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COMMENTARY

How Human Nature Can Inform Human Enhancement: a Commentary on Tim Lewens's *Human Nature: the Very Idea*

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Abstract In this commentary on Lewens (2012), I argue that although his criticisms of Machery's (2008) conception of human nature are sound, I disagree with his conclusion that human nature cannot inform us regarding issues of human enhancement. I introduce a framework for understanding human nature, the "life history trait cluster account," which aligns the concept of human nature with the human sciences and allows human nature to inform questions of human enhancement.

Keywords Human nature · Human enhancement · Commentary

I agree with Lewens (2012) that essentialist and quasi-Aristotelian notions of human nature are scientifically bankrupt. I do, however, wish to question his understanding of the scientifically legitimate alternative account and also to question his assertion that such an account can have no bearing on issues with ethical dimensions like that of human enhancement. Lewens's critique of the scientifically legitimate alternative is focused on Machery's (2008) "nomological account." In what follows, I will use the "nomological" label, not just for Machery's account but instead for any account that is based on scientific laws, regularities, or generalizations instead of essences.

In order to assess the nomological accounts and see if they can bear in any way on human enhancement, we need to be specific about what sorts of insights they may be able to provide. In the spirit of Kitcher (1994) and Buchanan (2009), we can enumerate four ways that human nature could bear on issues of human enhancement:

1. Human nature could show us which traits are susceptible to enhancement.
2. Human nature could elucidate the risks or benefits of enhancement projects.
3. Human nature could enumerate the "natural" traits, providing us with a target for enhancement.
4. Human nature could provide us with new moral principles about what should and should not be enhanced.

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To see whether a nomological account can accomplish any of 1–4, let's first examine the account that Lewens considers and challenges, that of Machery (2008). Machery's view is that human nature is something "shared by most humans" and "a result of evolution." Lewens rightly points out that the "shared by most" criterion seems to eliminate sex-specific traits as well as many interesting polymorphisms. Machery is aware of this limitation and bites the bullet, arguing that a concept of human nature that picks out only common traits will be more scientifically useful than one that also includes minority traits. There are reasons to doubt this—and I will suggest below that an improved nomological account that incorporates minority traits can be closely allied to scientific practice—but let's move on to the second of his components of human nature.

Lewens also rightly questions the "result of evolution" criterion. As stated, this is rather vague. If we read it as "in part a result of evolution," then it includes just about all human features, since even the most prototypically "cultural" or "learned" traits are made possible because of evolved cognitive capacities (and thus brain structures) and sensory organs. If we instead read it as "a result of evolution only," then traits that are clearly evolved but whose evolution is in part due to cultural practices—like the classic example of adult lactose tolerance in individuals descended from people with a longstanding dairying culture (Holden and Mace 1997)—will be excluded. Furthermore, if Machery is trying to carve the cultural off from the evolutionary, he must contend with theories of cultural evolution and provide a principled reason for excluding or including traits based on a process of cultural evolution. But let's set these problems aside and see if any of 1–4 can be accomplished by Machery's account.

It is clear that 4 is not accomplished since a mere catalog of common, evolved traits provides no moral principles. This is not to deny that one could gain new moral principles from human nature in Machery's sense by combining existing moral principles with data on which traits are a part of human nature. But in such a case, the normative nature of the new principle is inherited from the normative nature of the old. What I am denying in suggesting that Machery's account does not accomplish 4 is to say that human nature by itself does not entail moral principles. The failure to accomplish 4 is not confined to Machery's account or even to nomological accounts in general, but there is good reason to think that even essentialist accounts of human nature run into problems attempting to derive moral principles from human nature (Buchanan 2009).

Similarly, 3 does not seem to be accomplished either—even if one were to consider all traits picked out by Machery's account as "natural," there is no sense in which this provides us with a legitimate target for enhancement. This is true in part because the natural–unnatural distinction is as problematic as the nature–nurture distinction or the innate–acquired distinction (Lehrman 1953). Furthermore, by considering the traits isolated by Machery's account to be "natural," this should be interpreted either as a mere stipulation (in which case it being "natural" carries no additional information or moral significance), or it is picking out a set of traits that can be independently verified as "natural." If the latter, then one would need to know what the independent criteria for "naturalness" amount to and what connection (if any) these criteria bear to issues of enhancement.

Does Machery's notion of human nature inform us about the risks or benefits of enhancement projects, as specified by 2? For a catalog of shared, evolution-based traits to lend insight into the risks or benefits of enhancement, it would need to be true that attempts to modify these traits are more risky (or less risky) than average, or they

are more beneficial (or less beneficial) than average. While some have argued for the position that the products of adaptive evolution exhibit the "wisdom of nature" and are therefore more difficult to enhance than other traits (Bostrom and Sandberg 2007), others have challenged the wisdom of nature idea (Powell and Buchanan 2011). This is, of course, an empirical matter, not one that can be decided a priori. But the fact that Machery's account of human nature does not differentiate adaptive evolution from other forms of evolution (such as mutation and drift) suggests that the probability is low that his account is very informative about the risks or benefits of enhancement.

The same arguments against 2 also apply to 1, the claim that human nature can show us which traits are susceptible to enhancement. In addition to these arguments, consider that the fact that a trait is evolved and widespread in a species does not imply that it is easily (or not easily) manipulated in beneficial ways. There are literally thousands of human diseases caused by single gene mutations. Such diseases would thus be relatively (relative to other genetic diseases) easy to eliminate. But it seems that this ease of elimination is quite independent of whether the disease in question has undergone evolution or whether it is the result of a new mutation.

