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Human Nature
and Self Design
When we use the expression »human nature«, we can be talking about one of several different things. Indeed, if we are not careful, we may end up talking about more or less all of them at the same time. The purpose of what follows is to distinguish these various things we may be talking about when we talk about human nature and to establish a conceptual order that might help to begin to clarify the related, but importantly different fields we pick out when we use the expression. What I have to say may also have the side-effect of leaving you with the – perhaps not unjustified – impression that philosophical talk about human nature consists, to vary Whitehead’s famous dictum, in a set of footnotes to Aristotle.

After presenting various claims advanced in the last century to the effect that there is no such thing as human nature, I briefly sketch a number of uses of the term phusis distinguished by Aristotle. Aristotle bequeaths us an ambivalent inheritance, the structure of which we should get clear before attempting to draw the conceptual lines necessary to make sense of talk of »human nature«. I then go on to distinguish three basic – and several related – uses of the expression, before, in a last step, saying a word or two about the relation of each of these concepts of human nature to moral reasons.

1. Denials of Human Nature

Here, then, are some dismissals of the idea of human nature that can found in the literature. First up is Jean-Paul Sartre, who in Existentialism is a Humanism (1945) claims »… there is no human nature … Man is simply what he makes of himself.« (Sartre 1945, 49). Nine years later, the philosopher and sociologist Jürgen Habermas in his article »Anthropologie«, much read and commented on in the German context, rejects any »… anthropology having to do with human nature« because, he claims, »human beings only become historically what they are.« (Habermas 1958, 32; my translation).

Now, one might think that these are remarks of philosophers or social scientists who haven’t really got a clear perspective on the biological background we should have in mind when we are talking about human nature. But this turns out not to
be the case. If we look at what certain biologically informed philosophers have
to say about "human nature", we can see that we get equally strong denials that
there is anything corresponding to the expression. For instance, the philosopher of
biology David Hull asserted in 1984 that "if the human species has evolved the way
that other species have evolved, then it cannot have a traditional "nature" " (Hull
1984, 36). And a little more recently, Ronald de Sousa said something very
similar: "... the Darwinian revolution", he claims, "has made it impossible to take
seriously ... the idea of a human essence or its application to ethical practice" (de

Finally, a word from perhaps the foremost representative of the German
tradition known as "Philosophical Anthropology", Helmut Plessner. Plessner
- sort of - dismisses human nature, claiming somewhat gnomically that "it's part
of human nature to have no nature." (Plessner 1928, 309ff.; my translation)

I will come back to all of these quotations. One of the things I hope to show
is that these different authors turn out to be rejecting different things: two authors
who both deny that there is such a thing as "human nature" may, contrary to
appearances, very well not be agreeing with each other. One aim of the following
is to provide guidelines as how to find out if they are.

2. Aristotelian Concepts of Nature

It helps in this task to turn to Aristotle, who developed variants of the conceptual
distinctions we need, but unfortunately mixed these with features deriving from his
pre-Darwinian metaphysics in a way that foreshadows, and presumably influences
much of the confusion we find in contemporary discussions. If we look at the
fourth book of the Metaphysics (Met. 1014b 16ff.) or the second book of the
Physics (Phys. 192b 9ff.), we find Aristotle distinguishing as many as five different
concepts of nature (phusis). I want to pick out three which are germane to our
concerns.

The first is the idea of nature as opposed to techne or to manufacture. Nature
in this sense for Aristotle involves there being an inherent principle of growth
or movement in the entity that has this nature. The second concept is nature
as ousia or essence. This is a classificatory conception of nature which at least
sometimes in Aristotle seems to be developed in terms of the application of the
genus-differentia terminology. Finally, there is a conception of nature as the full
realisation of a specific form or blueprint. This third conception of nature is one
that is not possessed by entities that are the result of techne, i.e. which don’t partake
of nature in the first sense and is also not possessed by entities that are natural in
the first sense if they are not fully developed. I think this third conception should
be understood as a particular specification of the idea of essence, i.e. of nature in
the second sense.
What is extremely important for Aristotle’s view – and bequeaths us problems when we try and think about these things today – is the fact that this third conception of nature involves the idea of to-be-realisedness. It involves this idea in two senses: firstly, nature in this sense has dispositional to-be-realisedness, i.e. in the absence of defeating conditions, the natural entity will realise its full and specific form. Secondly – and this is famously the core of Aristotle’s teleological metaphysics – the idea of to-be-realisedness is also normative, i.e. the natural entity should also realise its full and specific form.

With these Aristotelian notions in hand, I shall now go on to distinguish three concepts of human nature. The first and the third can be seen as specifications of Aristotle’s first two concepts. The second is related to Aristotle’s third concept, but needs to be distinguished from it.

3. Conditions of Specieshood (HN1)

The first concept of human nature specifies the conditions of membership of the species homo sapiens. It follows that HN1 is a biological notion. To get clear on what it involves, we need to consider the concept of biological kinds after Darwin. This is the first point at which we encounter an incompatibility with Aristotle: whereas for Aristotle biological kinds could be timelessly classified (Dierauer 1977, 113), after Darwin we know that is not the case. The motor of evolution is the random variation of properties within existing populations. For this reason, no valid claims about the necessary properties of the individual members of a species can be derived from facts about the properties possessed by its existing members. Indeed, specieshood seems not to entail the possession of any properties at all. So there can be stripeless tigers and there can be armless humans. These are going to be statistically unusually individuals, but individuals that nevertheless instantiate the species.

