

Human Nature: An Overview

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INTRODUCTION

Debates about human nature inform every philosophical tradition from their inception (see Stevenson 2000 for many examples). Evolutionarily based criticisms of human nature are of much more recent origin. Ironically, most evolutionarily based criticisms of human nature are directed at work whose avowed goal is to biologicize human nature and even to place human nature within an evolutionary frame. Here I will focus on accounts of human nature that begin with and come after E.O. Wilson's sociobiology. I will also focus on criticisms of human nature that arose first as responses to sociobiology. There are some more recent approaches to human nature that have much in common with the sociobiological approach and I will show that critical arguments developed to target sociobiology have purchase on related recent approaches to human nature. In what follows I will briefly outline some well-known accounts of human nature. Next I will briefly outline some key evolutionarily based arguments against such accounts of human nature. I conclude by summarizing the evolutionary case against biological accounts of human nature and endorsing it.

Some evolutionary arguments against human nature arise from debates about species and the issue of whether or not essentialism is appropriately applied in the context of species delineation. I will only briefly introduce these issues as they are dealt with in more detail in John Wilkins and Kevin LaPorte's chapters in this section. Other evolutionary arguments against human nature center around the question of normality—is there a coherent concept of a normal human? Finally, some arguments against human nature focus on whether we can cleanly divide nature and culture. I briefly outline examples of these kinds of arguments below but the delineation of nature from culture is dealt with in much more detail in Louise Barrett and Maria Kronfeldner's chapters in this section.

BIOLOGICALLY BASED HUMAN NATURE

In the final chapter of his large work on sociobiology, Wilson (1975) argues that human social behavior has a biological basis just as animal social behavior does. He provides a more detailed defense of this view in his follow-up book, *On Human Nature* (1978). Here he argues, first, that human nature is best characterized by the collection of distinctive behaviors that are universally distributed throughout all cultures and, second, that these behaviors are best understood as having been shaped by natural selection. In other words, the genes underlying our social behavior are more highly represented as a result of selection. Wilson proposes that the goal of “human sociobiology is to learn whether the evolution of human nature conforms to conventional evolutionary theory” (2013: 16). He expressed optimism that we will soon identify the “genes that influence behavior” (2013: 21). Wilson acknowledges that there is genetic diversity in humans just as in any species, saying:

we are a single species . . . one great breeding system through which genes flow and mix in each generation. Because of that flux, mankind viewed over many generations shares a single human nature within which relatively minor hereditary influences recycle through ever changing patterns, between the sexes and across families and entire populations. (2013: 23)

Here he foreshadows later accounts of human nature (discussed below) that aim to account for variation as part of our nature. This approach is more liberal than the view that there is a collection of distinct behaviors, determined by a collection of genes that characterize our nature. This more restrictive view (or disciplined view as Lewens (2015) puts it) is the one usually associated with Wilson and the view that is the focus of much critical scrutiny.

Evolutionary psychologists propose that human nature is not a collection of universal human behaviors but rather a collection of universal psychological mechanisms underlying these behaviors. This view retains some of the structure of the sociobiological view but relocates the focus of explanatory work. The adaptations—products of natural selection—that evolutionary psychologists focus on are underlying psychological mechanisms. John Tooby and Leda Cosmides pithily sum up the view as follows: “the concept of human nature” is “based on a species-typical collection of complex *psychological adaptations*” (1990: 17). Here is David Buller’s characterization of the evolutionary psychologists’ view: “human nature consists of a set of psychological adaptations that are presumed to be universal among, and unique to, human beings” (2005: 423). Donald Symons clearly expresses the evolutionary psychologists’ approach as follows: “all accounts of human action . . . *imply* a human nature” and this nature is “a diverse array of complex, specialized brain/mind mechanisms” (1987: 89). Symons says that Darwinians are in a better position than others in the social sciences to account for our nature thus construed. Evolutionary psychologists acknowledge the wide variety of human behavior and cultures but argue that the best way to explain this variation is in terms of the underlying mechanisms we have in common. On their account, the selective pressures that shaped our psychological mechanisms were active thousands of years ago and so these mechanisms are adaptations that helped our ancestors in their environments. Like

