The Journal of Mind and Behavior
Winter and Spring 2010, Volume 31, Numbers 1 and 2
Pages 65–84
ISSN 0271–0137

Methodological and Moral Muddles in Evolutionary Psychology

Stuart Silvers

Clemson University

Evolutionary psychology, the self-proclaimed scientific theory of human nature, owes much of its controversial notoriety to reports in public media. In part this is because of its bold claims that human psychological characteristics are adaptations to the Pleistocene environment in which they evolved and these inherited characteristics we exhibit now constitute our human nature. Proponents maintain that evolutionary psychology is a scientific account of human nature that explains what this much abused concept means. Critics counter that some evolutionary psychological hypotheses threaten to undermine other intuitive concepts of human nature and well-being, specifically, by emphasizing purported scientific evidence of *natural inequalities* based on sex, gender, or race. They argue that this "gene machine" view entails consequences endorsing or at least seeming to give scientific aid and comfort to politically conservative, "right-wing" social agendas. Proponents deny that the theory has such unwelcome implications. Such objections, they reply, stem from "left-wing" egalitarian ideologies that presuppose the cogency of the disputed *tabula rasa* concept of mind intrinsic to the standard social science model of behavior explanations. Philip Kitcher's (1985) initial scathing analysis of sociobiology, now called evolutionary psychology, as the science of human nature went basically unchallenged. Bioethicist Janet Radcliffe Richards (2000) has given a detailed critique of Kitcher's arguments; she finds them to be "leftward-leaning," and wanting. Here I examine her arguments and find them wanting though not "rightward-leaning."

Keywords: evolutionary psychology, fact–value dichotomy, political and epistemic asymmetry, adaptive unconscious

Few disputes in the intersection of philosophy and science have exhibited such virulence and personal vilification as that generated by evolutionary psychology,

This article was an invited paper presented at the ninth International Colloquium on Cognitive Science at the University of the Basque Country, San Sebastian, Spain in May 2005. It was to appear in the proceedings volume but for reasons unknown that volume was never published. I would like to thank Dr. Ray Russ for further editing. This paper is a contribution to Research Project — Modularity, Reasoning and Social Cognition: A Critical Analysis of Evolutionary Psychology. Ref. FFI2009-08999. Spanish Ministry of Science and Innovation. Requests for reprints should be sent to Stuart Silvers, Department of Philosophy and Religion, 126D Hardin Hall, Clemson University, Clemson, South Carolina 29634–0528. Email: sstuart@clemson.edu

nee sociobiology. Some recent exchanges in the debate have been harsh, so one is advised to tread lightly.[1] Evolutionary psychology is a grand theory of the human mind, which argues plausibly that explanations of characteristically human behavior are enhanced by our understanding such behavior's evolutionary origins; more precisely, our understanding of the evolved neural mechanisms that are the proximate causes of the behavior. Evolutionary psychology gets considerable attention in the public media (among others, the self-described conservative *New York Times* columnist David Brooks often refers to work of evolutionary psychologists) in part, because of its claims. Specifically, the human mind is "an array of psychological mechanisms (domain-specific modules) that is universal among *Homo sapiens*" (Symons, 1992, p. 142). On this "Swiss Army Knife model," the mind is a vast collection of mental modules. The modules are (a) adaptations that arose by genetic variation and selection, enabling our human ancestors to solve specific adaptive problems in their Pleistocene environment, (b) inherited mechanisms constituting "a single, universal panhuman design, stemming from our long-enduring existence as hunter-gatherers" (Cosmides, Tooby, and Barkow, 1992, p. 5), and (c) "the psychological universals that constitute human nature" (Tooby and Cosmides, 1990, p. 19).

The highly charged dispute is with the claim that evolutionary psychology is a scientific theory of the intuitive concept of an innate human nature. The emphasis is on the causal-explanatory role of the evolutionary origins of human behavioral characteristics. This is distinct from the less contentious claim that identifying the evolutionary origins of behavior contributes importantly to our understanding of it without thereby being the only or even a significant part of its explanation.

I begin with a brief summary of Kitcher's (1985) argument critical of sociobiology and Radcliffe Richards' (2000) objections to it. To set the stage for the discussion to follow, I refer to a recent incident in which reference to an evolutionary psychological hypothesis was seen as endorsing a politically conservative view of the role or place of women in society, specifically, the academic community. The discussion then reviews Kitcher's (1985) arguments that the hypotheses of sociobiology (now evolutionary psychology) should be held to more stringent evidential criteria than hypotheses that don't bear directly on "human concerns" (p. 9). In contrast to hypotheses about, say, the origins of distant galaxies, he argues that hypotheses of evolutionary psychology require higher standards of evidence precisely because of the potential harm to human persons, if the presumed true hypotheses turn out to be false. Moreover, for this reason, in the absence of strong positive evidence, such hypotheses should be presumed false.

[1]Witness the exchange in the 2005 issue of *Trends in Cognitive Science* (Volume 9) between evolutionary psychologists Leda Cosmides, John Tooby, Laurence Fiddick, and Gregory Bryant, Martin Daly, and Margo Wilson and philosophers David Buller, Jerry Fodor, and Tessa Crume, on Buller's (2005) book, *Adapting Minds*. See also Silvers (2007).

Radcliffe Richards (2000) rejects Kitcher's view. She identifies his approach with "people of leftward leanings (who) have therefore been inclined to resist the whole enterprise out of hand, as a subordinating of science by the political forces of conservatism and authoritarianism" (p. 252). She argues that "if Kitcher is to justify his claim that sociobiology should be presumed false until there is strong evidence to believe it true" then sociobiological hypotheses must be shown to "have the unwelcome political implications attributed to them" (p. 222). She argues that they do not. Her contention is that Kitcher's methodological analysis contravenes Hume's strictures against deriving normative judgments ("ought" statements) from descriptive statement ("is" statements). She challenges Kitcher's argument that theories which impact (or could have impact) on human lives, such as evolutionary psychology, should be required to satisfy higher standards of evidence. According to Radcliffe Richards, there is nothing in Kitcher's analysis that explains why sociobiology (and evolutionary psychology) requires stricter evidential standards or a presumption of falsehood.

