

1 Introduction

Humans. *Homo sapiens*. The upright ape once obscure and scattered like rare bits of stone across the broad expanse of Africa, now a world-dominating – a climatic, a geologic – force. What are we? What is our nature? We vary across cultures and history and we sort humans into a diverse array of categories. We can be scholarly, sleazy, shallow, sassy, saturnine. We vary in our tastes, abilities, and dispositions to such a degree that true universal generalizations about humans, at least ones not disjunctive or vague or trivial, can be difficult to find.

What unifies Yaminawa living in the remote Peruvian Amazon with Buddhist monks in Thailand with Wall Street traders with Haitian vodou priests with California yoga instructors? What these individuals take as important features of the world – what they even take to be real features of the world – are radically divergent. Does human nature lie in what is the same across such diverse sets of people? Or does looking only for commonalities eliminate most of what is interesting and important about our nature?

If we ask, What is our nature?, there are two quite different sets of questions we may have in mind. One set concerns our character. Are we humans good, though subject to corruption? Or are we evil, possessing a wickedness that can perhaps be tamed, repressed, or obliterated? Questions of this kind take for granted that generalizations like “we are good by nature” are not problematic, that we have a nature and our task is simply to determine its features.

But there are prior, more basic questions. If I am describing the color of things, I may characterize them as azure, crimson, mauve, or taupe. But I could also step back and ask: What is color? What does it mean to say that something is colored? Is the color we see an intrinsic property of objects or an artifact of human visual systems? For human nature, the analogous prior questions are: What does it mean for a species to have a nature? What does the phrase “human nature” refer to? As we will see in the following section, some researchers have expressed skepticism about human nature, at times even suggesting that humans lack a nature, or that the very idea of a species nature is problematic.

There is thus a puzzle to solve prior to elaborating our nature. We must first reflect on the very concept of a species nature. Only then can we determine whether talk of human nature is justified. And if it is, we can push forward to develop a coherent – and perhaps even useful – concept of human nature.

This Element centers on these more fundamental questions. It is not concerned with how we can or should record, describe, and understand our features. It is not a methodological treatise. Nor is it an attempt to offer enlightening generalizations about our species (as selfish or altruistic or such). It is not an empirical investigation into how and why we behave in the way that we do. And it sits

outside of *philosophical anthropology* as traditionally practiced, which, in the words of Peter Hacker, “is the study of the conceptual framework in terms of which we think about, speak about, and investigate man (*Homo sapiens*) as a social and cultural animal” (2021, xi). Finally, it is not a survey of what are sometimes called “theories of human nature,” a rubric under which falls a collection of Western and Eastern scientific, philosophical, and religious views on the world and ourselves – such as Buddhism, Confucianism, existentialism, feminism, Freudianism, Marxism, and Platonism (Stevenson et al. 2017).

Instead, the focus is simply on what we mean – what we should mean – by *human nature* within a contemporary scientific worldview. When we say of a behavior that it is natural, what does this amount to? What empirical claim is being advanced? If we say of a trait that it is *part of our nature*, what might this mean? What concept of nature is at play in such a statement? What good (if any) does, or can, the concept of human nature play in the sciences? How should we understand popular discourse, in newspapers and magazines and social media, citing human nature as a cause of our actions? How has human nature been defined and critiqued, and which human nature concept might be the best for fulfilling the roles that we desire it to play?

We begin this journey in Section 2 by considering and rejecting human nature skepticism, the position that humans do not, in fact, possess a nature. I conclude that if we hold that a nature is an essence, then human nature is rightly rejected. But if we interpret human nature in a nonessentialist manner, we can sidestep some of the critiques waged by human nature skeptics.

The next task, in Section 3, is to evaluate the main way that human nature has been conceptualized, what I label the “trait bin” approach. The trait bin approach to human nature holds that the key to divining human nature is to sort traits into one of two bins, the human nature bin and the remainder bin. I argue that this approach, though it has a strong initial appeal due to its simplicity, is ultimately untenable.

From there, I move on in Section 4 to develop an alternative to the trait bin approach, which I label the “trait cluster” approach. The trait cluster approach centers on the idea that our nature is not defined by a bin of traits shared by all or most humans, but instead lies in how traits are exhibited within and across human life histories.