Wilson, evolutionary psychologists propose that human nature consists of traits that no longer vary. Evolutionary biologists say that such traits are at fixation. Selection can act so that a trait, or allele, becomes fixed in a population but selection can also result in alternative traits or alternative alleles being present in a population. Evolutionary psychologists account for some of the manifest variation in our behaviors in terms of a mismatch between our ancient psychological mechanisms and more recent challenging environments. We will see below that some evolutionary psychologists challenge this view of human nature but the view summarized here clearly captures the target of several evolutionary criticisms of human nature.

Edouard Machery (2008) presents and defends a notion of human nature that he claims is “an important notion of human nature [that] is compatible with evolutionary biology” (322). Machery calls his notion of human nature the “nomological notion.” The nomological notion states that “human nature is the set of properties that humans tend to possess as a result of the evolution of their species” (Machery 2008: 323). On this account, bipedalism is part of human nature but supporting Liverpool Football Club is not. According to Machery, the nomological notion of human nature rules out certain kinds of explanations for a trait if it is part of human nature. Specifically, “any explanation to the effect that [a trait’s] occurrence is exclusively due to enculturation or to social learning” (2008: 326) is ruled out. Machery adds that this constraint does not rule out that social learning could be part of the explanation of the trait but if a trait is part of human nature, it cannot be completely explained by appeal to culture or social learning. Machery proposes that traits arising purely as a result of local cultural circumstances are very unlikely to be common among humans. On his account, the idea that a trait is common among humans is a necessary condition for that trait being part of human nature. Machery refers to this as the universality proposal. So his account contains two central proposals, the evolutionary proposal and the universality proposal, summed up here: “humans have many properties in common as a result of the evolution of their species” (2008: 328). Machery’s account of human nature shares features of both the sociobiological account and the evolutionary psychologists’ account already introduced. This is by design, as Machery holds that his nomological notion of human nature is also important “because this notion of human nature is probably the relevant one for understanding sociobiologists’, such as E.O. Wilson, and evolutionary psychologists’ interest in human nature” (2008: 328). Elsewhere Machery says “the current attempt to reconceptualize human nature aims in part at explicating the notion of human nature that is used in the human behavioral sciences,” adding that his universality proposal and evolutionary proposal are “necessary for this task” (2012: 478). The relevant human behavioral sciences for Machery are sociobiology and evolutionary psychology.

Richard Samuels proposes and defends “causal essentialism” about human nature. He says “human nature is a suite of mechanisms that underlie the manifestation of species-typical cognitive and behavioral regularities” (2012: 2). Samuels says that human nature picks out a “set of phenomena that will form a focus of empirical enquiry for some region of science” (2012: 4), thus his account is very similar to Machery’s. However Samuels develops his view via criticisms of Machery. Samuels argues that “causal essentialism” provides a causal and explanatory function for human nature while the nomological notion is merely descriptive. Samuels says this about the nomological notion: “if human

nature just is the set of human-typical regularities, then it clearly cannot be the cause of these regularities, underlying or otherwise” (2012: 18). Samuels does not claim that the nomological notion plays no explanatory role at all but he says “Natures are supposed to be underlying structures that play a central role in the explanation of an entity’s more superficial properties; and this is not something that the nomological conception can give us” (2012: 18). There is not as much distance between the two views on this issue as Samuels thinks. Both present a set of common human traits to comprise human nature and both argue that human nature has an explanatory role to play in the behavioral sciences. Where the two views do differ is that they each highlight different behavioral scientists. Where Machery points to sociobiologists and evolutionary psychologists, Samuels says that his causal essentialist notion is more in line with the proximal mechanisms proposed by neuroscientists and cognitive psychologists.

