems. For example, evolutionary theory permits marketing scholars to navigate through the local–global strategic decision, an issue that has yet to be definitely resolved after close to eight decades of debate. Specifically, the Darwinian framework provides the necessary taxonomy to catalog marketing phenomena into human universals (e.g. evolved taste buds yield universal preferences for highly-caloric foods), cross-cultural differences that are adaptations to local niches and hence falling within the Darwinian realm (e.g. use of spicy foods varies as a function of a country's ambient temperature), and emic-based occurrences that fall outside the purview of evolutionary theory (e.g. the historical preference for tea over coffee in Britain). Hence, both human universals and some cross-cultural differences are within the evolutionary rubric. On the other hand, there are some context-dependent and/or individual level phenomena that are outside the scope of evolutionary theory. This does not weaken the validity of evolutionary theory. It simply recognizes that evolutionary forces do not shape all phenomena.

Conclusion

Scholars emanating from disparate fields have repeatedly found that the natural sciences are ranked as more influential and prestigious as compared to the social sciences. Within the social sciences, consumer behavior is not at the apex of any such hierarchy. The intellectual structure of the discipline reveals that the works produced by our field minimally influence the cognate fields from which consumer scholars borrow their theories. I have proposed several reasons regarding



the weak epistemological state of our discipline. First, consumer behavior lacks consilience and has little codified knowledge. Second, it suffers from both methodological and field fixation. Third, it trades off intellectual relevance for methodological and data analytic rigor. Fourth, it focuses on the pursuit of statistically significant effects, irrespective of how trivial the actual problems and subsequent findings are. Finally, it engages in a politically correct discourse of academic pluralism whereby all forms of intellectual dogma are allowed (i.e. no one position is privileged). Each of these lacunae is due to our discipline being a young field going through a maturation period. With that in mind, I have argued that the infusion of Darwinian and biological-based theorizing within our discipline will likely alleviate each of the latter problems (see Eyuboglu and Buja, 2007, and Wilkinson et al., 2005, for recent applications of Darwinian theory in the study of business and marketing relationships).

Sheth and Sisodia (1999) pronounced that marketing was a context-dependent field (i.e. void of universal laws). The identification of universal marketing truths will likely remain an elusive goal as long as the search takes place within phenomena that are intrinsically shaped by environmental forces. While no one would deny the importance of the environment in influencing marketing events, there does indeed exist a set of universal marketing phenomena that are unalterable by environmental factors. Consumers, which form the basis of any marketing system, are defined by a human nature comprised of common universals that transcend time and space. Many of these universals manifest themselves in the consumption arena in manners that are culturally invariant. Hence, the challenge for consumer scholars is to develop a framework that would facilitate the classification of phenomena as either universal (e.g. not bound by culture, context, or era) or context dependent. Kerin and Sethuraman (1999: 102) proposed, 'We might add that an exciting element of knowledge development in marketing lies in uncovering the conditions or circumstances when generalizations apply and when they do not.' They then add, 'It may very well be that our progress and status as a discipline in the twenty-first century will be gauged by our success or failure in this noble pursuit [of seeking lawlike generalizations]' (1999: 104). While their call is timely, they do not provide the mechanisms by which such a quest will prove successful. It is argued here that evolutionary psychology can serve as one of the integrative frameworks that might augment the level of consilience in the consumer behavior discipline. Marketing and consumer scholars must address their collective amnesia and accordingly 'remember' that much of our purposive behaviors, cognitions, and emotions, including those manifested in the consumption arena, are instantiations of our evolved biological heritage. Failure to address this collective amnesia will undoubtedly ensure that the marketing and consumer behavior disciplines will increasingly sink into an abyss of irrelevance while precipitously falling further down the hierarchy of sciences.



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