# The Anthropological Difference: What Can Philosophers Do To Identify the Differences Between Human and Non-human Animals?

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This paper considers the question of whether there is a humananimal or 'anthropological difference'. It starts with a historical introduction to the project of philosophical anthropology (sct. 1). Section 2 explains the philosophical quest for an anthropological difference. Sections 3-4 are methodological and explain how philosophical anthropology should be pursued in my view, namely as impure conceptual analysis. The following two sections discuss two fundamental objections to the very idea of such a difference, biological continuity (sct. 5) and Darwinist anti-essentialism (sct. 6). Section 7 discusses various possible responses to this second objection – potentiality, normality and typicality. It ends by abandoning the idea of an essence possessed by all and only individual human beings. Instead, anthropological differences are to be sought in the realm of capacities underlying specifically human societies (forms of communication and action). The final section argues that if there is such a thing as the anthropological difference, it is connected to language. But it favours a more modest line according to which there are several anthropological differences which jointly underlie the gap separating us from our animal cousins.

# 1. Philosophical Anthropology

Hume's ambition was to establish a 'science of human nature'. His claims on behalf of that project were far from modest. 'There is no question of importance whose decision is not comprised in the science of man. ... In pretending to explain the principles of human nature we in effect propose a complete system of the sciences'.' Since the sixteenth century, the scientific investigation

<sup>1</sup> D. Hume, *A Treatise of Human Nature*, ed. L.A. Selby-Bigge and P.H. Nidditch (Oxford: Oxford University Press, 1978), I.iv.16.

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of human nature had also been known under the label 'anthropology'. And Hume's great antipode Kant accorded a central role to that discipline, if not within the sciences in general then at least as regards philosophy. In his Critique of Pure Reason Kant famously distinguished three fundamental questions of philosophy: What can I know? What ought I to do? What may I hope for? In his Logic Kant less famously maintained that philosophy in a 'cosmopolitan spirit' (Philosophie in weltbürgerlicher Absicht), i.e. philosophy that pursues our ultimate concerns as rational creatures, can be 'summarized' (lassen sich bringen auf) by these three questions plus a fourth one: What is man? (Was ist der Mensch?). The first question is answered by metaphysics, the second by morality, the third by religion and the fourth by 'anthropology'. Nevertheless, Kant goes on to claim, even the first three questions can be regarded as belonging to anthropology, since they all 'refer to' (sich beziehen auf) the last question.2

Any such blanket statements about a particular discipline lying at the heart of philosophy, not to mention the sciences in general, are controversial, and for good reasons. Still, Kant's three initial questions do refer to the last one in at least one respect. They are phrased in the first-person singular, yet in a generic way such that 'I' can easily replaced by 'we'. Consequently they concern, respectively, the knowledge, moral obligations and spiritual prospects of *human beings*. Furthermore, assigning pride of place to anthropology is potentially illuminating in so far as many fundamental philosophical questions concern the nature of human beings and their place in the universe, either directly or indirectly. That is to say, they ultimately point to questions such as

Who are we? What *kind* of creatures are human beings? And what is our relation to the natural world?

In the nineteenth century, 'anthropology' won out over 'science of human nature' as a designation for the academic investigation of such questions. Following Kant, moreover, philosophy came to be clearly distinguished from the empirical sciences. It is in this context that Scheler distinguished 'philosophical' from 'theological'

<sup>&</sup>lt;sup>2</sup> I. Kant, *Critique of Pure Reason*, trl. P. Guyer (Cambridge: Cambridge University Press, 1998), B 832–3. I. Kant, *Lectures on Logic*, trl. J.M. Young (Cambridge: Cambridge University Press, 2004), AA IX 24–5.

and 'scientific' anthropology.<sup>3</sup> In the sequel, the label 'philosophical anthropology' was popularized by a movement within German philosophy founded by Scheler and continued by Plessner and Gehlen. Their general aim was to interpret and synthesize scientific findings concerning human nature in a philosophical fashion. More specifically, the members of the movement were keen to explicate the concept of life in such a way that the differences between plants, animals and humans would become apparent. At the same time they attempted to resist Darwinism and its naturalistic tendencies in the name of a non-materialist biology. Finally, the movement was associated with the idea that we encountered in Hume and Kant. Human nature and its exploration is of particular importance to philosophy as a whole – the project is not just a philosophical anthropology but also an anthropological philosophy.