The accounts of human nature outlined so far all are couched in terms of traits we have in common. There are several biologically based accounts of human nature that emphasize human variation and aim to treat variation as part of human nature. The accounts introduced so far either exclude highly varying traits from human nature or aim to explain variation in terms of traits in common that comprise human nature or both. Next I introduce some of the accounts of human nature that encompass variation.

Elizabeth Cashdan, like many in her field of evolutionary anthropology, is well aware of the human diversity that Wilson notes but she rejects the assumption, held by Wilson and many in her field, that “human nature is found solely in its universals—in the traits found in every society” (2013: 71). Those who hold this assumption (e.g., Brown 1991) say that traits found in some cultures but not others are “culturally constructed and without an evolutionary foundation” (2013: 71). We saw this distinction preserved in Machery’s account of human nature above. In contrast Cashdan assumes that we evolved to be flexible and we exhibit phenotypic plasticity. She says that examining human nature should start with the question of how natural selection shaped our flexibility. She says that “we cannot understand our universal human nature without understanding the variability in its expression” (2013: 71). Cashdan argues that our nature is found in patterns of variation. She proposes to reveal these patterns in variation by appealing to norms of reaction, which are “the pattern of expression of a genotype across a range of environments” (2013: 71). Evolutionary biologists present norms of reaction by plotting the relation between a trait value and an environmental factor for specific genotypes (see Figure 11.1). Norms of reaction reveal variation in traits produced by the same gene expressed in changing environments. According to Cashdan, all the reaction norms for all our genes in all environments taken together constitute our nature.

Evolutionary psychologist H. Clark Barrett (2015) shares Cashdan’s view of how we should approach human nature and so differs from many evolutionary psychologists in emphasizing variation. He says “both variation and lack thereof (if any) should be of interest to those studying humans” (Barrett 2015: 324). For Barrett our “species is a thing,” and he takes species and nature to be equivalent here, “a big wobbly cloud that is different from the population clouds of squirrels and palm trees. To understand human minds and behaviors, we need to understand the properties of our own cloud, as messy as it might be” (2015: 332). For Cashdan, reaction norms, taken together, are the patterns in our variation that constitute our nature. Barrett has a slightly different take on the situation, for him: “Even on a probabilistic, population-minded, reaction-norm-based view

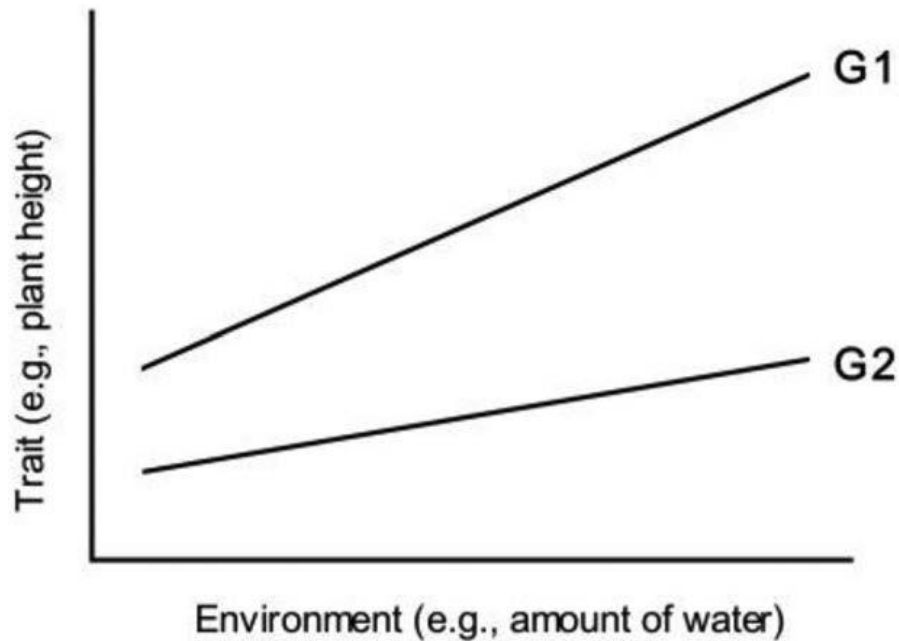


Figure 11.1 Relation between a trait value and an environmental factor for specific genotypes

of human nature, we eventually want answers about how variation is structured across humans” (2015: 324). Here Barrett indicates that there is more to the patterns in human variation than just reaction norms and this is what makes up our nature.