This trait cluster account has some counterintuitive implications and is easily misunderstood. Thus, in Section 5, I examine some critiques of the view. One critique is that my account is too permissive, and that this permissiveness makes it vacuous. I argue that the permissiveness critiques arise from a failure to fully grasp the difference between a trait bin and trait cluster account. Another critique relates to the core–veneer distinction. Human nature is often thought

of as residing in our core, implying that we have a natural core overlain by a cultural veneer. I argue against the view that human nature is about what's within, about our core. Instead, I conclude that the core–veneer distinction has fundamental problems and, furthermore, is unnecessary to understanding ourselves.

Having elaborated and defended the trait cluster concept of human nature, the task of Section 6, the last one before the conclusion, is to explore what the trait cluster account of human nature can do. Can it explain occurrences of traits? Can it be used to learn about our nature and how it differs from the nature of other species through the study of twins, triplets, and even related species, such as chimpanzees? Can it make sense of how the concept of human nature is used in popular media? Can it be a guide to our moral behavior?

Let's now begin our journey through these topics, starting with human nature skepticism.

2 Against Human Nature

An argument for the hopelessness of seeking a coherent, productive, useful concept of human nature was offered by David Hull in his article “On Human Nature” (1986). This article has cast a long shadow over the field, and it is thus important to understand what his argument is and whether it is convincing. To grasp his argument, we first need to understand what he takes a human to be. Only then can we follow how he derives his argument that humans lack a nature.

Before we begin, however, it is worth pointing out how radical the idea is that there is no such thing as human nature. As David Hume argued in his monumental *A Treatise of Human Nature*:

'Tis evident, that all the sciences have a relation, greater or less, to human nature; and that however wide any of them may seem to run from it, they still return back by one passage or another. Even Mathematics, Natural Philosophy, and Natural Religion, are in some measure dependent on the science of Man; since they lie under the cognizance of men, and are judged of by their powers and faculties. (1731, xix)

He thus placed human nature at the very foundation of human inquiry and linked human nature with the “science of Man.” Could it be that Hume's seven-hundred-page treatise on human nature is not on anything at all? Was he chasing a mirage for hundreds of pages? Hume was not alone in positing the centrality of human nature. Thus, to argue that there is no such thing as human nature calls into question broad swaths of philosophy. It is therefore radical and highly destructive—and should not be accepted without an airtight argument to back it up.

2.1 What Is a Human?

What is a human? There are two basic responses we may offer. The simplest answer is that an organism is a human if and only if it is a member of the scientific category *Homo sapiens*. This is the response given by Hull (1986). But before we consider this response in detail, we will first consider a second response, which relies not on a scientific criterion, but on normative evaluations – that is, evaluations of what we *ought* to be like, not merely what we *are* like. It is thus prescriptive, not merely descriptive. If we talk of certain behaviors as being “inhuman” or of certain people being or acting (merely) like animals, then we are using normative criteria. One can be inhuman in the normative sense while still belonging to *Homo sapiens*.

This normative way of defining humans has clear problems. One is that it renders human nature (at least in part) merely stipulative. If we add our own normative criteria for what it is to be a proper human (to act morally, say) to the concept of a human, then it is not an empirical question whether we are moral. Humans will be moral because we stipulate that humans are moral creatures. But if we maintain that whether a species (*Homo sapiens* or otherwise) exhibits a particular trait (like morality) should be an empirical matter, then trait possession should be discovered, not stipulated. We therefore need to avoid using a normative mold to cast the boundaries of species. It is for this reason preferable to take humans to simply be members of *Homo sapiens*. While being moral may be an important feature of our kind, it is not the basis of our species’s boundary.

You may respond by asserting that normativity must be a part of what it is to be a human, since human nature is deeply normative: human nature is about how we should be, not about how we are. One motivation for this position is that it is appealing to have human nature be a target at which to aim. If human nature is an ideal target, then deviations from it can be reasons to strive to be more like it. We may even hold that we *ought* to strive in this way.

But if human nature is an ideal of this kind, it is an invention – a product of culture and imagination. Such ideals often crystallize in religion, where disciples are told how they ought to be, what it is to be a good Christian or Muslim or Hindu. The ideals offered by religions can be deeply meaningful belief systems that shape human behavior and profoundly inform our understanding of ourselves and others. In this way, they provide insight into our nature: we are a species capable of generating complex, meaningful religious systems, and this is a fact important to understanding ourselves. But acknowledging this does not mean that particular religious ideals are themselves true accounts of our nature. For example, the Catholic Church, as they describe in their *Catechism* (part one, section two, chapter

one, article one, paragraph seven¹), maintains that we should interpret the biblical Adam and Eve story in the following way:

417 Adam and Eve transmitted to their descendants human nature wounded by their own first sin and hence deprived of original holiness and justice; this deprivation is called “original sin.”