I argue to the contrary that there are both conceptual and empirical resources from which to fashion a plausible explanation for why evolutionary psychology should be presumed false rather than true. The conceptual resources are in Kitcher's (2001) subsequent analysis of the relationship between facts and values in scientific theories, which was already implicit in his earlier work. The theoretical and empirical resources derive, in particular, from Timothy Wilson's (2002) theory of the "adaptive unconsciousness."

Lawrence Summers' Evolutionary Psychology of Education

A notorious incident of support for a purported evolutionary psychological hypothesis involved Lawrence Summers, then President of Harvard University, former United States Secretary of the Treasury and currently, Assistant to the President for Economic Policy. At the 2005 conference of the National Bureau of Economic Research, Summers addressed the question of why fewer women than men succeed in science and mathematics careers. One of his three explanations was because of genetic differences. The reaction was fast and widespread, as in this excerpted report from *The Boston Globe*.

> The president of Harvard University, Lawrence H. Summers, sparked uproar at an academic conference Friday when he said that innate differences between men and women might be one reason fewer women succeed in science and math careers. Summers also questioned how much of a role discrimination plays in the dearth of female professors in science and engineering at elite universities.
>
> "I said no one really understands why this is, and it's an area of ferment in social science," Summers said in an interview Saturday. "Research in behavioral genetics is showing that things people previously attributed to socialization weren't due to socialization after all."

> Asked about this, Summers said, "It's possible I made some reference to innate differences . . . . I did say that you have to be careful in attributing things to socialization . . . . That's what we would prefer to believe, but these are things that need to be studied."[2]

Summers was immediately pilloried for his explanation. He was denounced by the left, cheered by the right, and after a "firestorm" of criticism, he apologized publically and later resigned his Harvard presidency. In *Human Events Weekly: The National Conservative Weekly*, Linda Chavez came to the beleaguered Harvard president's defense: "Summers was really just articulating what most researchers in this area believe — that biology plays a bigger role in explaining these differences than socialization does."[3]

The Summers case shows that when influential figures (seem to) acknowledge the scientific authority of speculative hypotheses about the causes of some aspect of human behavior, it can result in public anxiety about the hypotheses' alleged social and political implications. In particular, when such hypotheses involve antecedently held, popular beliefs, there can be and are serious social repercussions. Such are the social, cultural, political, and educational consequences that critics, both of the political left and right, identify with evolutionary psychology.

In the welter of critical commentary on the explanatory scope of evolutionary psychology, some staunch Darwinians are also acute critics of its claimed abuses, e.g., Lewontin, et al., (1984) *Not in Our Genes* and Hilary and Steven Rose's (2000) *Alas, Poor Darwin*. Philip Kitcher's (1982, 1985, 2001) sustained and trenchant critique of the methodology and accompanying cultural reactions to "psychological Darwinism" as the science of human nature has gone largely unanswered. In neither of Stephen Pinker's (1997, 2002) big books on evolutionary psychology is there any discussion of or reference to Kitcher's debunking of the theory.[4] Radcliffe Richards (2000) argues that both sides are misguided in presupposing social and moral implications of the theory. Her goal is to show why the contentious implications ascribed to evolutionary psychology are not (and cannot be) the logical consequences its critics claim. The defense of evolutionary psychology from such normative objections rests on what she takes to be an inviolable fact–value dichotomy. I reconstruct her arguments that no normative implications follow logically from evolutionary psychological hypotheses to make the case that such inferences cannot be so easily or simply dismissed.[5]

---

[2]Summers' remarks on women draw fire. Marcella Bombardieri, Globe Staff, January 17, 2005. http://www.boston.com/news/local/articles/2005/01/17/

[3]http://www.humaneventsonline.com/article.php?id=6342

[4]In *The Blank Slate* (2002) Stephen Pinker fights a "rear-guard" action by documenting a history of the denials of human nature (this is also the subtitle of his book) in a tirade describing the atrocities he ascribes albeit indirectly to the Lockean idea of the mind as a *tabula rasa*.

[5]A current case of concerns (or fears) for dire implications of an empirical theory, as well as the credibility of evidence, is with that part of meteorology now known as "climate science." This case is thus relevant to the issue Kitcher raises about presumptions of truth and falsity of hypotheses and the cost of error in being wrong.

Radcliffe Richards on Kitcher's Logical and Methodological Blunders

Radcliffe Richards' (2000) fine-grained analysis of Kitcher's (1985) assessment of sociobiology, is motivated, in part, by what she says "is clearly an anti-sociobiology piece of writing" (p. 215). She ascribes this to Kitcher's use of biased language such as "friends of sociobiology," "body of doctrine" and scare quotes which carry "a strong negative spin."[6] I eschew this part of her critique to focus on the more substantive objections.

Kitcher (1985) critically analyzed what he called pop sociobiology as a theory of human nature.[7] Among the many critical points he argues there are two, one methodological–evidential, the other moral–social, that he claims impinge on each other in ways requiring more stringent criteria for accepting sociobiology [evolutionary psychology] than for theories that don't bear on human behavior.[8]

For Kitcher, "*The dispute about human sociobiology is a dispute about evidence*" (1985, p. 8; italics in the original). We adjudicate scientific theories on the empirical evidence that confirms or infirms them. As a scientific theory, evolutionary psychology falls within the scope of these evidential norms, so the issue is about the empirical findings adduced for its truth. Accordingly it seems that "The issue reduces to a question about truth, pure and simple" (p. 8) but he notes "Lady Bracknell's reminder is apposite — the truth is rarely pure and never simple" (p. 9).[9] The issue is, thus, not about accepting a hypothesis about humans regardless of its social or political implications once there is sufficient evidence for it, it is rather about whether the judgment of evidential sufficiency itself is "independent of its political consequences" (p. 9). If there is a high cost of error in being wrong about the truth of a hypothesis, there is greater need to demand more stringent evidential standards than in cases where such errors are comparatively harmless. Since theories about human behavior and our evo-

---

[6]It is worth mentioning, as Rosenberg (2008) does, that "The vocabulary of ordinary language and the social sciences is replete with value-laden terms" (p. 228). This issue is part of the long-standing debate about whether there is an essential moral dimension to social science. It should also be noted that the issue is not settled by referring to Popper's view that science seeks not truth but interesting, explanatory truth.