Grant Ramsey’s (2013) account of human nature is set up in contrast with Machery’s nomological account of human nature. Ramsey asks “why should we presume that it is the *sameness* across individuals that is of interest to scientists, and not their variation?” (2013: 986). Like Cashdan he thinks “it is a mistake to hold that only traits universal (or nearly universal) in the human species are of scientific interest and should be included within human nature” (2013: 986). Also, like Cashdan, Ramsey draws on evolutionary biology for help in characterizing the relevant variation. He appeals to life history theory evolution (see, e.g., Roff 2002). Life history theorists emphasize the variation at different life stages of each individual and the different selection pressures that impact upon different life stages. Frogs’ drastically different morphologies at different life stages exemplify the need for this evolutionary approach. For Ramsey “individual nature is defined as the pattern of trait clusters within the individual’s set of possible life histories” and “human nature is defined as the pattern of trait clusters within the totality of extant human possible life histories” (2013: 987). He calls this the “life-history trait cluster” (LTC) account of human nature. Different possible life histories for organisms result from the range of possible developmental responses organisms make to differing environmental circumstances. He also proposes that “characterizations of features of human nature are merely descriptions of patterns within the collective set of human life histories” (2013: 988). According to Ramsey, the LTC framework reveals “patterns within and across human heterogeneity” (2013: 992).

Paul Griffiths (2011) also emphasizes variation but he proposes an account of human nature that appeals to a different evolutionary perspective than the accounts by Barrett, Cashdan, or Ramsey. He echoes Barrett, Cashdan, and Ramsey when he says

“The search for a shared human nature cannot be a search for human universals; it must instead be a way to interpret and make sense of human diversity” (2011: 326). Instead of appealing to norms of reaction or life histories, Griffiths adopts the Developmental Systems Theory (DST) perspective (see, e.g., Griffiths & Gray 1994, 2001). He says that the DST perspective shows that to find out what an organism is like we need to look to “external” influences, such as the organism’s environment. According to DST, organisms’ developmental processes are not solely a product of internal factors, of which the usual candidate is the genome. Griffiths says “If an animal’s nature is what explains its species-typical development, then its nature includes many of the environmental influences with which ‘nature’ has traditionally been contrasted” (2011: 326). One implication here is that you cannot find out what humans are like by ignoring society or culture (2011). For Griffiths, society and culture are potent causal determinants of our developmental trajectories and so make up our nature. Griffiths’s account does not allow for Machery’s principled distinction between products of evolution and products of culture or learning. On this account it is important to note that an organism’s environment is not understood as merely a constraint or influence on development. Rather an organism’s environment is as important a contributor to development as genes or any other relevant causal factor (cf. Griffiths & Gray 1994, 2001). This implies that his account also invokes a wider range of traits to characterize our nature than either Cashdan’s or Ramsey’s accounts. Cultural artifacts, for example, can be part of our nature on this account. Griffiths takes his notion of human nature to serve an explanatory function, saying “human nature in the causal sense includes the causes of difference as well as of uniformity” (2011: 319). Griffiths agrees with Cashdan that evolution can favor phenotypic plasticity and he points out that this means that adaptations need not necessarily be species typical (2011: 325) or need not be at fixation in the population, to use the terminology introduced above (cf. Buller 2005).