Species after Darwin are, in David Hull’s words, «historical entities» (Hull 1978, 338ff.; 1984, 19), i.e. they are defined by their lineage. The point is nicely illustrated by the comparison between biological kinds and chemical elements: if all atoms with the atomic number 79 were to somehow disappear from the planet, then there would be no metal on earth that we could correctly refer to as «gold». Such a catastrophe for the jewellers’ trade would not, however, need to be irreversible. It would remain at least metaphysically possible for there again to be such a thing as gold – were atoms with the appropriate atomic number through some happenstance, to reappear. So gold could completely disappear and could, perhaps centuries later, reappear on the scene. This is not the case with biological kinds because they are defined by their lineage (Hull 1984: 22f.; Mayr 1987: 157). Thus, should, as a result of a random rearrangement of atoms, entities
suddenly spring into existence that had all the pheno- and genotypical features of pterodactyls, they still wouldn’t be pterodactyls because they would lack the appropriate causal history. Similarly, should we be able to create androids that possessed all the characteristic human physical and psychological features, so that they were indistinguishable from humans, they would still have no participation in human nature in this first biological sense because they simply wouldn’t have the right lineage.

Return now to the claims of David Hull and Ronnie de Sousa that there is no such thing as human nature. This sounds fairly dramatic, but is primarily the result of insisting on strict, somewhat traditional conditions for the realisation of concepts. However, since we are not tied to such a narrow view of conceptual conditions, there is leeway for either accepting or rejecting their assertion. There is no such a thing as human nature in this first, biological sense if we think of the conditions of specieshood as a matter of necessary and sufficient conditions furnished by pheno- or genotypical nonrelational properties. Let’s call the unrealised concept of human nature that requires such narrow conditions \( HNI^* \). However, once we allow relational – in particular historical – properties, we can unproblematically pick out human nature in the sense of conditions of specieshood (asteriskless \( HNI \)). In naming the relevant conditions, we simply need to pick out a particular section of the phylogenetic tree.

There is a substantial problem here, namely that of specifying precisely what conditions do this, as mentioning descent is clearly insufficient. Sufficient conditions are only named once we have picked out a relevant speciation event, where speciation generally involves the splitting of one species into two, although it can involve the fusion of two species into one (Mayr 1970, 248ff.). Different theories see speciation as being tied to different additional criteria, among which number the existence of a reproductive community, the occupation of an evolutionary niche or genetic or phenotypical coherence (de Quieroz 1999, 60). What is pertinent to our concerns is that none of these candidates offer the prospect of completing sufficient, non-relational conditions of specieshood. Occupation of an evolutionary niche is an environmental relationship; genetic or phenotypical coherence, like membership in a reproductive community, are relationships between entities, or properties of entities that have the status of specieshood. And, of course, the core historical characteristic of descent is itself eminently relational. Hull’s strongest worry – and the point at which Darwinian species are most obviously distinct from their Aristotelian predecessors – is that the properties thus named are, in contrast to the properties required for defining natural kinds such as pure metals, not timeless.

What we should conclude from this is, I think, that human nature in this first sense, like the nature of any biological kind, is neither categorical nor timeless. Nevertheless, the conditions of specieshood constitute a stable structure which, in spite of its transformability, nevertheless persists over time. It thus seems plausible
that specieshood is a cluster concept, a stable but not timeless constellation of properties, none of which are individually necessary. This corresponds to Richard Boyd’s suggestion, according to which species are clusters of properties bound together by causal mechanisms with peculiarly homeostatic characteristics (Boyd 1999, 145ff.). This conception of species is explicitly open to the possibility that certain properties can be missing in the case of individual species members and can eventually come to be cease being instantiated within the species at all.

4. An Aristotelian Confusion

In his article »On Human Nature«, David Hull argues that, from the lack of what I have labelled $HN1^*$ it follows that there is no feature that could fulfil the »traditional functions of human nature«, that is, there is no »property which makes us peculiarly human« (Hull 1986: 7). In spite of what I take to be a perfectly good argument about the consequences of Darwin for the conditions of specieshood, what he concludes from it here is, it seems to me, highly misleading. That’s because his talk of the »peculiarly human« is peculiarly ambiguous. In the first place, Hull seems to be simply reiterating the biological argument. Thus understood, to claim that there is no property that can make us »peculiarly human« is simply to claim there are no actually instantiated, non-relational, timeless properties that have to be given if a specific entity is going to be a human entity. That follows because $p \rightarrow p$. But what’s all this about »the traditional function« of human nature? I think it’s fairly clear that the traditional function of talk of human nature is not classificatory. Something else is being claimed when someone – perhaps a politician or a psychologist – maintains that some feature is or belongs to »our nature«. If that’s the case, then it is anything but clear that the biological argument is going to have any purchase on such claims.

In the light of the fact that Hull’s biological argument is explicitly directed against Aristotle, it is not a little paradoxical that his conclusion only seems plausible because of the failure to distinguish two notions of human nature that are only indistinguishable from within an Aristotelian metaphysics. Allow me to make the point by focussing on what we can take as the paradigm for the conflation of specieshood and a second concept of human nature: Aristotle’s thought that the human being is a *physei politicon zoon*. This formulation can be given two very different interpretations, which in the Aristotelian scheme of things are stuck together in a way that after Darwin fall apart. The first is a matter of biological classification. Aristotle sees the assertion that »man« is a »political animal« as a biological claim. We can see that from the way he introduces the idea in his *Historia animalium* (Hist. an. 487b 33ff.). There he divides animals into those that are solitary and those that are gregarious. Among the gregarious animals are swans and tuna fish. These are then divided into those that are independent and
those that are, as he says, »political«. Aristotle is quite explicit what he means by »political«, viz. that the animals have some sort of collective aim. The animals that are political in this sense include humans but also bees, wasps, ants, and (for some reason) cranes.

Aristotle is here classifying animals according to biological, more precisely, ethological criteria. These are clearly criteria that work with observably instantiated properties. However, once we are clear that observably instantiated properties cannot be used for such definitional purposes, we should either stop applying these predicates to our species or else get clear on what other function their ascription might be fulfilling. Now, the idea of human beings as »political animals« has a long and flowery history which obviously isn’t dependent on the thought that we can only distinguish humans from other animals by ascertaining whether the animals in question are political or not. Instead, we should see such attributions as claims concerning what we can call the characteristic human life form. Indeed, it ought to be clear that, in order to characterise certain sorts of animals in such a manner, we need to be able to distinguish the entities that fulfil the specieshood conditions in the first place. It is primarily humans, as animals satisfying the conditions of $HN_1$, of whom this particular life form is predicated. Pace David Hull, then, we should be clear that the kind of justificatory burden we take on when we make assertions about the characteristic human life form are very different from claims about specieshood. Post Darwin, talk of the former is by no means shown to be empty simply because there is no $HN_1^*$. 