[7]His target was the work of E.O. Wilson (1975, 1978) and C. Lumsden and E.O Wilson (1981, 1983a, 1983b).

[8]Pop sociobiology has been supplanted by evolutionary psychology thanks to the work of Cosmides and Tooby, and a host of other notable scholars. Their computational, massive modularity of mind thesis has proven hugely provocative and responsible for the resurgence and vigorous interest in the application of Darwinian principles to the explanation of human behavior and, in particular, to the question of the heritable determinants of human nature. These developments are significant and fecund but the underlying features of the account of human nature in its evolutionary psychological incarnation remain intact. In particular, the questions of evidential strength and explanatory adequacy of evolutionary psychology continue to be current.

[9]In quoting this passage Radcliffe Richards correctly substitutes the name of Algernon Moncrieff for Lady Bracknell's. It's plausible to suppose that any number of different people have remarked on the notion of truth in this way.

lutionary history can be offered in support of legislation for social policies, hasty acceptance of a flawed theory might have harmful results. This point was made forcefully by Rudner (1953) who contrasted "the relatively high degree of confirmation" for a hypothesis about the level of a toxic ingredient of a drug and a hypothesis about whether a set of belt buckles was defective. "*How sure we need to be before we accept a hypothesis will depend on how serious a mistake would be*" (p. 2, italics in the original).

The potential damage done by the acceptance of a faulty hypothesis about drug safety based on inadequate evidence equates with the potential damage wrought by the acceptance of a faulty hypothesis about the determinants of human behavior based similarly on inadequate evidence. The argument is that precisely because of the potential human harms, it's worse to presume sociobiology true, if it's false than presuming it false if it's true. This is not a repudiation of evolutionary psychology but a caution against hasty acceptance of insufficiently supported hypotheses, specifically when they tend to fortify antecedently held, tradition-bound prejudices. We don't foreclose on competing research projects under the weight of claims made by those who allege to have discovered the (genetic) key to human nature because "There is no guarantee that our beliefs about ourselves will be correct, no matter how carefully we weigh the evidence. But the more extensive our inquiry, the more secure we are against error. That, at least, is the hope of human rationality" (Kitcher, 1985, pp. 10–11).[10]

Radcliffe Richards (2000) disagrees that the potential for harmful consequences cautions us to hold evolutionary psychological hypotheses to stricter evidential standards. In particular, she claims that Kitcher offers no explanation for how sociobiological assumptions lead to purported harmful consequences.[11] Without such explanation, she argues, there is no justification for "his implied claim that it is much worse to assume sociobiology true if it is false than false if it is true" (p. 219). I argue to the contrary that there is a cogent explanation; I spell it out below.

These implications fail, Radcliffe Richards argues, because they commit the naturalistic fallacy, i.e., the truth or falsity of the descriptive hypotheses of evolutionary psychology is logically independent of any normative conclusion about what our social goals *should* be. The question of which values we ought to adopt, she claims, cannot be resolved by derivation from any descriptive theory, on pain of breaching Hume's strictures about not inferring "ought" statements from "is" statements. To shore up the fact–value distinction she offers two related objections against Kitcher's (1985) argument.

---

[10]Kitcher showed the methodological and explanatory shortcomings of sociobiological theories by reviewing a variety of alternative, environment-based explanations for the empirical data that sociobiologists argue can be explained only by adaptationist hypotheses.

[11]She also argues that Kitcher errs in claiming that being wrong about the bases of human social behavior implies the abandonment of the goal of a fair distribution, "when really it is a separate point" (p. 220).

The first is that fundamental ideas of justice, e.g., men and women should be treated equally, are independent of any descriptive theory about the nature of men and women, whether genetic or environmentally based. Her second objection is to Kitcher's contention that " 'socially harmful consequences' as well as 'consequences for social policies and individual lives if we turn out to be mistaken' and 'carelessness that results in the destruction or diminution of human life' " (p. 219) follow from accepting sociobiological theories. As she puts it, ". . . he thinks that (such) harm will follow from mistaken assumptions about the truth of sociobiological theories . . . . But this does not explain how sociobiological assumptions would result in these kinds of harm, or why mistakes should be worse in this direction than the other" (p. 219). She acknowledges that while Kitcher (1985, p. 10) is right about the need for "close methodological scrutiny" where adoption of inept social policies is detrimental to human lives, ". . . no reason has been given for taking the default presumption to be against sociobiology in general" (Radcliffe Richards, p. 240).

Radcliffe Richards' objection is again based on the alleged logical gap between "is" and "ought" statements and the distinction between fundamental and derived values. Fundamental values are purportedly independent of matters of fact.[12] In contrast, derived values do follow from combining factual statements with statements of fundamental value, the latter being just those about which evolutionary psychology or any descriptive theory has no message. For instance, if the fundamental value is equal regard for the well-being of men and women, then this combined with facts about male–female differences implies a derived or practical value about our actions, e.g., equal pay for equal work. Only derived values can be threatened by "changes in the understanding of our nature . . . while the fundamental ones remain intact. In other words, the 'is' 'ought' distinction remains intact" (Radcliffe Richards, p. 242). She concludes that there is no threat that we will have to abandon our *ideals* of social justice, our fundamental values, if evolutionary psychology is true because there is nothing in the theory from which to draw such conclusions. So, she argues, Kitcher need not fear that his fundamental value, equal regard for the well-being of men and women, is endangered by evolutionary psychology. Her reasoning is that fundamental values are expressed in normative, i.e., "ought" statements and are, in virtue of being *fundamental*, unlike statements of derived values, logically independent of any and all factual, scientific statements. Insofar as evolutionary psychology is a scientific theory, no logical inferences regarding fundamental values can be drawn from its factual hypotheses. The distinctions are two sides of the same coin and work in a convenient harmony to relieve evolutionary psychology of the unwelcome implications its critics attribute to it.

---

[12]It is difficult to conceive of having fundamental values in the total absence of relevant facts.