EVOLUTIONARY CHALLENGES TO HUMAN NATURE

As we have seen, biologically influenced accounts of human nature either emphasize traits in common, or universal traits, or include differing numbers of human trait variants. These accounts all converge on the ideas that human nature is something that can be characterized in biological terms and is a proper object of study. Philosophers and social scientists direct general skeptical arguments at both these central ideas. (See Prinz 2012 for a sustained skeptical attack on both these ideas.) This debate has similar contours to debates about race. In debates about race some defend eliminativism, arguing simply that there is no such thing as race, and some defend constructivism, arguing that while there is such a thing as race, it is a social construction. Here I will not discuss broader skeptical attacks on human nature. (See Kronfeldner, Roughley, & Toepfer 2014 for a discussion of a broad range of arguments about human nature.) Rather, I focus on a smaller subset of criticisms of human nature all of which draw on evolutionary thinking. Throughout this section I take “human nature” to stand for “biologically based accounts of human nature” unless I indicate otherwise.

We can distinguish four types of evolutionarily based criticisms of human nature. They are that defenders of human nature (i) presuppose an untenable species concept,

(ii) cannot adequately account for human variation, (iii) require a notion of normal or natural that is not supported by evolutionary biology, or (iv) presuppose an untenable distinction between the impacts of biology and culture. These types of criticisms are related and the details of criticisms under each type differ. I will go through these types of criticism in turn.

Barrett speaks for all defenders of human nature when he says “Whatever human nature is, it’s a biological phenomenon, with all that implies” (2015: 321). Evolutionarily based criticisms of human nature capitalize on Barrett’s final clause. The first criticism is that defenders of human nature presuppose an untenable species concept. The untenable species concept in question is an essentialist (Buller 2005; Hull 1978, 1986; Sober 1980) or typological species concept (Mayr 1994; Sober 1980). The problematic essentialist species concept is roughly that a particular trait or specific collection of traits characterizes each species (cf. Buller 2005; Hull 1986; Sober 1980). Sober emphasizes that the essentialist species concept plays an explanatory role, the characteristic(s) shared by all members of a species explain(s) “why they are the way they are” (1980: 354). The problem is that the essentialist notion of species is not supported by evolutionary biology. Rather, evolutionary biologists treat species as historical entities, lineages, with beginnings and, in the case of extinction, ends. There are several distinct species concepts defended by evolutionary biologists but all are consistent with this rough outline. (John Wilkins in Chapter 12 and Joseph LaPorte in Chapter 13 in this section of the volume treat essentialism and the various species concepts in more detail.)

Buller (2005: 441–442) provides a quick and dirty way of distinguishing between essentialist and lineage style species concepts. Say we became extinct but that some time after our extinction a new species arises with exactly the same cluster of characteristics in common as our species. On essentialist grounds, these would be the same species but evolutionary biologists cannot recognize them as such. Individual organisms in a species are connected by their place in a lineage and that lineage, the whole historical entity, is the species. Buller explains how holding the lineage-style species concept can be turned into an argument against human nature by David Hull: “As Hull says, if species are individuals, ‘then particular organisms belong in a particular species because they are part of that genealogical nexus, not because they possess any essential traits. No species has an essence in this sense. Hence there is no such thing as human nature’ [Hull 1978: 358]” (Buller 2005: 450).

The question now is whether this criticism holds against any of the defenders of human nature presented here. Buller argues that evolutionary psychologists succumb to this criticism and Hull argues that sociobiologists do also. Both sociobiologists and evolutionary psychologists (but not Barrett) say that we are characterized by a set of traits that we have in common and, further, both argue that our wide variety of traits can be explained in terms of this set of traits. For sociobiologists we are characterized by genes we have in common and for evolutionary psychologists we are characterized by psychological mechanisms we have in common. Buller’s and Hull’s criticisms appear to be on target in these cases. Machery and Samuels both explicitly deny that they adopt an essentialist approach to species. Machery says that his nomological account is not intended to delineate our species and Samuels says that his account does not serve a “taxonomical function.” Machery says that his account does serve an explanatory function but he says he does not claim “the fact that humans have the same nature explains

why generalizations can be made about them” (2008: 323). Perhaps the case could be pushed against Machery and Samuels (Lewis, forthcoming, does so against Machery) but the evolutionarily based case against their accounts of human nature is made better by adopting one of the other types of criticism discussed below. Similarly, it would be difficult to make the case that Cashdan, Barrett, Ramsey, or Griffiths presupposes an essentialist species concept (Louise Barrett does push this claim against H. Clark Barrett in Chapter 14 in this section). As presented here, this type of criticism is successful against only two of our accounts of human nature.