5. **Structural Properties of the Characteristic Human Life Form ($HN_2$)**

To be »political« in the sense of sharing goals with one’s conspecifics is, someone might say, »part of human nature«. This can be interpreted as a fairly low-level, but perfectly plausible claim about one feature of the life form characteristic of human animals. The notion of human nature at work here is so broad as to be fairly uninteresting. I labelled »$HN_1^*$« the concept of specieshood that was uninteresting because of being unjustifiably narrow. In a similar spirit, this uninterestingly broad concept of human nature in a second sense can be labelled »$HN_2^*$«. What falls under asteriskless $HN_2$ are features of the characteristic human life form that have a particularly central explanatory role relative to the other typical features of that life form. This seems to me to be the best way to understand what Hull called the »traditional function« of talk of human nature, talk that is also sometimes marked by one use of the expression »human essence«. Thus, claims that reason or freedom is our nature or our essence should be understood as claims that reason or freedom are properties that play a particular explanatory role within the characteristic human life form. That particularly central
explanatory role is picked out by the expression »structural properties«, which I have adopted from Mary Midgley (Midgley 2000, 57). Structural properties have two features: firstly, they determine the way the characteristic features of a life form hang together and, secondly, they pervade the specific shape taken on by individual features. They are, one could say, structural in both a holistic and a micrological sense. The properties that play this explanatory role should, then, be seen as our nature in this second important meaning of the expression.

Note that the concept of structural properties entails nothing as to whether the properties concerned are specific to humans. If I am right, for example, that the Aristotelian characterisation of the human being as a political animal is a claim about a structural property of the human life form, then Aristotle is, in the light of his assertion that there are also other »political« animals, claiming that at least one facet of HN2 is shared with other animals. Still, if talk of HN2 is supposed to be of particular explanatory importance, then it will have to contribute significantly to explaining what is specific about our life form. Midgley suggests that what we should be looking for here is a unique constellation of features, where the individual properties need not be uniquely human.

What is certainly intuitively plausible about this is that we have no a priori reason to expect that human nature in this sense is going to be a monistic affair. A monistic conception of HN2 attempts to explain the characteristic human life form in terms of a single property such as reason, freedom, language use or intentionality. The debate between Chisholm and Sellars in the 1950s as to the relative priority of intentionality and language (Chisholm/Sellars 1972, 214ff.) can be understood as confronting opposed conceptions of candidates for the key structural property of our life form. Ernst Tugendhat has recently argued explicitly that this property is the capacity for language use, a capacity from which, he claims, our freedom, our reason and our tendency to pursue a concept of the good all derive (Tugendhat 2007, 43ff.). Any such monistic position on HN2 brings with it a heavy burden of proof, a burden that among other things concerns the method of demonstrating such a global and primary causal impact.

In this context I want to note that the idea of a monistic conception of HN2 throws considerable light on the quotations with which we began from Sartre and Habermas. Remember that both claim that there’s no such thing as human nature. What they seem to be claiming is that there is no such thing as a characteristic human life form, that is, that there is no such thing as HN2*. Empirically, this is surely a bizarre claim: this weak notion of the characteristic human life form gets an asterisk precisely because claims to the effect that humans generally walk upright, are generally susceptible to pleasure and pain etc are uninteresting as a result of being trivially true. Moreover, considering that all other animals have a characteristic life form – they live in the water or on the land, create burrows or build nests, rear their offspring in a particular way – there would be something very special about humans were they not to do so. In other words, there would have to
be some unique human feature that prevents the species developing a characteristic life form. Claims that there is no human nature, where these constitute a rejection that there is any content to the idea of $HN2^*$, turn out to ground in radically monistic conceptions of $HN2$. That is, they contend that there is a single unique structural property of the human life form, the influence of which is so great that it overrides any other dispositions with which all or most members of the species may be fitted out.

Indeed, both Sartre and Habermas in 1958 seem to think that this is so. In Sartre’s case, the feature in question is radically indeterministic freedom: we are, he thought, free in the sense that the needs and desires that humans generally have and the external conditions under which they generally live can be transcended to such an extent and on such an everyday basis that there is no such thing as a characteristic human life form. The property that the young Habermas saw as decisive is what he calls the capacity for historical self-understanding. Why that should prevent the development of a characteristic human life form I am not quite sure. As far as I can see, the claim is on the lines that a person’s interpretation of her needs in, and in terms of a particular historical or cultural context should constrain us to describe the needs in a way that is sensitive to that context. This would make it illegitimate to see for example the need for food of a 14th-century peasant and the need for food of an 18th-century aristocrat as the same type of need. Such an argument would rely not only on a claim about the all-transforming power of historical self-understanding, but also a claim about the semantics of identity assertions. I am not going to pursue these conceptions any further. I simply want to hold onto the fact that flat-out denials that there is such a thing as a $HN2^*$ seem to require a radically monistic conception of the structural feature of the characteristic human life form.

6. The Aristotelian Constellation

As I pointed out, Mary Midgley believes that discussions of $HN2$ should aim to pick out a cluster of properties that are together responsible for the specific shape of our characteristic life form. This seems to me to be a promising approach. Interestingly, it is an approach that is suggested by Aristotle in the second place in his work where he characterises humans as political animals, that is, in the Politics (Pol. 1253a 2ff). There, he paints a picture of the specifically human that consists of a constellation of three kinds of property: first, being political, second having »logos« and third, having a sense of justice.