Radcliffe Richards diagnoses the "erroneous" ascription of normative consequences as the repudiation of the "is" "ought" logical gap. "Many people who express doubts about Hume's distinction, and a great many more — who do not think to put the matter that way — clearly do, in practice, make the assumption that conclusions about what ought to happen *can* be derived directly from an understanding of the nature of things" (p. 242). It's a version of the "moralistic fallacy" that "it's natural" implies "it's good (or right)." "There seems little doubt that ideas of this kind — which see 'ought' and 'is' as intimately connected — lie at the root of much of the anxiety about evolutionary psychology. They may even be the real source of Kitcher's conclusion that evolutionary psychology should be presumed false until proven true" (p. 244).

Radcliffe Richards' claim of the value-neutrality of evolutionary psychology is the standard defense; Pinker (2002) appeals to it explicitly.[13] Radcliffe Richards is right about the rejection of the descriptive/normative dichotomy as a source of concern about the potential depredations of theories of human nature. The question is, however, whether there are grounds for sustaining this dichotomy. My argument is that the case Radcliffe Richards makes rests on a rigid and discredited dichotomy of fact and value. To argue this involves explaining (a) how the harms come about, (b) why it's worse to presume sociobiology true if it's false than presuming it false if it's true, and (c) how potential errors in evolutionary psychology about human nature can undermine ideals of distributive justice. As Cartwright (2000) points out, "At some stage, the Darwinian will want to give a naturalistic account of value and morality and this, in the absence of any transcendental notions of goodness, will presumably have to be based on a factual account of the natural world" (p. 327).

Seeing Through False Dichotomies

The naturalistic fallacy defense of evolutionary psychology's value neutrality is logically myopic. It is predicated on the idea of a theory's implications being a matter of deductive inference. Radcliffe Richards restricts her examination of the various normative consequences ascribed to evolutionary psychology to the question of whether they are deductively implied by the theory. To deflect the force of the critical claims, she employs *modus tollens* argument forms to demonstrate that the consequences attributed to evolutionary psychology cannot

[13]To political scientist Roger Masters' (1989, p. 240) counterexample that, "When the physician says the patient ought to have an operation because the facts show appendicitis, the patient is unlikely to complain about a fallacious deduction," Pinker (2002) argues, "Acknowledging the naturalistic fallacy implies only that discoveries about human nature do not, by themselves, *dictate* our choices. The facts must be combined with a statement of values and a method of resolving conflicts between them" (p. 164).

be derived from it by a deductively valid argument. I present her inference forms and then reconstruct them to reflect subtleties disclosed in the results of experimental cognitive psychology that bear directly on the traffic in the busy intersection of facts and values.

While we can acknowledge that the unwelcome consequences the critics cite are not deductively logical consequences of the theory, there are good reasons for thinking that there is more to their concerns than can be dismissed on deductively logical grounds. The logical point is that whether or not a statement follows from a hypothesis depends on which auxiliary statements mediate the inference. To test the implications of evolutionary psychological hypotheses Radcliffe Richards constructs argument forms in terms of conditional statements which, when conjoined with relevant premises, enable her to demonstrate that the claimed unwelcome implications fail to follow validly from the premises. She considers Gould's criticism of what he took to be Dawkins' (1976) genetic determinism. "If we are programmed to be what we are, then these traits are ineluctable. We may, at best, challenge them, but we cannot change them either by will, education, or culture" (Gould, 1977, p. 238, quoted in Radcliffe Richards, 2000, p. 115). "[T]he problem," Radcliffe Richards (2000) says, "is to assess the truth of a conditional, which is something like this:"

> If (sociobiology is right, and) women's emotional attitudes towards men are genetic in origin, then (however successfully they refuse to allow their actions to be manipulated by their emotions) women who have these emotions have no way of avoiding them (and their unwelcome effect). (p. 116)

To this she adds the premise affirming the antecedent of the conditional:

> Women's emotional attitudes towards men are genetic in origin.

From which it is claimed to follow that:

> Therefore women who have these emotions have no way of avoiding them. (p.116)

The argument is unsound because Gould's premise leading to the (unwelcome) conclusion is false. To say that traits are ineluctable relative to some specific, ineffective means to alter them is not to say that they are unchangeable by some others, e.g., psychopharmacology or psychotherapy. One can also argue, as Radcliffe Richards does, that the inferences of this kind commit the fallacy of division, for from the fact that a genetically based female trait is true of the class of females, it does not follow that said trait is true of all individual females

or true of them in the same degree. This tutorial works well as an exercise in the logic of the implications of evolutionary psychology, one that I happily recommend, but it's orthogonal to and hence ineffective against the point of the so-called "leftward-leaning" implications she seeks to deflect. The probative force of such arguments, however, is not to be found in such simplistic reconstructions. The reason is that evidential criteria, for example, for the premise about women's genetically based emotional attitudes toward men, do not exist in a methodologically sterile vacuum. This methodological point stresses the intricacy of relationships between the idea (and ideal) of evidential adequacy and contexts of acceptance and rejection of theories.

The idea is that evolutionary psychological theories should be held to higher standards of evidence precisely because of the opacity in the nexus of evidence and decision to accept or reject a hypothesis. This obliges us to consider more thoughtfully the costs of being wrong about them than with theories that don't bear directly on human well being. In light of this methodological messiness, more exacting evidential criteria are appropriate. The reason is that accepting evolutionary psychological theories as true on the available (inadequate) evidence and then acting on them, e.g., legislating social policies, could undermine our political ideals and cause more harm to the well being of lives of those already socially disadvantaged. This is why we recognize that decisions to accept or reject theories of human behavior are unavoidably fraught with multifarious influences. This justifies demands for greater evidential scrutiny where the risk of error can have devastating human consequences.

In a tale of two communities, Kitcher (2001) distinguishes political and epistemic asymmetries to explicate the intricate connection between the societal context of scientific inquiry and methodological issues in determining a theory's evidential adequacy. On a point about how the two asymmetries are connected that will loom large, Kitcher refers to "the underprivileged" in remarking that there are obvious disparities in the welfare of populations comprising a society's structure. I summarize key elements in his analysis.

Political asymmetry is exhibited where scientific research is conducted in societies having "significant inequalities with respect to well-being" (Kitcher, 2001, p. 96). Among the causes of such disparities are past beliefs in the natural inferiority of people with certain characteristics, often minorities in the population. Although such beliefs are repudiated in most public discourse, residual forms of this belief are still present (p. 96). Evidence purportedly supporting hypotheses of *natural inferiorities* results in the revival of formerly held beliefs with the potential consequence that the lives of those believed to have the features constituting the *natural inferiority*, the "underprivileged," decline.