The second type of criticism holds that defenders of human nature cannot adequately account for human variation. Most criticisms of this type can be expressed as follows: defenders of human nature do not account for variation in a manner consistent with evolutionary thinking (cf. Lewens 2015). Hull ties his version of this criticism tightly to his version of the above criticism concerning essentialism. Elliott Sober’s (1980) version of this criticism is also tied closely to an anti-essentialist line and I will outline this first. While Sober’s line of argument is not directed squarely at human nature, it nicely frames relevant issues about accounting for variation. Further, Buller (2005) applies Sober’s arguments to good effect in this context. Finally, Sober’s arguments can be cleanly separated from the issue of competing species concepts.

Sober distinguishes between two ways of confronting and accounting for variation. Ernst Mayr puts the distinction this way: “For the typologist the type is real and the variation is an illusion, while for the populationist, the type is an abstraction and only the variation is real. No two ways of looking at nature could be more different” (1994: 158). Sober says that Mayr’s typologists, or typological thinkers, account for variation within a species or population as interference with the natural state or prototype for that population. Sober says that this approach appeals to the “Natural State Model,” which distinguishes between the natural state of a kind of object and its state resulting from an interfering force (1980: 360). Sober traces the Natural State Model to Aristotle but notes that it is the underlying explanatory model in Newtonian mechanics and other scientific fields. Newton’s first law clearly illustrates this approach. Applied to biological contexts, the Natural State Model accounts for variation in a population of organisms as arising from interference with the organisms’ natural state. Sober also stresses that according to the Natural State Model “the invariance underlying . . . diversity is the possession of a particular natural tendency by each individual organism” (1980: 370). Variation in a population is accounted for in terms of each individual’s deviation from natural type. In contrast, for evolutionary biologists variation is characterized at the level of populations. Evolutionary biologists—populationists or population thinkers—account for variation in a population in terms of variation in previous generations of the population. Evolutionary biologists capture variation in a population via norms of reaction (introduced above). From this perspective there are no “natural” states and states that result from interference. All of the phenotypes expressed in the population are natural and the variation is a property of the population.

Buller takes evolutionary psychologists to task for invoking the Natural State Model in their account of human nature. He goes on to argue that the Natural State Model “can’t be founded in evolutionary biology” and so evolutionary psychologists’ proposal that underlying psychological mechanisms constitute our nature is not an evolutionary view (Buller 2005: 432). This version of the criticism tells against evolutionary psychology (excluding Barrett) but what about the other defenders of human nature? Samuels’s is the

other approach outlined here that most clearly adheres to the Natural State Model but he explicitly states that his account of human nature is not an evolutionary account. As a result, his view cannot fail for not being consistent with evolutionary thought. Further, Samuels does not take his task to be accounting for variation. This implies that there is no variation in cognition or neuroanatomy to account for but there is massive variation in human cognition (see, e.g., Henrich et al. 2010) and neuroanatomy (see, e.g., Amundson 2000). The Natural State Model is not only an inappropriate approach to accounting for variation, its adherents are predisposed to downplay or ignore variation. Evolutionary thinkers also criticize defenders of human nature for ignoring or not accounting for variation, which is not consistent with evolutionary thinking.