418 As a result of original sin, human nature is weakened in its powers, subject to ignorance, suffering and the domination of death, and inclined to sin (this inclination is called “concupiscence”).

The lesson to take from this is that we are a species capable of generating and believing these kinds of stories. We should not, however, conclude that we have a weakened nature due to original sin. Instead, this tale can be appreciated as one among countless tales about our origin and nature generated by a diversity of religions the world over (Ramsey 2017).

We are a culturally diverse species, and there are many standards offered by cultures and religions for how to behave, for how to be a proper human. But we need to distinguish *what we are like* from *what we think we should be like*. As I will argue below, if we want human nature to align with the sciences, then it is the former that is human nature. The latter can – depending on how, precisely, human nature is understood – be seen as an aspect of our nature or as partially due to our nature. Thus, while the moral dimensions and implications of human nature are important, they will enter this Element only after we figure out what human nature is.

Thus, eschewing normative ways of defining humans, “human” will simply denote *Homo sapiens*. A member of this species is a human no matter how they act. The least moral human is still a human. Of course, this immediately prompts us to ask what the criteria are that make each of us belong to the biological species *Homo sapiens*. The answer to this comes from knowing what it is for something to belong to a species. And to know this, we must have a strong grasp on the Darwinian insight that the history of life on Earth has a tree structure, where species are branches on this tree – an insight that played a crucial role in Hull’s argument.

2.2 Essences and Evolutionary Trees

Prior to Charles Darwin’s publication of *On the Origin of Species* in 1859, species were often thought of as having an immutable essence. A dog was in essence a dog, and its offspring were dogs because they inherited this essence. One could breed a dog and achieve individuals as diverse as Irish wolfhounds

¹ www.vatican.va/archive/ENG0015/_P1C.HTM.

and Chihuahuas. But these are all dogs, and while you can breed them to be different in size, color, and such, you cannot breed a dog into a cat or a horse. Cats, dogs, horses, and all other species are essentially different. Literally, that is: they contain distinct essences. Under one interpretation, these essences were divinely created. Dogs were created by God as dogs, and forever they will remain so.

The view of species as fixed types with unique essences underwent a powerful critique by Darwin. In the *Origin*, he did two important things. First, he argued that natural selection is a powerful and creative force, a force capable of generating adaptations – traits that fit their function. Eyes well adapted for seeing food, prey, and predators, and teeth sharp for piercing flesh or flat for grinding grass or seeds.

Second, he argued that the history of life has a tree structure. That is, not only do species have an evolutionary history, but they also have common ancestors: trace any two species back in time far enough and you come to a point when they were one. We now know that humans and chimpanzees arose from the same species more than six million years ago, humans and orangutans close to thirteen million years ago (Glazko and Nei 2003; Almécija et al. 2021).

Darwin's tree of life view is a radical departure from accounts that take species to be independently created. It gave new meaning to the shared traits among creatures. The bones in a bat's wing and our hand are the same not because of some shared divine blueprint, but because we share an ancestor with the same bone structure, and bone correspondences (though not necessarily shape) are well conserved over time. This correspondence relation is that of *homology*, a concept introduced in a non-evolutionary framework by Owen (1843) but reinterpreted by Darwin (1859) to be based on shared ancestry (Ramsey and Peterson 2012).

Darwin's view also gave new meaning to the species concept: extant species are just terminal branches on the tree of life. What is crucial to understand about the tree structure of the history of life is what it implies for the answer to this question: *Why does a given organism belong to a given species?* The Darwinian answer, which is the answer that contemporary evolutionary biology also provides, is that the organism belongs to the species not because of an intrinsic property it possesses, but merely because of where the organism is located on the tree of life. If the organism is within the branch of the tree constituting the species, then it belongs to that species even if it deviates from the norm.