Epistemic asymmetry regarding belief acceptance is when "people . . . take the belief to have more support than it deserves" (p. 97). The asymmetries mutually reinforce each other. The history of science discloses that members of

scientific communities often view their findings "through a glass darkly," while demographic evidence shows the make-up of our current scientific communities is (in part) a result of the efficacy of society's political asymmetry. They are non-random subsets, as it were. We cannot thus expect from scientists caught up in the excitement of their research into "differences due to sex, gender, or race . . ." (p. 106) reflection on how such work contributes to reinforcing the very conditions of political asymmetry of which they are beneficiaries. This is not intentional, rather it's that researchers see themselves as discovering basic truths of human nature and, Kitcher emphasizes, as "defending 'unpopular' views" (p. 106) and as walking in the (Galilean) footsteps of scientific precursors who suffered political injustices.[14]

Consider a case that fits Kitcher's thesis and is of critical significance in the subsequent discussion of the evidence for Wilson's (2002) theory of *adaptive unconscious*: the December 5, 2002 remarks by Trent Lott of Mississippi, then United States Senate Majority Leader, on the occasion of Strom Thurmond's 100th birthday testifies to the continuing reality of Kitcher's account of residual forms of beliefs still present, despite repudiation in public discourse. Lott, as Senate Majority Leader, counted clearly as someone in a politically powerful position. He came to grief and was forced to resign his position as Majority Leader in the United States Senate for these remarks he made.

> I want to say this about my state: "When Strom Thurmond ran for president, we voted for him. We're proud of it. And if the rest of the country had followed our lead, we wouldn't have had all these problems over all these years, either." Thurmond ran for president in 1948 on a Dixiecrat platform opposing "social intermingling of the races." (Report by Sheryl Gay Stohlberg, *New York Times*, December 10, 2002)

What was this "lead" in voting for Thurmond that Lott wanted the country to follow? One can only speculate that it has something to do with adopting Thurmond's policies of opposing desegregation. After slavery was outlawed, such policies were realized in the infamous Jim Crow laws outlawing integration. About Thurmond whom Lott lionized, he was Governor of and then Senator from South Carolina and staunch defender of racial segregation. In a 1948 speech

---

[14]A recent case in point is this: scientists studying the DNA of 52 human groups from around the world have concluded that people belong to five principal groups corresponding to the major geographical regions of the world: Africa, Europe, Asia, Melanesia, and the Americas. The study, based on scans of the whole human genome, is the most thorough to look for patterns corresponding to major geographical regions. These regions broadly correspond with popular notions of race, the researchers said in interviews. Dr. Marcus Feldman of Stanford University, the senior author of the study . . . said the finding essentially confirmed the popular conception of race. He said precautions should be taken to make sure the new data coming out of genetic studies were not abused. "We need to get a team of ethicists and anthropologists and some physicians together to address what the consequences of the next phase of genetic analysis is going to be," he said (Nicholas Wade, *New York Times*, December 20, 2002).

during his campaign for United States President for the State's Rights Democratic Party (Dixiecrats) that met with cheers by supporters, he stated:

> I want to tell you, ladies and gentlemen, that there's not enough troops in the army to force the Southern people to break down segregation and admit the Nigra's race into our theaters, into our swimming pools, into our homes, and into our churches.[15]

Despite various public displays of contrition, Lott was forced to relinquish his powerful Senate Majority Leader's position because of his *incautious* remarks celebrating Thurmond's aggressive defense of racial segregation.[16]

Apropos of this and similar cases discussed below, Wilson (2002) illustrates the phenomenon of "dual attitudes" within the context of his more general theory of the adaptive unconscious. His thesis of the adaptive unconscious provides rich empirical and theoretical resources to explain why, precisely because of the potential human harms, it's worse if we presume evolutionary psychological hypotheses to be true and they turn out to be false than the other way round.

Wilson distinguishes his idea of the adaptive unconscious from the once popular Freudian notion of preconscious states of mind as "the part of my mind that I cannot access even when I try." They are "*mental processes that are inaccessible to consciousness but that influence judgments, feelings, or behavior*" (p. 23, Wilson's italics). Drawing upon results from a variety of experiments, Wilson identifies an autonomous (human) mental control system whose designation as " 'adaptive unconscious' is meant to convey that nonconscious thinking is an evolutionary adaptation" (p. 23). He discusses several explanatory properties of the hypothesized adaptive unconscious, including pattern detection, attention and selection, interpretation of information, feeling and emotion, and goal-setting and then asks about its functional role in the explanation of our actions. The experimental results lead him to a powerful explanatory hypothesis and, in turn, a serious question the answer to which seems to bear directly upon the issue of the persistence of beliefs about and attitudes toward what Kitcher calls the "underprivileged." According to Wilson, "The adaptive unconscious . . . plays a major executive role in our mental lives. It gathers information, interprets and evaluates it, and sets goals in motion, quickly and efficiently. This is a wonderful set of mental abilities to have, and if we were to lose them . . . we would find it very difficult to make it through the day" (p. 35).

---

[15]Quoted in Bass and Poole (2009, p. 104). The authors add, "Nevertheless, Thurmond forever denied running a racist campaign" (p. 105).

[16]Strom Thurmond holds two noteworthy records as a United States Senator. One is that he holds the record for conducting the longest filibuster in Senate history in an effort to block passage of the Voting Rights Act of 1964 that ensured minorities and specifically African Americans unimpeded access to the legal right to vote. The other is that he was the longest serving Senator in United States history, 48 years.

That the adaptive unconscious plays an "executive" role indicates its function in our mental economy: it carries out those operations that contribute to successful self-maintenance. It does so independently of our conscious mental states, our beliefs, desires, hopes, expectations, etc. in the sense of overriding their presumed conscious causal powers that inform and make intelligible the concept of human *agency*. If the adaptive unconscious does perform this autonomous executive function the question is, *what governs its operations?* More metaphorically, Wilson (p. 35) asks, ". . . how does the adaptive unconscious decide *what* to select, how to interpret and evaluate, and *which* goal to set in motion? In short, what is its agenda?" His answer brings us to Kitcher's point about residual forms.