In the Germanophone world, the title 'philosophical anthropology' is still applied first and foremost to this particular school of thought, which continues to the present. 4 But in a wider sense philosophical anthropology is any philosophical – as opposed to religious, scientific or artistic – reflection on the nature of human beings. Over the past 10 years or so, philosophical anthropology in this wider sense has become increasingly prominent within the Anglophone world, prompting some to speak of an 'anthropological turn'. The reasons for anthropology's new place in the philosophical limelight are manifold. First, within the analytic tradition the philosophy of mind has replaced the philosophy of language as the most dynamic discipline, and the one most often accorded a foundational role.<sup>5</sup> And problems concerning the mind and its relation to the body have an obvious bearing on human self-understanding. Secondly, and relatedly, the actual or alleged advances of neuro-science have led many to question the idea that possession of a mind sets humans apart from the rest of creation. Thirdly, biology, especially evolutionary biology, is now widely regarded as the most exciting natural science. Indeed, Darwin's theory of evolution is sometimes even portrayed as the

<sup>&</sup>lt;sup>3</sup> M. Scheler, *Die Stellung des Menschen im Kosmos* (München: Nymphenburg, 1928).

<sup>&</sup>lt;sup>4</sup> For a historical survey see J. Fischer *Philosophische Anthropologie* (Freiburg: Alber, 2009). Ernst Cassirer's *An Essay on Man* (New Haven: Yale University Press, 1944) stands outside this tradition. It does not focus on the difference between humans and animals and does not draw on biology.

<sup>&</sup>lt;sup>5</sup> H.-J. Glock, *What is Analytic Philosophy?* (Cambridge: Cambridge University Press 2008), ch. 2.8.

discipline underlying all science, the far more credible claims of logic and physics notwithstanding. Fourthly, in biology and psychology the retreat from behaviourism and the rise of cognitive ethology has led to definite advances in the methods for observing and experimenting on animal behaviour, both in the laboratory and in the wild. These in turn ensued in astonishing discoveries concerning the intelligence and behavioural capacities not just of primates, cetaceans and other mammals (notably dogs and pigs), but also of species from other taxa, such as parrots, Caledonian crows and octopuses. Fifthly, the debate about animal minds stimulated by these discoveries has been linked to a debate about the moral status of animals that started in the 1970s and continues unabated. All these have been contributing factors to a more general crisis in our self-image as human beings. Many achievements that seemed to be the preserve of humans appear to be within the grasp of animals, computers or robots. Add to that, finally, the newly developed technologies for replacing many parts of human beings by prostheses or implants, and the question of what being human ultimately amounts to becomes more urgent than ever.

# 2. The Anthropological Difference as A Central Topic of Anthropology

For (philosophical) anthropology, non-human animals (henceforth simply animals) have always been a central topic, since they serve as *objects of comparison*. Traditionally the nature and place of human beings has been determined in relation to the divine looking up and to animals looking down. Most of our contemporaries still purport to know not just that there is a God, but also what HE is like (without their convictions regarding this second issue being even remotely compatible). Within academic circles, however, God has become too contested and obscure to serve as a point of orientation. Which leaves animals. 'It would be of little interest to know what animals are, if it weren't a means for knowing what we are', de Condillac opined.<sup>6</sup> In a similar vein Gehlen maintained: 'Any anthropology must define the essential difference between humans and animals'.<sup>7</sup>

<sup>&</sup>lt;sup>6</sup> E. de Condillac (1755), *Traité des Animaux*, (Paris: Vrin, 1987), 1 (my translation).

<sup>&</sup>lt;sup>7</sup> A. Gehlen, 'Die Resultate Schopenhauers', reprinted in V. Spierling (ed.), *Materialien zu Schopenhauer's 'Welt als Wille und Vorstellung'*, (Frankfurt a. M.: Suhrkamp, 1984), 323.

Indeed, this interest in animals constitutes one of the two central problems of anthropology down the ages. On the one hand, there is the question of *anthropological constants* or *universals*: Are there features shared by all ('normal') human beings, irrespective of their social and historical context. On the other hand, there is the question of the *human-animal* or *anthropological difference*:<sup>8</sup> Are there features that are *unique* to humans, i.e. set them apart from all animals?

However, there is nothing special about being special. Every biological species differs from all the others, i.e. has unique features. There is an empirical reason for this: speciation proceeds by specialization, the exploration of a unique 'ecological niche'. Depending on one's understanding of species, there may also be a conceptual reason. Perhaps we should count two groups of animals as belonging to the same species if they share all features other than origin (more on this anon).