Now, it is fairly clear that, here as elsewhere, having »logos« is for Aristotle the most significant of the three. Nevertheless, it seems that we only get to the specifically human constellation at the heart of our life form if we take in the other two. »Logos«, which we can perhaps render as »linguistically structured reason«,
has in Aristotle’s conception a theoretical and a practical dimension. Theoretical
»logos« is the capacity to make general judgements and to form inferences on their
basis. On the practical side, »logos« is the capacity for planning. The other two
features that Aristotle brings in both belong on the practical side. Firstly, having a
»sense of justice« means here having the capacity to evaluate in terms of good and
bad, right and wrong. Secondly, being political, that is, having shared aims, is the
capacity that has recently been intensively discussed under the rubric »collective
intentionality«. Interestingly, Aristotle thinks that collective intentionality is a
property we share with certain animals, but that other animals neither form
general judgements – they form perceptual judgements at the most – nor make
distinctions in terms of good or bad – as they are only concerned with pleasure
and displeasure (cf. Dierauer 1977, 121).

According to Aristotle, then, the cluster of properties at the heart of our
characteristic life form consists of two features that are specifically human along
with one feature we share with certain other animals. Note, though, that the idea
of having shared aims with other members of the species entails that one has
individual aims and that one is able to plan on that basis. Moreover, judgements
of good and bad plausibly count as judgements because of their general character,
and certainly take on the function they have in our life because of our capacity to
form inferences on their basis. Thus, the three features in question are interwoven
in a very specific manner. Finally, if this constellation of features is to be decisive
for the particular form of our other characteristic features, then it would need to
be shown, for instance, that our tendency to experience suffering under certain
circumstances results in part from, and has its particular content as a result of our
capacities for planning and for making general judgements – judgments about,
among other things, right and wrong.

I think that we have the outlines of an important research programme here.
Indeed, it seems to me that a version of that research programme is being carried
out by a group of researchers in Germany, namely the group around Michael
Tomasello at the Max Planck Institute of Evolutionary Anthropology in Leipzig.
We can see Tomasello’s research project as focussing on the idea of the human
being as a physei politikon zoon, since the core claim of the programme in its
most recent version is that we are animals with a peculiar proclivity to shared
or collective intentionality (Tomasello et al 2005, 6ff.; Tomasello 2008, 72ff.).
This is a claim about a core feature of HN2 because it is combined with the
assertion that it is this proclivity which, more than any other feature, explains
what makes us cultural animals, where the cultural character of our life form is
taken to be its most salient feature. Now one might construe this as one further
monistic conception of HN2.¹ However, I think it would be more accurate to

¹ Faced with the criticism that their research programme is a misguided attempt to answer the «philoso-
nical» question as to «the core of human nature», Rakoczy and Tomasello reply that their aim
see it as emphasising one feature in a cluster that is close to the Aristotelian constellation.

Following Searle, Tomasello et al. see the capacity for culture as also grounding in the capacity for taking on normative attitudes, that is, for seeing certain moves that others make in the context of shared endeavours such as games or institutions as either right or wrong (Rakoczy 2006,120ff.; 2009, 110ff.). The assumption seems to be that the capacity for judging things in normative terms is intimately related to collective intentionality, perhaps in as far as one can only take on normative attitudes with or for others who also do so. There are also indications that Tomasello et al. agree with Margaret Gilbert, who, pace Searle, takes collective intentionality to necessarily involve a normative component (Gilbert 1989, 410ff.). However these issues are to be resolved, it seems clear that we are dealing with two separable features of the basis of our cultural life form, two features that are at least related to two cornerstones of the Aristotelian constellation: our political character and our possession of a sense of right and wrong.

Finally, there is the question of the relation of these feature to »logos«. Tomasello claims explicitly and persuasively that language is a form of communication that can only be acquired by animals that are capable of joint attention (Tomasello 1998; 2008, 57ff.), a capacity that might be seen as the first level of collective intentionality.\(^4\) Even if he is right, that doesn’t change the fact that the specific structures of the joint and collective aims developed by the political human animal, in as far as they lead to a pervasively cultural life form, are going to be highly dependent on linguistic communication. Moreover, the setting and pursuit of the complex and highly mediated ends of our characteristic culturally, institutionally and technologically ordered life form clearly involves the capacities for general judgements and inferences, without which there would be no such thing as planning.

\(^2\) According to Searle, normativity only enters the scene with the advent of status functions, for which collective intentionality is necessary, but not sufficient. Cf. Searle 1995, 39ff.

\(^3\) But see the phylogenetic objections and plea for a coevolutionary model expressed by Bickerton (Bickerton 2005).

\(^4\) Here »intentionality« means mental »directedness«. Joint mental directedness appears to be the precondition of the development and pursuit of joint goals or intentions, i.e. of being an Aristotelian political animal.
I have no doubt taken interpretative liberties here with Aristotle. But for discussions of \( HN2 \) I think we could do a lot worse than take as our paradigm the broadly Aristotelian idea of a constellation of collective intentionality, normative attitudinising and linguistically structured reasoning. The explanatory and conceptual relationships between these features is the object of important ongoing research. Particularly where the focus is on the detailed relationships between the component features, such research need not think of its topic as human nature. Talk of »human nature« has, understandably, a reputation for approximating to a linguistic variant of amateur impressionistic painting. One point I hope to have made is that this reputation need not be justified.

A final word on the relationship of \( HN2 \) to \( HN1 \): As the two concepts are independent, there is no necessity that entities partaking of the one sort of human nature also partake of the other. Imagine for a moment that there is conclusive evidence that the capacity for joint attention is the phylogenetic precondition of the development of the characteristic human life form. There is no obvious reason why that capacity would have had to come into being or become pervasive with whatever speciation event counts as the starting point of \( homo sapiens \). What archeologists refer to as »behavioural modernity«, evidenced by what William Calvin calls the »behavioural Bs« – »blades, beads, burials, bone toolmaking, and beautiful« (Calvin 2004, 109) – is thought to have developed between 90,000 and 50,000 years ago. These activities may have resulted from the emergence of collective intentionality, which enabled the development of the capacities for coordination and extended planning. However, the emergence of the species is generally dated well over 100,000 years earlier. So there is likely to have been a time during which the members of the species were not bearers of what I am calling the characteristic life form of the species. It is also surely conceivable that, as a result of some sort of catastrophe, the remaining members of the species might be damaged, perhaps genetically, in such a way that they are no longer able to develop the decisive structural properties. How long they would then survive is, of course, another matter.