Based on his own research as well as of others', Wilson postulates that "we possess a psychological immune system that protects us from threats to our psychological well-being" (p. 38). Since the adaptive unconscious selects, interprets, and evaluates information, "it is no surprise that one of the rules it follows is 'Select, interpret, and evaluate information in ways that make me feel good'" (p. 39). My argument draws upon the explanatory force of Wilson's adaptive unconscious hypothesis to elucidate the elusive and sometimes treacherous connection between the political and epistemic asymmetries of belief.

Relevant cases involve people's attitudes toward minority groups, where it is generally assumed that people know of themselves whether or not they are prejudiced. For example, Title VII of the United States Civil Rights Act, which prohibits discrimination in employment on the basis of race, color, sex, national origin, and religion, assumes that such discrimination is conscious, deliberate, and intentional. A growing corpus of evidence suggests strongly that we are routinely subject to having two (or more) feelings and beliefs about the same issue. Wilson argues that people are prone to "dual attitudes," toward the same topic, "one more conscious than the other" (p. 35).

First stipulate that in the United States and in most Western industrialized democratic countries there is a positive correlation between people identified as socio-economically underprivileged and members of so-called minorities, otherwise identified as non-Caucasian within the overall population. There have been significant and encouraging changes in attitudes of White people toward African American people in the United States, witness the recent historic election of a half African American to the Presidency of the United States. Comparative polling results from 1958 and 1997 disclose that Whites now have far more favorable attitudes toward Blacks. Nevertheless, the evidence for the persistence of racial prejudice comes from a disturbing variety of studies of discrimination in housing showing that real estate agents discriminate against African American and Hispanic clients. Wilson cites Yinger's (1995) study reporting that over a twelve year period, "there has been little or no reduction in housing discrimination" (p. 189).

> Consciously, we might not be prejudiced at all toward these groups, and if it were not for social psychological research on the topic, that would be all there is to it. But on the basis of the research, we might at least entertain the possibility that we have automatic, habitual prejudiced responses toward members of some of these groups of which we are not fully aware. (Wilson, 2002, pp. 190–191)

Wilson's hypothesis receives additional confirmation from results of experimental studies designed to "measure people's level of implicit prejudice, bypassing their conscious beliefs and desires" (2002, p. 191).

In light of the connections between political and epistemic asymmetries we can re-formulate Radcliffe Richards' arguments to correctly capture the concern for ubiquitous inferences from suggestive but insufficient evidence to contentious conclusions, which in turn are used to justify social actions. Recalling the furor over some suggestive claims in Herrnstein and Murray's *The Bell Curve* (1994), suppose we re-write Radcliffe Richard's argument substituting "African Americans" for "women" as Kitcher's "underprivileged." The argument form is *modus ponens*. For ease of comparison I restate Radcliffe Richards' (2000) argument:

> If (sociobiology is right, and) women's emotional attitudes towards men are genetic in origin, then (however successfully they refuse to allow their actions to be manipulated by their emotions) women who have these emotions have no way of avoiding them (and their unwelcome effect).
>
> Women's emotional attitudes towards men are genetic in origin.
>
> Therefore women who have these emotions have no way of avoiding them (and their unwelcome effect). (p. 116)

My reconstructed version reflecting political asymmetry:

> If people in powerful positions (e.g., Trent Lott) are (or can be) persuaded that (evolutionary psychology is right, and) African Americans' (alleged) relatively lesser intellectual capacities are genetic in origin then they are likely to believe that (however successfully African Americans refuse to allow their actions to be manipulated by their lesser capacities), African Americans who have these (alleged) lesser capacities have no way of avoiding lesser capacities (and their unwelcome effect).
>
> People in powerful positions are (or can be) persuaded that African Americans' (alleged) lesser intellectual capacities are genetic in origin.
>
> Therefore, people in powerful positions are likely to believe that African Americans who have these (alleged) lesser intellectual capacities have no way of avoiding them.

Similar arguments can be reconstructed in the case of the above-mentioned Lawrence Summers who pondered the explanation of genetic differences between men and women to account for girls' poor performance on math and science tests.

With respect to epistemic asymmetry, we can similarly re-construct Radcliffe Richards' formulation of Gould's argument:

> If scientists are (or can be) persuaded that evolutionary psychology has more support than it deserves (evolutionary psychology is right, and) women's emotional attitudes towards men are genetic in origin, then they are likely to believe that (however successfully women refuse to allow their actions to be manipulated by their emotions) women who have these emotions have no way of avoiding them (and their unwelcome effect), has more support than it deserves.
>
> Scientists are (or can be) persuaded that the hypothesis that women's emotional attitudes towards men are genetic in origin, has more support than it deserves.
>
> Therefore, scientists are likely to believe the hypothesis that women who have these emotions have no way of avoiding them, has more support than it deserves.

A case in point is the recent incident involving Nobel Laureate James Watson, co-discoverer of DNA. He was forced to resign as Director of the Cold Spring Harbor Laboratory, because he remarked that while

> "there are many people of color who are very talented," he admitted to being "inherently gloomy about the prospect of Africa . . . . All our social policies are based on the fact that their intelligence is the same as ours — whereas all the testing says not really." Watson later said, "I cannot understand how I could have said what I am quoted as having said. There is no scientific basis for such a belief." (Report by Cornelia Dean, *New York Times*, October 19, 2007)

The reconstructed argument for this case looks like this:

> If distinguished scientists like James Watson can be persuaded that evolutionary psychology has more support than it deserves (i.e., persuaded that evolutionary psychology is right) and Africans have lesser intelligence, then they are also likely to believe the hypothesis that no matter how successful Africans are in refusing to allow their actions to be manipulated by their intelligence, those who have such lesser intelligence have no way of avoiding it, has more support than it deserves.
>
> Distinguished scientists like Watson can be persuaded that evolutionary psychology has more support than it deserves (evolutionary psychology is right) and Africans have lesser intelligence.
>
> Therefore, scientists like Watson are also likely to believe the hypothesis that no matter how successful Africans are in refusing to allow their actions to be manipulated by their intelligence, those who have such lesser intelligence have no way of avoiding it, has more support than it deserves.