Ignoring or downplaying variation can be a consequence of focusing on traits that do not vary, or are fixed. We have seen that several human nature defenders invoke universal traits or traits in common or species typical traits. Evolution does result in the fixation of traits but also sustains variation in populations (cf. Buller 2005; Hull 1986; Lewens 2015). This point applies at both the phenotypic and the genetic level. There is a high degree of heterozygosity in human populations with some populations having higher percentages than others (Buller 2005; Hull 1986; Sober 1980). Also, there is enormous variation in genotypes associated with particular clusters of traits; for example, the immune system. Machery says that his account of human nature is designed to account for traits we have in common rather than traits that vary. He also says that traits that are part of human nature result from evolution. There are many traits that result from evolution that we do not share and many are very rare. Lewens says that Machery draws an arbitrary line around some evolved traits by counting only those we share as part of our nature. Drawing this line is not supported on evolutionary grounds and to do so results in an impoverished evolutionary account (Lewens 2015: 67). So to ignore variation or deliberately rule it out is not consistent with evolutionary thought. Also, while not perhaps strictly sticking to the Natural State Model, ignoring variation indicates typological rather than population thinking. So accounts of human nature that cannot account for variation or simply ignore variation are not evolutionary and also fail to confront phenomena that need accounting for.

Barrett, Cashdan, Ramsey, and Griffiths all acknowledge human variation and all agree that this variation results from evolution. They all reject accounts of human nature that adopt the Natural State Model, accounts that appeal to human universals and accounts that downplay or ignore variation. Yet these accounts have still been subject to criticism from other evolutionary thinkers. The criticism is that these views “have no theoretical meaning” (Buller 2005: 420) or constitute “simply a collection of informative truths about humans” (Lewens 2015: 77) (cf. Hull 1986). Further, these accounts amount to no more than the proposal that we consistently apply the various evolutionary methods we use to study all organisms to the study of humans (Downes 2016). Here is Buller’s version of this point: “One possibility is that the concept of human nature could refer to the totality of human behavior and psychology.” He goes on to say that his version of human nature “has no particular theoretical meaning; it is merely an abbreviation for talking about the rich tapestry of human existence” (2005: 420). Lewens, discussing Ramsey but making a point applicable to any of the people under discussion here, says: “For Ramsey, a description of human nature is simply a collection of informative truths about humans. His account demonstrates that extreme liberality is the price of defensibility in this domain” (2015: 77). Lewens later says: “Once an account of human nature is loosened up so as to

make room for variation and learning, there is no way to gain control of it” (2015: 79). Lewens calls these views “libertine” accounts of human nature. So accounts of human nature that ignore variation or account for it by appealing to the Natural State Model are not evolutionary, and accounts that include variation do no special work over and above the work done by the evolutionary tools they invoke.

The third type of criticism says that human nature requires a notion of normal or natural that is not supported by evolutionary biology. This type of criticism is closely connected to considerations about variation. Hull makes this connection by considering norms of reaction. He says that when confronted with norms of reaction “the conviction is sure to remain that in most cases there must be some normal developmental pathway through which most organisms develop or would develop if presented with the appropriate environment” (1986: 8). On this conception, the normal or natural pathway for humans characterizes human nature. There is no normal or natural slice of the norm of reaction countenanced by evolutionary theory. When we look at a coarse grained trait like adult height in humans, we can assess average height and we can assign upper and lower bounds to observed height but there is no normal or natural height to be discovered. Douglas Futuyma says that if “human nature is our behavioral norm of reaction, which includes everything that people do,” we can’t say that any of this is not natural or not normal, it is certainly all natural from an evolutionary standpoint (1998: 743). Many people have made the point that characterizing what is normal for humans is not supported on evolutionary grounds (Buller 2005; Dupré 1998; Hull 1986; Lewens 2015; Sober 1980). Of the accounts presented here, other than sociobiology and evolutionary psychology, Machery’s account comes the closest to endorsing a notion of normality when he says that traits are species typical, but he does not explicitly link his nomological account of human nature with normality. So this criticism has bite against sociobiologists and evolutionary psychologists but it would take work to make it stick against Machery or others presented here.