Moreover, it ought to be even more clear that, alongside such diachronic restrictions on which members of the species we should take as paradigmatic bearers of \( HN2 \), there are also synchronic restrictions. There are significant differences in the extent to which humans participate in the characteristic human life form. Some such restrictions are voluntary, as when a hermit renounces all sociability. Whole groups of people are, however, also subject to involuntary kinds of restrictions. We classify serious limitations on people’s capacities to live our characteristic life as disabilities, some of which involve restrictions of candidates for features of \( HN2 \). If the capacity for joint attention has the status Tomasello assigns it, autism can be seen as an organically based defect affecting the core of our nature (cf. Tomasello et al. 2005, 12). Research into the features of a characteristic human life that are missing from the lives of autistic humans would go some way to sharpening the
concept of structural properties. If the concept picks out the kind of explanatory force I have claimed for it, if the capacity for joint attention is indeed such a structural property and if this property is missing in humans with autism, seriously afflicted members of our species will be missing certain characteristic features of our life form and, where they possess other such features, some of these will take on a markedly different character.

7. Naturalness

I turn now toward the third concept of human nature, the concept of naturalness as applied to human beings. As we saw, Aristotle characterised the natural in this sense in both positive and negative terms: Negatively, the natural is whatever is not the result of technē. According to the positive Aristotelian characterisation, a natural entity is the bearer of an internal principle of movement and development towards a preset form. That positive characterisation is clearly not sufficient, because we are perfectly capable of producing technological devices that develop towards preset forms. More importantly, genetic predispositions of organisms only lead to phenotypical effects as a result of interaction with the organism’s environment. There is thus little sense to the idea of a blueprint inherent in the organism (Dupré 2003, 122ff.).

For these reasons, we are left with the negative characterization of natural as the non-manufactured. That shifts the conceptual burden onto clarifying precisely what we mean by «manufactured». In his article «Nature» (1874), John Stuart Mill offered a definition of the natural in negative terms as »what takes place without the agency, or without the voluntary and intentional agency, of man« (Mill 1874, 375). If we understand «intentional agency» as simply explicating, not qualifying the concept of agency, Mill can be taken to define the non-natural in terms of the results of intentional (human) action. This sounds straightforward and intuitively plausible. However, we should note where it leads. In order to do so, we need to understand both the function of talk of intentional action and the relevant notion of resulting.

One reading of Mill’s definition clearly has implausible consequences: if the non-natural were only to cover those products of human action that are deliberately brought about, it would follow that an unintentionally polluted river is to be classified as natural. That’s clearly not what we should be saying. Rather, unintentional pollution of the environment leaves the resulting state no less unnatural than where the contamination is deliberate. So Mill should be interpreted as defining the non-natural as whatever results – whether intentionally or unintentionally – from intentional action. Or in Davidson’s well-known phrase: whatever results from behaviour that is intentional under some description, that is, regardless of whether the description mentions the results in question. Moreover, a charitable
reading would also make it clear that the relation of resulting at issue obtains irrespective of how far back in time the episode of intentional action lies or how many intervening events there may have been. Thus, if someone slips and opens up the sluices by falling on the relevant button, the fact that this person did nothing intentionally makes no difference either. What is important is that the substances thus released themselves were the result of intentional action.

Thus interpreted, Mill’s definition is, I suggest, the Darwin-compatible concept of nature we should be working with. But note now what follows from it. Consider the fact that the seas, the rain forest, the deserts and the climate have all been influenced to a greater or lesser degree by human action. If, then, there are virtually no (supra-molecular) features of our earth that have not taken on the specific form they have as a result of at least some level of influence of human action and if every change brought about by human action to entities qualifies them as unnatural, then it seems that there are no (supra-molecular) terrestrial natural objects at all. So does following Mill’s lead take us down a road whence lies a lack of differentiation so radical that the concept of the natural loses any purchase at all?

No. Nature in the sense we are after is a gradual concept: entities can be more or less natural. Rough ordinal scales of decreasing naturalness are easily established beginning with the tropical rain forest, moving to the Black Forest and from there to Trafalgar Square. If we want to get cardinal, then the number of effective interventions might appear to be an appropriate measure. But if the relation of resulting takes in all sorts of influence by human action, however mediated, there will be great difficulties in quantifying here. Moreover, the number of pruning events may be irrelevant for the level of unnaturalness of a piece of shrubbery if it is only the final pruning that has any lasting effect. A more plausible measure of unnaturalness would be the extent of influence of human action on the constitution of the object. We should, one would think, be able to establish that by asking the counterfactual question as to how different some object is from the way it would have been had it not been exposed to the influence of human action. However, the mediated nature of the relation of resulting again raises severe epistemic problems.

One particular dimension of the extent of unnaturalness should be mentioned: what we might call depth of intervention. We have depth of intervention where the result of human action is the installation of dispositions to instantiate other properties. Where not only the present shape of a piece of flora, but its tendency to take on a certain shape under particular conditions is altered, we have an intervention in the internal structure of the object. Even if the effect is minimal, we may want to think in terms of a greater level of unnaturalness because of the permanence of the effect. For this reason the alteration of the genetic code of crops in order to produce properties such as a higher level of food production or resistance to disease is generally seen as particularly unnatural.
8. **Natural Human Features (HN3)**

Applying the concept of naturalness to humans, we get the third concept of human nature. We can define HN3 as the set of properties and dispositions instantiated by a human being to the aetiology of which human action has contributed relatively little. The gradability of what is natural in humans means that talk of our nature in this sense is talk of properties with a causal history to which the contribution of human action lies below a certain threshold: hence the vague phrase «relatively little».