The inelegance of these reconstructed versions of the arguments aside, by parity of reasoning with Radcliffe Richards' arguments, the conclusions follows. The crucial issue, however, is the plausibility of the reformulated premises.

Their truth is most likely beyond our reach because of the staggering complexity of the factors that comprise the asymmetries. It is nonetheless significant that the demarcation of the asymmetries constitutes a plenitude of well-considered reasons that, contrary to Radcliffe Richards' assertion, do connect "mistaken assumptions about the truth of sociobiological theories" and " 'socially harmful consequences' as well as 'consequences for social policies and individual lives if we turn out to be mistaken,' and 'carelessness that results in the destruction or diminution of human life' " (Radcliffe Richards, 2000, p. 219). If these are plausible (and generalizeable) re-formulations of Radcliffe Richards' argument strategy, we need to examine the grounds of the plausibility, viz., why it's defensible to demand that we hold evolutionary psychology to higher evidential standards. Specifically, we need to determine if there is reason to think that people can be persuaded to so believe because of antecedently held attitudes rather than on the available evidence. This goes to her contention that ". . . no reason has been given for taking the default presumption to be against sociobiology in general" (p. 240).

The contention is disingenuous for two reasons: first, suppose evolutionary psychology does include hypotheses describing distinctly different, racially-based, behavioral/cognitive capacities which are, on the available evidence, believed to be true but are in fact false. The erroneous beliefs might be traced to such factors as inadequate and/or anecdotal evidence, unreliable test methods, or because it sustains unfounded stereotypical attitudes. Suppose too, that the mistaken beliefs are used, albeit surreptitiously, to formulate and justify the codification of social arrangements as, for example, in barring access to certain kinds of employment or social organizations, etc. (this is hardly a counterfactual supposition). The harm suffered unnecessarily by those already disadvantaged by the history of such practices is worse than if evolutionary psychology were presumed false. If it's presumed false, we might expect that experts would explain striking instances of confirming evidence as false positives and expect a greater likelihood that they would caution skepticism for those responsible for formulating social policies. If evidence suggestive of, say, racially based differences in cognitive capacity, as in the cases of Herrnstein and Murray's *The Bell Curve* (1994) and James Watson, were to be offered in scientific justification of policies legitimizing racial quota hiring laws, the antecedent presumption of falsehood would be more likely to lead to the demand for more evidence. More significantly, the presumption of falsehood or at least serious skepticism toward the evidence for the hypothesis would heighten the demand for alternative explanations to account for whatever empirical data are introduced to support the hypothesis in question.

The second reason is that Kitcher's critique of evolutionary psychology is not based upon an acceptance or defense of the blank slate thesis. The call for alternative forms of inquiry and explanation prior to foreclosing on the essence of human nature is an admonition on the pitfalls of scientific hubris. Here, the

connection between epistemic and political asymmetry is the relevant consideration. The ideal of theory determination by objective evidence garnered by disinterested researchers returns us to Lady Bracknell's insight on truth.[17]

Radcliffe Richards also errs in arguing that there is no more reason to believe that presuming sociobiological ideas to be true when they are false than it is to hold that they are false when they are true. Consider Kitcher's thought that we have ". . . the duty to care for those whose lives already go less well and to protect them against foreseeable occurrences that would further decrease their well-being" (2001, p. 103). Are there equally forbidding, foreseeable occurrences if we hold evolutionary psychological hypotheses to be false when they are true? I think not.

Let's assume that we legislate purported egalitarian policies because we believe falsely that there are no racially based innate, genetic, cognitive differences among peoples when in fact there are. Would this harm those who are (in fact?) race-genetically disadvantaged? How would this go? Of course, there are countless cases of unsuccessful attempts at overachievement but they are *individual* instances in which the relevant details relate to one's individual capacities and not to blanket generalizations about genetically based traits of racial groups. Indeed to argue that presuming evolutionary psychological theories are true when they are false is no worse than the converse is to beg the question of harmful consequences. We might reasonably wonder whether telling people they are innately disadvantaged is likely to reduce their degree of disadvantage, and if so, how? Moreover, even if it were (counterfactually) true that there are such racially-genetic based cognitive (and other *characterological*) differences, there is the still the important question of the degree and distribution of such differences and whether the supposed degrees of difference make significant human difference. This recalls the unsavory question of "human essence" and the disparaged notion that some "races" are only marginally human or *Untermenschen*. Alternatively, one might argue that the damage would accrue to the innately *advantaged*, but the consequences of such an idea are too horrendous (and too historically recent, not to say current in Aryan supremacy dogma) to speculate further here.

Concluding Comments

My reformulation of Radcliffe Richards' arguments is designed to retrieve the critical discussion of the nature of evolutionary psychology's implications from the narrow confines of deductive inference. Its proper focus is on the confounding complex of issues in the intersection of evidential standards and inescapable, practical decisions to accept and reject scientific hypotheses. Here we find a glut of reasons for the thesis that we should hold evolutionary psycho-

[17]As noted, the insight "The truth is rarely pure and never simple" is spoken by Algernon Moncrief in Oscar Wilde's play, *The Importance of Being Ernest*.

logical theories of human nature to higher evidential standards. The reasons are complex, opaque, *factual*, and often not pretty, for they involve our own untutored predilections and indiscretions. The explanatory power and fecundity of evolutionary psychology as a viable empirical theory of human behavior depends upon the keen discernment of the relationship between political and epistemic issues implicated in theory determination. Thus, when Radcliffe Richards concludes, "So it seems to me that Kitcher is just wrong" (2000, p. 241) that theories of human nature require closer methodological scrutiny than other theories, we can venture that it does so because of her reliance on the tenability of the naturalistic fallacy that disqualifies an entire category of relevant reasons. There is, contrary to her conclusion, good reason to believe the "is" "ought" distinction is not intact and that it is as much a dogma of empiricism as the analytic–synthetic distinction.