Here is a really clear statement of the distinction between culture and biology: “Human evolution has biological and cultural components. Man’s biological evolution changes his nature; cultural evolution changes his nurture” (Dobzhansky 1962: 23). Several of the accounts of human nature presented here share this distinction, including sociobiology, evolutionary psychology, and the nomological account. The final type of criticism of human nature is that such a clear distinction between the biological and the cultural is not defensible on evolutionary grounds and, as a result, human nature concepts presupposing this distinction fail.

One way the distinction between biology and culture is defended is to claim that social behavioral patterns arising only in a small number of human populations are due to culture (see, e.g., Machery 2008). But we have seen that all manner of variation is sustained by evolution; for example, differing proportions of heterozygosity in sets of alleles in different human populations. The fact that there is variation in social behavior between populations does not rule out evolutionary factors contributing to this variation. Even if the relevant behavior is extremely rare, it could still be a consequence of evolutionary processes. Rare alleles are present in the total species genome and most of them are likely not present as a result of cultural processes. Even this last claim requires more care because, as we shall now see, the best explanation for the presence of some alleles in some human populations often appeals to cultural phenomena.

As Theodosius Dobzhansky presents the biology/culture distinction, biological processes produce biological traits and cultural processes produce cultural traits. However, there are examples of gene-culture co-evolution (cf. Lewens 2015). Adult humans in some populations are capable of digesting lactose and hence able to consume milk as part of their diet. Clare Holden and Ruth Mace assess all of the possible explanations for lactose digestion capacity and provide very strong support for the claim that the capacity is an “adaptation to dairying” (Holden & Mace 1997). Other environmental hypotheses do not account for the presence of the capacity in the relevant populations. The mechanism supporting lactose digestion capacity involves an enzyme that supports breakdown of lactose. This enzyme is present in people who have alleles that code for the enzyme. In this case, dairy farming, a cultural phenomenon on most accounts, is key to accounting for the presence of certain alleles in a population.

Evolutionary anthropologists provide numerous examples of human traits whose evolutionary explanations blur the cultural/biological distinction. Kim Sterelny makes a very strong case that many human traits arise as a result of intricate co-evolutionary processes and that to understand the evolution of human traits we must take niche construction into account (see his 2012). Many animals structure components of their environment: rabbits dig burrows, termites construct city like mounds, and so on. Humans can be thought of as the niche constructors par excellence. We are surrounded by what we build. We build not just concrete artifacts but also language and other prototypically cultural products. According to Kim Sterelny (2012), to account for the evolution of human traits, we must acknowledge the dynamic selective impact of all of our environments, including the environments we have constructed. Doing this puts a great deal of pressure on any clear distinction between biology and culture as independent determinants of distinct clusters of our traits. So, claiming that human nature is a product of biological evolution as opposed to cultural evolution, presupposes a distinction that is not supported by evolutionary thought. There is plenty of variation that results from selection, and prototypically biological traits arise as the result of prototypically cultural processes and vice versa. Both Louise Barrett and Maria Kronfeldner pursue different aspects of the nature culture divide (or lack thereof) in their chapters in this section of the current volume.

CONCLUSION

Wilson challenged sociobiology to “learn whether the evolution of human nature conforms to conventional evolutionary theory” (1978: 34). What we can conclude from the discussion above is that biological conceptions of human nature do not conform to evolutionary theory. Such human nature concepts presuppose an untenable species concept; ignore or cannot adequately account for human variation; require a notion of normal or natural that is not supported by evolutionary biology; or presuppose an untenable distinction between the impacts of biology and culture. Evolutionary thought supports none of these presuppositions. There is great promise for providing evolutionary explanations for human traits of many kinds but little promise for biologically based accounts of human nature. Those who provide evolutionary accounts of the origin of human social behaviors, such as Barrett, Cashdan, Griffiths, and Ramsey, could do so more profitably without invoking human nature.

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