This is not entirely true, since some deviations from the norm can be extreme enough that new species are founded. It is thus not the case that an organism belongs to a given species if and only if the organism's parents belong to that species, since this would make speciation impossible. On the contrary, branches

can split and new species can form. Speciation is a complicated process often involving periods of ambiguity. The complications of speciation will not be dealt with here, since all we need is the understanding that a species is a branch and that belonging to a species is belonging to its branch. It is also important to mention that while these relational (instead of intrinsic) properties are what makes an individual a member of a species, this does not mean that intrinsic properties are not important to species determinations. On the contrary, intrinsic properties play important evidentiary roles in classification. If it looks like a duck and quacks like a duck, then probably it is a duck. The quacking and appearance can thus provide evidence concerning its classification.

We can visualize Darwin's framework as a tree laden with fruit. It is an unusual tree, with different branches grafted on from different fruit varieties. One branch produces apples, another pears, yet another cherries. Now consider a single fruit. What makes it a pear? It is tempting to point to the fruit's bottom-heavy shape, the unique floral taste, the waxy yellowish-green maculated skin. This answer points to the fruit's intrinsic properties, and these properties may be very useful in identifying pears, but it is important not to mistake the usefulness of these properties with what makes something a pear. In this case, it is a pear because it is on the pear branch. A small round fruit growing on this branch will still be a pear, though a strange one. An apple that looks and tastes much like a pear will still be an apple so long as it is on the apple branch. The properties are merely useful guides, not necessary and sufficient conditions for membership in their kind.

We therefore need to separate the main distinguishing characteristics of an organism from what makes the organism belong to its species. We may think of the Asian one-horned rhinoceros as being large, gray, having one horn, herbivorous, and so on. And using these criteria may work flawlessly in picking out *Rhinoceros unicornis* from a lineup of mammals. But it is not these properties that make it belong to *R. unicornis*. Instead, it is its location in the tree of life. If an *R. unicornis* mother gives birth to a hornless offspring, it will still be a rhino, despite lacking a key distinguishing feature. (Again, I don't wish to imply that speciation is impossible. It is improbable though certainly possible that the hornless rhino marks the saltational beginning of a new hornless rhino species. But if it is a founding member of a species, this is the case because of the branch it forms, not merely because it substantially differs from its parents. The point is that in the absence of the founding of a new species-level branch, the individual is in the same species as its parents, despite its aberrant traits.)

What are the implications of the Darwinian view of species for human nature, and for Hull's skepticism about human nature? If "human" means *Homo sapiens*, and if belonging to *H. sapiens* is based not on attributes we think of

as important human traits – speaking language, being moral – then these traits are not definitive of our species. They are not our essence. They are common, but not necessary to being human. Each of us is human based on our place in the tree of life, not on our characteristics. Diverse ways of being human do not make us more or less human. Someone who is bisexual, lesbian, asexual, or transgender is human independent of sexual preference or gender identity, no matter how unusual.

2.3 Hull's Argument

With the nonessentialist concept of human in hand, we are almost ready to lay out Hull's argument. But before we get there, we must understand his concept of a *nature*. For Hull, a nature is an essence – it refers to the necessary and sufficient conditions for membership in a kind. While there may be such things as relational essences, the essences Hull is concerned with involve intrinsic properties.

We can now see how Hull's argument gets off the ground. He combines a nonessentialist notion of a species with a nature understood as an intrinsic essence. Doing so appears to problematically refer to the essence of a nonessentialist collection of things. If humans have no essence, it seems to follow that they have no nature. And if this is true, human nature is an incoherent concept – it is an incompatible marriage of an essence-free scientific category (species) with an essence. We could summarize Hull's argument as follows:

Premise 1: The human species has no essence.

Premise 2: Natures are essences.

Therefore: The human species has no nature.

There is a variety of responses we can have to this argument. If we take it to be sound, it appears that we should stop talking about human nature. In this view, human nature is like the *élan vital*, the vital force that living things possess but the nonliving lack. The *élan vital*, once taken seriously by biologists, has since been discarded. There is no place for it in the contemporary metaphysics of biology. This is how Hull responds to this argument. Human nature, insofar as it is understood to rest on a scientific foundation, is a mirage. It may appear to exist when viewed at a distance, but on closer inspection, it is absent.