Thus only certain bacteria perform chemo-synthesis; only bats can navigate through ultra-sound. These examples of uniqueness concern higher taxa, yet instances of species uniqueness can be provided by going into finer detail or combining features. Thus beavers are the only species that can digest wood and (being mammals) suckle their young. Indeed, it is not beyond the wit of man to specify unique features of human beings. 'Man is the only creature that can partake of a hot meal in flight', as the German humorist Loriot observed. In their quest for the anthropological difference, however, philosophical anthropologists are looking for a difference with a difference. They are searching for features of homo sapiens that (a) set us apart 'categorially' or 'essentially' from all other animals; (b) are fundamental, in that (all) other relevant differences derive from them; (c) are important, notably to our self-image, for instance because they assure us of a higher spiritual or moral status than animals.

Because of (a), the search for the anthropological difference is *ab initio* linked to the search for anthropological constants. In conjunction, the two quests amount to a search for a *definition* of what it is to

- The expression anthropologische Differenz hails from the German tradition of philosophical anthropology. There it continues to be used in a variety of ways, many of them obscure and idiosyncratic. My employment of it is in line with M. Wild, Die Anthropologische Differenz (Berlin: deGruyter, 2006), an exemplary historical investigation of the debate about animal mentality in early modern philosophy from the vantage point of contemporary ethology and philosophy of mind.
- <sup>9</sup> D. Radner and M. Radner, *Animal Consciousness* (Buffalo: Prometheus, 1989), 8; K. Sterelny, *Thought in a Hostile World* (Oxford: Blackwell, 2003); Wild, op.cit. note 9, 2–3.

be human, an answer to a Socratic 'What is X?' – or 'What are Xs?' – question. Such an analytic definition must specify conditions which are individually necessary and jointly sufficient for being human. Furthermore, since it is supposed to capture the nature or essence of human beings, the features specified by such a definition should not just *in fact* be possessed by all and only human beings; rather, it should be *necessary* that all and only human beings possess them. Only creatures possessing all of the features specified in the definition can be human, and any creature possessing them all is ipso facto human.

Accordingly, the anthropological difference is or would be something that could be used as a *differentia specifica* in such an analytic definition. (a) further ensures that this definition takes the form

Human beings are the animals that  $\Phi$  / are F rather than, for instance

Human beings are the animals that  $\Phi$  more or most/ are F to a higher or highest degree.

Needless to say, not all definitions that take this form also satisfy the requirements for an analytic definition stating an anthropological difference. Plato, for instance, maintained that man is a featherless biped. Confronted by Diogenes of Sinope with the counterexample of a plucked chicken, he is supposed to have added 'with round nails' (as reported by Diogenes Laertius<sup>10</sup>). But not all human nails are round, and even if they were, having claw-like nails would certainly not disqualify an otherwise human-like creature from being human. Plato's definition also falls foul of conditions (b) and (c). Though far more serious, Loriot's characterization similarly fails at these two hurdles. Concerning (b), our capacity for heating up a meal in flight, striking though it may be, is obviously derivative of our technological capacities. The same holds for other advanced features that are obviously unique to humans. Only humans engage in organised sports, get married, construct airplanes, compose music or philosophize about the nature of their own species. But these characteristics presuppose other more basic capacities.

The history of ideas has also yielded several at least prima facie promising candidates for such more basic differences. Among the features that have, at various times, been held to constitute an anthropological difference are:

Diogenes Laertius, *Vitae philosophorum*, ed, H.S. Long, (Oxford: Oxford University Press, 1964), 6.40

thought (rationality, reason); concepts and abstraction; language; knowledge of necessary truths; consciousness or sentience; self-consciousness (knowledge of one's own mental states); knowledge of the mental states of others; an immortal soul; a moral sense; a sense of humour; a sense of history; anticipation of the future, including one's own death; a sense of beauty; tool use or tool manufacture; technology; free will; a capacity to act (for reasons); a capacity to follow rules (normativity); personhood or personality; a capacity for culture or cultural progression.

Trying to test the members of this list against conditions (a) – (c) would be a Gargantuan task. Fortunately, some headway can be made by noting the following point. Though decidedly diverse, these proposals share one highly general assumption. If there is such a thing as the anthropological difference, it must concern our *mental* properties and capacities. Thus Hacker states: 'The abilities distinctive of human beings are abilities of intellect and will'. This is not to deny that some of our anatomical endowments may be important not just biologically but also philosophically—notably upright posture and the possession of a dexterous hand with opposable fingers 12. But such physical peculiarities can only have contributed to our special status through being connected to our mental powers and/or their development.