Threshold setting can be fairly arbitrary. Often, however, thresholds express preferences or evaluations. This seems to be one of the reasons why talk of nature in this sense has frequently been controversial. There are, however, good reasons for denying that naturalness is a property possessed by adult humans at all. This is so for what may at first appear to be extremely uninteresting reasons. In contrast to other animals, human beings come into being physically as the result of intentional action of other humans, whether or not that action is intentional under the description «bringing another human into being». Moreover, not only the biological entity, but also the social and personal entity is the product of uncountable actions of upbringers, educators and enculturators – not to mention all those actions which made the actions of these people possible. This might at first appear uninteresting, because it might seem to be simply an artefact of building a minimised causal contribution of humans, rather than of other animals, into the concept of the natural. However much work the parents of owls put in, their offspring will remain natural, whereas if naturalness had been defined relative to the causal contribution of owl behaviour, young owls would soon lose their naturalness, whereas we would be able to keep ours intact!

If that were all that were being said, we could set the threshold for HN3 at a point beyond both conception and some specified amount of brood care, allowing the results of these activities of other humans still to count as natural. However, there is a feature, better: group of features of the characteristic human life form which makes the effects of the actions of other humans both so pervasive and so specific that no such general cut-off point can hope to be imposed. This is the feature known as secondary altriciality (Portmann 1951, 44ff.). Human neonates don’t fit into the disjunctive categorisation schema according to which newborn mammals are either precocial (small litter, open sense organs, relative maturity at the motor level) or altricial (large litter, closed sense organs, poor neuromuscular control, helplessness). Newborn humans are classified as secondarily altricial because, although they are, like newborn mice, helpless as a result of their poor neuromuscular control and homeostatic regulation, they are also born as part of a small litter (usually of one) and have well developed sense organs (cf. Dubreuil 2010, 78ff.). Human neonates are thus helpless, but sensorily open to the world. These features are combined with the unique phenomenon
of a brain growth-rate that is maintained at the foetal level for a full year after
birth.

Humans thus enter the world needing intensive attention and care in order
to survive, forms of interaction with other humans that take place in full view
of the neonates’ sense organs and during the period in which their brain struc-
tures are still developing rapidly. For this reason, Portmann called the conditions
during the first year of infant life the »social uterus« (Portmann 1967, 330). As
a result of this peculiar conjunction of dependence on and causal openness to
the influence of others, the psychophysical being of humans is permeated by the
effects of behaviour of their conspecifics to an extent unparalleled anywhere else
in the animal world (Ragir 1985, 456ff.). Moreover, the formative exposure to
the actions and the results of the actions of other humans continues at least until
of puberty: as recent neuroscience has suggested, the teen brain not only is still
under development, but is, because it is undergoing a significant reconstructing,
particularly susceptible to environmental effects, whether »experience-expectant«
or »experience-dependent« (Andersen 2003, 5ff.; Spear 2007, 12ff.). Note that
this susceptibility is not just general, but involves being subject to the influence of
the action of specific other members of the species.

In view of the pervasive effects of the actions of particular humans in particular
contexts on the formation of the psychophysical structures of individual members
of the species at least up to adolescence, any attempt to set a quantitative influence
threshold below which the effects of others’ behaviour should not be seen as
detracting from the naturalness of the resultant properties appears hopelessly
naïve. First, no such disentanglement is possible. Second, the contextual and
individual character of the agential influence of others raises a problem for the idea
that talk of a human nature in this sense could be anything other than individual.
The as yet unspoken assumption that is generally at work where the idea of an
HN3 is in use is that the human being mentioned in the definition is in some
sense representative. We could make this explicit by taking HN3 to be a subset
of HN2. The corresponding definition would then pick out the set of properties
and dispositions characteristic instaniated by human beings to the aetiology of
which human action has contributed relatively little.

Both for pragmatic reasons and in order to emphasise the radically social nature
of human psychophysical being, we may seem justified in rejecting any attempt to
set the threshold for irrelevant human actions in a way that would give the concept
of HN3 substantial content. This is, I think, what Plessner is doing in the remark
I quoted at the beginning of the paper. We should, I suggest, make sense of the
paradoxical, or nonsensical appearance of his claim – »It’s part of human nature
to have no nature« – by reading the first occurrence of »nature« as HN2 and the
second as HN3. His claim would then be that it’s a structurally decisive feature
of our characteristic life form that it contains no significant features that have
developed independently of the influence of the actions of other human beings.
He makes the same point when he claims that we are »… naturally artificial«, where I suggest we read »naturally« as »as far as the structural properties of our characteristic life form are concerned«.

There are three kinds of response that those interested in human naturalness can pursue. The first involves explicitly renouncing any connection between HN3 and HN2. Rather than being interested in natural properties that are characteristic of human life in general, we might be interested in those properties that structure an individual's way of perceiving, feeling and living and which, after the end of the formative period of adolescence, resist the further influence of human action. Explicitly setting a zero point in time at the end of adolescence, prior to which the influence of the actions of others is not seen as detracting from the naturalness of some property, and combining this with the exclusive focus on individual members of the species leads us to a concept of individual nature. John Stuart Mill works with such a concept in On Liberty (Mill 1859, 83f.). When we say it's »in someone's nature« to feel or behave in a certain sort of way, this is the concept of nature in play.

A second possibility involves locating the zero point at the beginning of the life of humans. Doing so allows us to avoid all the problems connected with the neotenic (decelerated) and hypermorphic (extended) character of human growth after birth. In this way we can isolate what we can call natal HN3. This could be defined as the set of properties and dispositions characteristically instantiated by human beings at birth to whose aetiology human action has contributed relatively little, where »relatively little« sensibly excludes conception. It is surely uncontroversial that there is such a thing as a natal HN3. What is controversial is the explanatory relationship between natal HN3 and HN2*. Nativists, for example evolutionary psychologists, believe that natal HN3 largely determines our characteristic life form (Tooby/Cosmides 1990). Now, the strength and mechanisms of any such explanatory relationship is an empirical question. Certainly, there can be no doubt that – because of the significance of secondary altriciality and collective intentionality – culture and concrete interaction drastically mediate the influence of dispositions belonging to natal HN3. It is an as yet unanswered question how much the neural architecture underlying our mental life is dependent for its genesis on earlier forms of interaction with conspecifics (cf. Ragir 1985, 452). It would, however, seem that at least the formal features of human mentality – involving basic kinds of attitudes: beliefs, desires, intentions, basic emotions, perhaps also the disposition to engage in joint attention – must result from specific predispositions, even if their conditions of realisation leave enormous leeway for variation. This would still mean that certain forms of human action remain necessary for the features of HN2 to emerge in ontogenesis. Perhaps, however, the fact that these are more or less unavoidable if human infants are to survive justifies locating them below the threshold of influence that excludes naturalness. The third response, which argues for the subsumption of HN3 under HN2*, attempts this kind of threshold setting.
9. **Summary of the Typology**