Machery's view therefore cannot accomplish any of 1–4. Does it therefore follow that no nomological understanding of human nature can accomplish 1–4? In answering this question, I will briefly sketch out my own account of human nature and argue that it can accomplish 1 and 2.

I have argued elsewhere (Ramsey 2013) that there is a way of understanding the nomological view of human nature without being overly vague, permissive, or restrictive, while at the same time being sensitive to traits that are robust but uncommon. A full explication and defense of the position requires a full article, but I will provide a sketch here: Consider the actual life history of an individual human plus all of the possible life histories that that individual could have had. These possible life histories include everything from encountering the heterogeneity in their environment in a slightly different way to being raised in a radically different environmental/cultural milieu. Now consider the set of life histories made up of all of the (actual and possible) life histories for all of the extant human beings. If we were to take all of the members of this set of life histories and line them up next to one another for examination, one thing would become clear: there are patterns in the distribution of traits within the set. Specifically, within the whole set, or some subset, there are temporally antecedent traits (e.g., giving birth) that are regularly followed by consequent traits (e.g., lactating). Such patterns support general claims about humans, for example that individuals who give birth will (with a high probability) lactate. And these patterns form the foundation for human nature: Human nature just is the pattern of trait clusters within the totality of extant human possible life histories.

This view of human nature, which I have labeled the life-history trait cluster (LTC) account, has two main benefits. First, it provides an account of human nature not plagued by quasi-Aristotelianism, essentialism, or some of the limitations of Machery's view (like not including uncommon traits or attempting to divide traits into distinct "natural" and "cultural" categories). Second, the LTC account aligns human nature with the social, psychological, and biological sciences. That is, the experiments and observations of human behavior, psychology, and morphology that end up being published are, in general, identifying patterns of trait clusters within the collective set of human life histories. The goal of an experiment is just to identify or

realize a particular antecedent and then record and analyze the consequents. A psychology study attempting to link playing violent video games with committing acts of violence are attempting to learn about human nature. They are seeing whether the antecedent (playing video games) is reliably linked with the consequent (committing violence). Even a drug trial provides information about human nature in this sense. The controlled introduction of an antecedent (a blood pressure drug, say) will or will not be linked to the desired consequent (reduced hypertension).

At this point, one may think that the LTC account cannot be right, that it is clearly overly permissive and is incorrectly subsuming cultural phenomena within the scope of human nature. Thus, it would appear that counterexamples to the LTC view of human nature are plentiful. For example, humans in North America that drive a car will tend to drive on the right side (and those in Australia, say, will drive on the left).[1] Given trait clusters such as these, one could attempt a reductio of the LTC view: Which side of the road one drives on is culturally contingent, not part of human nature. The LTC view includes driving traditions within the scope of human nature. Therefore, the LTC account is fatally flawed.

This attempt at a reductio, however, misses the point. It is not "driving on the right side" that is part of human nature, it is instead the pattern of traits that constitutes human nature, with particular antecedents (being raised in a specific milieu in North America with certain forms of education, traditions, etc.) and particular consequents (in this case driving on the right side). Not only is this antecedent–consequent pattern part of human nature, it is uniquely human. While it may be true that we could train a dog or a chimp to drive on the right side of the road, the set of antecedents necessary for this to occur will differ from the human antecedents. (A dog or chimp given the same guidance and drivers training as a human will almost certainly not drive on the right side, much less drive at all.) Similarly, letting a sloth play a violent video game may not prompt any violent outbursts—and giving a squirrel human hypertension medicine may produce radically different consequents.

By articulating the sui generous trait cluster patterns for humans and other animals, one can gain a rich understanding of human nature and how it differs from the natures of other species. The fact that cultural traits are included within the set of antecedents and/or consequents is immaterial. What matters is the pattern of these traits within the life histories.

Now that we have a sketch of the LTC account, we can see whether it can bear on issues of human enhancement. Consider again 1–4. It should be clear that the LTC account can accomplish 1, since it can show which traits are susceptible to enhancement. The susceptible traits will be consequents that readily vary with particular modifications to one or more antecedents, where these modifications are realizable and have few or no ancillary deleterious consequents. The LTC account can also bear on 2, since the pattern of trait clusters will show whether a particular enhancement requires risky antecedents or engenders risky and/or beneficial consequents. As for 3, the LTC account does not identify a set of traits as "natural" and therefore a target for enhancement. Other than the guidance achieved via 1 and 2, the LTC account does not provide information about a proper target for enhancement. Finally, the LTC account does not directly bear on 4 either—no new moral principles are generated by the account alone (though one could of course take preexisting moral principles and

[1] I thank Russell Powell for this attempt at a reductio.

use the LTC account to help derive new principles). It does, as in 1 and 2, however, help link existing moral principles with data, enabling us to make informed decisions about human enhancement.

The issue of human (and especially biomedical) enhancement is a tricky one. It would be handy if there were a set of "natural" traits that were the ones we would be obliged to enhance were we to subject humans to biomedical enhancement. But, for better or worse, no such class of traits exists, not, at least, in any scientifically legitimate way. Human traits, however, are not randomly distributed over the collective set of human life histories. The trait patterns, which I identify with human nature, can be exploited in enhancing humans. Human nature can, in this sense at least, bear on issues of human enhancement.

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