Another response to Hull's argument is to challenge its soundness by challenging the truth of one or more of its premises. Premise 1 is not readily challenged since, as we saw, it appears to follow from the structure of the tree

of life. I should note, however, that some argue for forms of essentialism that could apply to Darwinian species, such as *historical essentialism* or *origin essentialism* (Griffiths 1999; LaPorte 2004). You might think that having the parents you do is a part of your essence, or that having a particular ancestor is part of the essence of an individual organism. There are debates over whether evolutionary trees support historical essences (Pedroso 2012), but such arguments are orthogonal to the point here. Hull was concerned with intrinsic property essences, so pointing out that you can get a kind of essence “for free,” since individuals essentially have the ancestors they do, does not bear on Hull’s argument. I won’t further discuss historical or origin or other relational forms of essentialism in this Element.

Let us therefore assume that Premise 1 is true and instead turn to Premise 2, which equates essences and natures. I agree with Hull that if natures are essences, there is no such thing as human nature. When the biologist Michael Ghiselin wrote, “What does evolution teach us about human nature? It tells us that human nature is a superstition” (1997, 1), he likely had the equation of nature and essence in mind. It would a superstition be if we held this equation.

But while the terms “essence” and “nature” are often considered synonymous, they need not be. While it is clear that Hull’s challenge is an important one – we must concede that if human nature picks out the essence tying us to our species, then we run into problems – it is possible to reject the second premise and assert that human nature is not essential to our belonging to *Homo sapiens*.

In fact, when the term “nature” is used, it often refers not to an essence, but instead picks out the important features of something. If you say that a lion is aggressive by nature, you are probably not meaning that there is some hidden essence within the lion associated with these behaviors. Nor are you claiming that being aggressive is a necessary property for being a lion, such that no nonaggressive animals can be lions. Instead, you presumably mean that lions are disposed toward aggressive behavior. Such a disposition is grounded in the psychology and physiology of the organism. In this view, generalizing about the species amounts to saying that the disposition is, at minimum, widespread.

A nature in this sense is like a family resemblance. Intelligence and petiteness might run in your family. You could thus rightly characterize your family as smart and petite. But this is not incompatible with a dull or stout individual being born into your family. These properties are not essences and therefore do not mean that the person is not, in fact, a part of your family.

Thus, a nature could be linked to dispositions to express traits, or to the pattern of trait expression, or even to a mere subset of human traits. If a trait is only widespread and not universal in a species, then it cannot be definitive of that species. A nature linked to such traits is thus not an essence. If such

nonessentialist conceptions are allowed, Premise 2 is false. Natures are not (in this context, at least) essences.

There thus appear to be two options for how to react to Hull's argument: (1) take human nature to be an essence and endorse his conclusion that there is no such thing as human nature, or (2) explore nonessentialist concepts of human nature. One reason to pursue (2) instead of (1) is the entrenched usage of the term "human nature." Entire books are published on the topic. In *The Blank Slate: The Modern Denial of Human Nature*, psychologist Steven Pinker spent over 500 pages defending the idea that humans have a nature (Pinker 2002). (This is not to say that such books are unproblematic; Pinker's has been criticized for, among other things, an overly simplistic characterization of the distinction between blank-slate proponents and biological determinists.)

The use of the human nature concept extends far beyond philosophical and popular science treatments. It appears in the news media playing roles in making sense of and explaining our behavior. Consider a few examples from the *New York Times* with "human nature" in the title: John R. Quain (2016), "Makers of Self-Driving Cars Ask What to Do with Human Nature"; Evan Lipkis (2017), "Blame Human Nature, Not Guns"; and Farhad Manjoo (2018), "The Problem with Fixing WhatsApp? Human Nature Might Get in the Way." Such articles assume that there is such a thing called human nature, and they take it to have explanatory force: we can cite our nature in explaining our behavior. Are these authors deeply confused about human nature? Assuming that they are not referring to essences, then what is it that can do the explaining? (I will return to these examples in Section 6.4 to see whether the way they employ the concept of human nature can be understood in terms of the framework argued for below.)

Given the entrenched state of the discourse surrounding human nature, this question is worth answering. Instead of simply declaring that the notion of human nature is incoherent, we should pause and ask what it is that people like Pinker mean when they defend the idea that there is a human nature. Instead of trying to suppress talk of human nature, it thus may be more fruitful to explore and explicate what human nature might mean. This Element centers on the development of a nonessentialist conception of human nature that can help us to reject Hull's argument and make sense of what we mean when we are talking about human nature.

Simply rejecting the equation of intrinsic essences and natures in the case of human nature does not thereby provide us with a nonessentialist concept of human nature. Instead, we must develop one. The development of such a concept will be the chief focus of the next two sections. In them I will consider