There is nothing in any of this that suggests any sort of morally based restrictions on the pursuit of evolutionary psychological explanations to enhance our understanding of the evolutionary origins of human behavior and social institutions. There are, of course, rationally justified moral prohibitions on certain types of experimental inquiry but evolutionary psychology is not of that kind. It is, however, the kind of inquiry rationally requiring that we hold it to higher standards of evidence precisely because the contextual factors impinging on it are opaque and seductive and the consequences of error about the constituents of human nature are potentially harmful. Here I have argued that Radcliffe Richards' defense of evolutionary psychology fails against requiring closer methodological scrutiny. The value-free science defense of evolutionary psychology to which Radcliffe Richards and proponents of the theory subscribe, fails because it presupposes the tenability of the discredited fact–value dichotomy and disregards the factors that make it false in favor of an idealized caricature of theoretical competition for the truths of human nature.

References

Barkow, J., Cosmides, L., and Tooby, J. (Eds.). (1992). *The adapted mind: Evolutionary psychology and the generation of culture*. New York: Oxford University Press.

Bass, J., and Poole, W.S. (2009). *The palmetto state: The making of modern South Carolina*. Columbia, South Carolina: University of South Carolina Press.

Buller, D. (2005). *Adapting minds: Evolutionary psychology and the persistent quest for human nature*. Cambridge, Massachusetts: MIT Press.

Buller, D., Fodor, J., and Crume, T. (2005). The emperor is still under-dressed. *Trends in Cognitive Sciences, 9*, 508–510.

Cartwright, J. (2000). *Evolution and human behavior*. Cambridge, Massachusetts: MIT Press.

Cosmides, L., and Tooby, J. (1987). From evolution to behavior: Evolutionary psychology as the missing link. In J. Dupre (Ed.), *The latest on the best: Essays on evolution and optimality* (pp. 277–306). Cambridge, Massachusetts: MIT Press.

Cosmides, L., and Tooby, J. (1992). Cognitive adaptations for social exchange. In J. Barkow, L. Cosmides, and J. Tooby (Eds.), *The adapted mind: Evolutionary psychology and the generation of culture* (pp. 163–228). New York: Oxford University Press.

Cosmides, L., Tooby, J., and Barkow, J. (1992). Introduction: Evolutionary psychology and conceptual integration. In J. Barkow, L. Cosmides, and J. Tooby (Eds.), *The adapted mind: Evolutionary psychology and the generation of culture* (pp. 3–15). New York: Oxford University Press.

Cosmides, L., Tooby, J., Fiddick, L., and Bryant, G.A. (2005). Detecting cheaters. *Trends in Cognitive Sciences, 9,* 505–506.

Daly, M., and Wilson, M. (2005). The 'Cinderella Effect' is no fairy tale. *Trends in Cognitive Sciences, 9,* 507–508.

Dawkins, R. (1976). *The selfish gene.* New York: Oxford University Press.

Dean, C. (2007, October 19). Nobel winner issues apology for comments about Blacks. *New York Times,* p. A21.

Gould, S. (1977). *Ever since Darwin.* New York: Norton.

Herrnstein, R., and Murray, C. (1994). *The bell curve: Intelligence and class structure in American life.* New York: Free Press.

Jensen, A.R. (1978). The nature of intelligence and its relation to learning. In S. Murray–Smith (Ed.), *Melbourne studies in education* (pp. 62–89). Melbourne: Melbourne University Press.

Kitcher, P. (1982). *Abusing science.* Cambridge, Massachusetts: MIT Press.

Kitcher, P. (1985). *Vaulting ambition.* Cambridge, Massachusetts: MIT Press.

Kitcher, P. (2001). *Science, truth, and democracy.* Oxford: Oxford University Press.

Lewontin, R., Rose, S., and Kamin, L. (1984). *Not in our genes.* New York: Random House.

Lumsden, C., and Wilson, E.O. (1981). *Genes, minds, and culture.* Cambridge, Massachusetts: Harvard University Press.

Lumsden, C., and Wilson, E.O. (1983a). *Promethean fire.* Cambridge, Massachusetts: Harvard University Press.

Lumsden, C., and Wilson, E.O. (1983b). Genes, mind, and ideology. *The Sciences, 21*(9), 6–8.

Masters, R. (1989). *The nature of politics.* New Haven: Yale University Press.

Pinker, S. (1997). *How the mind works.* New York: Norton.

Pinker, S. (2002). *The blank slate: The modern denial of human nature.* New York: Viking.

Radcliffe Richards, J. (2000). *Human nature after Darwin.* London: Routledge.

Rose, H., and Rose, S. (2000). *Alas, poor Darwin.* London: Random House.

Rosenberg, A. (2008). *Philosophy of social science* (third edition). Boulder, Colorado: Westview Press.

Rudner, R. (1953). The scientist qua scientist makes value judgments. *Philosophy of Science, 20,* 1–6.

Silvers, S. (2007). Adaptation, plasticity, and massive modularity in evolutionary psychology. *Philosophical Psychology, 20*(6), 793–813.

Stohlberg, S.G. (2002, December 10). Under fire, Lott apologizes for his comments at Thurmond's party. *New York Times,* p. A28.

Symons, D. (1992). On the use and misuse of Darwinism in the study of human behavior. In J. Barkow, L. Cosmides, and J. Tooby (Eds.), *The adapted mind* (pp. 137–159). New York: Oxford University Press.

Tooby, J., and Cosmides, L. (1990). On the universality of human nature and the uniqueness of the individual: The role of genetics and adaptation. *Journal of Personality, 58,* 17–67.

Wade, N. (2002, December 20). Gene study identifies five main human populations. *New York Times,* p. A37.

Wilson, E.O. (1975). *Sociobiology: The new synthesis.* Cambridge, Massachusetts: Harvard University Press.

Wilson, E.O. (1976). Academic vigilantism and the political significance of sociobiology. *BioScience, 26,* 183–190. [Reprinted in A. Caplan (Ed.), *The sociobiology debate* (pp. 291–303). New York: Harper: 1978.]

Wilson, E.O. (1978). *On human nature.* Cambridge, Massachusetts: Harvard University Press.

Wilson, T. (2002). *Strangers to ourselves.* Cambridge, Massachusetts: Harvard University Press.

Yinger, J. (1995). *Closed doors, opportunities lost: The continuing cost of housing discrimination.* New York: Russell Sage Foundation.