I have distinguished three basic concepts of human nature. In each case I also distinguished a closely related concept or a particular specification. I argued that there is no $HN1^*$, that is, there are no necessary and sufficient non-relational and non-circular conditions of specieshood. However, if one relaxes the kinds of conditions required in a way appropriate to the species concept, we have no reason for denying that there is an $HN1$.

A weak and fairly unexciting variant of the second concept, $HN2^*$, encompasses all those properties that belong to the characteristic human life form. The stronger and more interesting variant, $HN2$, picks out the structural properties of that form of life. Denials that there is a human nature in either of these senses are completely implausible; at best they are a form of rhetoric in campaigns for the acknowledgement of the importance of some particular structural property. I suggested that we should be suspicious of these and other monistic conceptions of $HN2$ and that the focus of interest here should be on clusters of structural properties, for which the Aristotelian constellation can be seen as a paradigm. The conceptual and explanatory relationships between the relevant properties and between the cluster and the rest of $HN2^*$ are, I claimed, important topics for interdisciplinary research.

Finally, the applicability of $HN3$, which picks out those human features to whose aetiology human action has contributed relatively little, involves various sorts of difficulties. One is that the gradability of the idea of naturalness necessitates the setting of a quantitative threshold for the level of influence. However, the unparalleled degree to which, and multilayered manner in which the psychosocial being of humans is determined by the actions of conspecifics make any hopes of quantification illusory. Moreover, these features suggests that we should refrain from attempting to set even a rough threshold that would allow the concept’s application to typical adult humans, as doing so would appear to minimise the significance of that influence. Conversely, this may seem misleadingly to minimise the breadth of the kinds of contributions by conspecifics compatible with the emergence of formal mental structures belonging to $HN2$. A clear-cut solution to these difficulties can be achieved by employing a different temporal specification of what is meant by «human features». Picking out neonate, rather than adult humans, that is, applying the concept of *natal HN3*, enables an unproblematic ascription of human nature in this third sense. It also allows us to pose unequivocally the question of the explanatory relationship between the dispositions we characteristically have prior to even minimal enculturation and the structural features of the characteristic human life form. In spite of the ideological posturing that has often characterised claims in this area, I take it that we are still far from having an adequate answer to this (rather large) question.
10. Human Natures and Normative Reasons

How do these concepts of human nature relate to normative issues? Turning first to HN1, in particular to the lack of an HN1*, one would not have thought that this is of any great moral relevance. However, a number of philosophers of biology – David Hull, Ronnie de Sousa and John Dupré – disagree. They have suggested that the lack of actually instantiated constitutive properties of specieshood offers support or justification for ethical pluralism. De Sousa argues as follows:

Cite any character you like and I’ll find you some member of the species who lacks it. But not a normal member of the species! you’ll say: quite, so what we have are not universal characters but normative ones: what you must mean by ›universal‹ is not that everyone shares it but that everyone ought to share it (de Sousa 2000, 315f.).

De Sousa goes on to assume, further, that the non-satisfaction of those normative conditions will lead to social exclusion.

This argument contains various confusions. One is the failure to distinguish HN1 and HN2. Another is the assumption that HN2 must be understood normatively. Once these points are cleared up, there is no necessity to the social consequences de Sousa fears. De Sousa’s argument depends on the false assumption that the only alternative to naming strictly universal properties is the imposition of normative conditions. I have claimed that, alongside the conditions of specieshood, we have a concept of the structural properties of the characteristic human life form, a concept that does indeed focus on »normal« humans in a certain sense. Now, it is also correct that people do sometimes assume that what is normal in the sense of what is characteristic is also normative. That, however, is a confusion that is not best avoided by avoiding the topic of our characteristic life form or its structural properties. Rather, it is best avoided by insisting on the distinction between the descriptive and the normative use of the term »normal«. Paradoxically, the idea that a characteristic function is one that ought to be achieved is a piece of the Aristotelian metaphysics that de Sousa is arguing against in rejecting the possibility of ascribing species-definitive properties.

There is no conceptual, or empirical necessity that species members lacking features of the characteristic human life form, even of its structural properties, need be the victims of exclusion. That depends, firstly, on the evaluation of the relevant features and, secondly, on what consequences are drawn from such evaluations. Now, it is certainly not necessarily the case that features of HN2* need be positively evaluated. We might, as Mary Midgley put it, be creatures with certain pervasive bad habits (Midgley 2000, 57). Konrad Lorenz was, for instance, convinced that humans are a particularly aggressive species. Independently of the truth of the claim, it seems, firstly, to be a claim about HN2*, if not about HN2. Secondly, it doesn’t seem to be particularly complimentary. But, thirdly, it is hardly incoherent. Moreover, the susceptibility to various forms of suffering is also surely a fairly good
candidate for inclusion in \textit{HN2}. Again, for that to be the case, this susceptibility doesn’t have to be a feature of our life that we value particularly highly. The fact that it is a pervasive feature of human life may make it wise to learn to come to terms with it in one way or another. But this argument moves from the fact that the feature is characteristic or normal to an evaluative or prescriptive conclusion. And even where we do evaluate features of our characteristic life form positively, there are various options of what normative conclusions we should draw relative to those species members who lack the relevant feature. There are very good moral grounds for seeing a someone’s reduced capacity to participate in the human life form as justifying measures to secure their inclusion.

There is a traditional view according to which important candidates for inclusion in \textit{HN2} are taken to be of primary ethical importance, indeed sometimes of such ethical importance that the criterion of moral rightness has appeared to consist in according appropriate consideration to just that property. The tradition is given its most explicit formulation in Aristoteles’ version of the \textit{ergon} argument (\textit{NE} 1097b–1098a20), which works with a conception of a uniquely characteristic human activity, famously the exercise of reason – thus jettisoning the rest of the Aristotelian constellation.\textsuperscript{5} The argument is premised on the idea that bodily organs are well constituted and social roles are well fulfilled when the organs or the role occupants best fulfil their characteristic function. It moves by analogy to the claim that humans attain the good for humans when and in as far as they instantiate the property that is uniquely and characteristically human. Together with the claim that reason is the unique and characteristic human property, it allows the conclusion that the good for humans consists in their exercising their reason.

The argument raises two important questions in our context: first, why should we think that there is only one single good for humans and that it is the same for all humans? Secondly, why should we take it that what is good for us, whether singular or plural, is fixed by whatever characteristics happen to occupy \textit{HN2}? The parallel Aristotle sets up between the unique and characteristic human feature and the features which both characterise and are normative for our bodily organs (seeing for eyes) or for the occupants of certain social functions (preventing ill health for doctors) only makes sense within his teleological metaphysics. The state of bodily organs is reasonably measured against their functionality for their bearers and the standard of goodness for doctors is sensibly their capacity to fulfil the function for which they have been trained. Only a teleological metaphysics, which sees the good for humans as a goal that is similarly fixed externally, can draw a strict analogy here. Aristotle’s argument depends on the idea that it is part of the

\textsuperscript{5} Whether »the Aristotelian constellation« is thus something of a misnomer or whether there is, as I suspect, a real tension between a cluster conception and a monistic conception of \textit{HN2} in Aristotle’s writings is something for genuine Aristotle scholars to pronounce on.
concept of the nature of an entity that its fully developed form should be realised. However, once again, the concept of $HN_2$ is explanatory, not evaluative. Certainly, it would be strange if an ethical theory were to claim that the core of morality consists in the demand that we give special consideration to some property that plays a completely marginal role in human life. But the fact that some property belongs to $HN_2$ is by no means sufficient for us to assign it particular value.

I conclude with a couple of thoughts on $HN_3$, motivated by recent reflections on human nature in this sense by one of the authors we saw rejecting the applicability of $HN_2$. I refer again to Jürgen Habermas, who in his slender book *The Future of Human Nature* (2003) expresses concern about what he sees as the threat of the dissolution of a normatively significant distinction between human features that result from processes of mere becoming and those that result from human production, that is, of the distinction between *phusis* and *techne* as applied to humans. In line with his focus on genetic interventions, particularly in the germ line, the concept of human nature he is working with is that of natal $HN_3$. Habermas doesn’t argue that there is an intrinsic moral problem with the transformation of human nature thus understood. Rather, he sees the problem in the fact that such interventions are forms of instrumentalisation because they involve an unavoidable imposition of the purposes of the intervener on the interventee. This is so, he thinks, because an individual who results from such prenatal intervention is necessarily less autonomous, being in part constituted by what Habermas calls the programmers’ »sedimented intention«. For this reason, he claims, it is a presupposition of the autonomy necessary for our standing as a moral agent that we result from »a natural fate going back before our socialization« (Habermas 2003, 60).

What is interesting about Habermas’ argument for our purposes is that it attempts to make sense of widespread worries about messing with our natal $HN_3$, without postulating that its naturalness is intrinsically valuable. All medicine, even homeopathic medicine, essentially involves diminishing $HN_3$. We generally think that the resulting welfare of patients is sufficient justification for the application of medical techniques. Nevertheless, there are features of natal $HN_3$ that do give us grounds for serious worries about its manipulation.

The first point is an epistemic consequence of naturalness: because we haven’t made the structures we’re working with, we often don’t know where interventions in those structures are going to lead. Sufficiently informed risk assessment is extremely hard to come by here. The second point is the inescapability of the results of deep intervention in our natal $HN_3$. The results of particular interventions are going to be inescapable for a particular individual and when the intervention concerns the germ line, the results become inescapable for future generations. As

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*6 Habermas is thinking in particular of enhancement, which he seems to assume can be unproblematically distinguished from therapy.*
a result of these – purely descriptive – points, manipulation of natal \( HN3 \) should only take place under massively restricted conditions.

In a second step we then need to ask what sort of foreseen or unforeseen results should be judged morally unacceptable, a question we can only answer on the basis of the criteria for the evaluation of those consequences. Two standard moral criteria are obviously pertinent: firstly, the welfare of the people who are going to be affected over however many generations and, secondly, their hypothetical consent. Applying these two sorts of standards will often lead to the same results, sometimes the answers we get will differ. This is not the place to start adjudicating, but both standards, in contrast to naturalness itself, possess obvious normative weight. The worries expressed by Habermas are a variant of the Kantian worries that focus on – genuine, autonomous – hypothetical consent. The idea seems to be that certain sorts, or certain levels of deliberate determination of one’s natal dispositions prevent any consent one might give, or might be thought to give, from being genuinely autonomous. Although I am fairly sceptical about this line of thought, I want to conclude by emphasising that it suggests a direction for further normative enquiry that might turn out to clarify the kinds of worries we have here. Such enquiry would have to show that, and why delegitimisation of hypothetical consent is an inescapable consequence of certain forms of manipulation of natal \( HN3 \).

Here, as in other areas of medical ethics, whether we are concerned about effects on welfare or about the possibility of genuine hypothetical consent, it is not the unnatural character of medicine that has to be balanced against the good it can produce. The idea that naturalness – as of human nature in either of the other senses – might be in some sense intrinsically normative is one feature of Aristotelian thought we should see as having been rendered obsolete by Darwinian biology. That is my last footnote to Aristotle.

**References**