Beyond this point of almost universal consensus, however, there is an ongoing controversy on every aspect of the idea of an anthropological difference. All of the proposals listed above have been contested, on both conceptual and empirical grounds. To take just one prominent case: traditionally, humans were regarded as *homo faber*, the only species capable of using or at any rate of manufacturing tools. Yet in 1961 Jane Goodall observed how a chimpanzee broke off the branch of bush, modified it and then used it to fish for termites in a mound. When she reported this to her colleague, the palaeontologist Louis Leakey, the latter famously remarked: 'Now we must redefine tool, redefine Man, or accept chimpanzees as humans'.<sup>13</sup> All three

P.M.S. Hacker, *Human Nature: the Categorical Framework* (Oxford: Blackwell, 2007), 2.

<sup>&</sup>lt;sup>12</sup> R. Tallis, *The Hand: a Philosophical Inquiry into Human Being* (Edinburgh: Edinburgh University Press 2003). Emil Zatopek's famous: 'Fish swim, birds fly, humans run' is a variation on the theme of upright posture.

<sup>&</sup>lt;sup>13</sup> See D. Peterson, Jane Goodall—the Woman who Redefined Man (New York: Houghton Mifflin, 2006), 212.

options have been pursued, but only the second one is remotely palatable. 14

Indeed, the very suggestion that there might be such a thing as the, or an, anthropological difference has attracted critical comments in recent years. More specifically, the question has been raised whether the idea of such a difference is compatible with the biological continuity between animals and humans, and whether it remains wedded to a scientifically outdated essentialism. Before considering these two fundamental worries in the final sections, however, I shall outline my methodological approach to anthropology in general and the anthropological difference in particular.

# 3. Philosophical Anthropology and Conceptual Analysis

My conception of philosophical anthropology is neither tied to the specific Germanophone tradition, nor as wide as the idea of a philosophical reflection on human nature. Instead, I pursue a third option. At a first approximation, that option is summarized by Peter Hacker, who characterizes philosophical anthropology as 'the investigation of the concepts and forms of explanation characteristic of the study of man'. 15 Nonetheless my own preferred characterization is slightly different. Philosophical anthropology investigates the specifically conceptual and methodological issues thrown up by our non-philosophical (scientific and non-scientific) discourse about the nature of human beings. I agree with Hacker that it should be part of philosophical anthropology to elucidate what types of explanation can afford what kind of insight into human beings and their behaviour. It is worth adding, however, that the concepts and explanations concerned are not just those of 'the study of man', or even of humans. They are not confined to the scientific or more loosely academic investigation of human beings. Instead, they pervade other forms of discourse, such as morality and law, and of course, first and foremost, our everyday parlance.

Henceforth I shall speak of 'anthropological concepts', keeping in mind that these include non-scientific concepts. Another point to keep in mind is that anthropological concepts in my sense are not confined to those which apply to all or only to human beings, their

<sup>5</sup> P.M.S. Hacker, op. cit. note 11, 4.

Technology is a different matter, since it involves the production of tools for the purpose of repeated use, and in the context of collaborative social practices.

activities and productions. They do not need to signify an anthropological constant or difference (otherwise perspiration and soap, respectively, would qualify). They only need to be relevant to the philosophical discussion of the nature of human beings. Finally, such concepts may also fall under other philosophically relevant headings. Altruism, for instance, is relevant both to philosophical anthropology and to moral philosophy.

My major point of agreement with Hacker is this. The specifically philosophical as task concerning anthropology does *not* consist in collecting new data about human beings or in devising empirical theories. It does not even consist predominantly in synthesizing the empirical findings at a particularly abstract level. Instead it consists in clarifying *what it is* to satisfy various anthropologically relevant concepts and *under what conditions* such concepts can be ascribed.

In this respect, conceptual analysis follows the traditional philosophical search for analytic definitions. By contrast to that tradition, however, many variants of twentieth-century conceptual analysis do not seek *de re* definitions capturing the nature or essence of *Fs*, something independent of the way we think and speak. Instead they are content with *de dicto* definitions, definitions which capture the meaning(s) of 'F', something we have given to the expression by using it in a certain way. Finally, in its enlightened Wittgensteinian form, conceptual analysis leaves open what concepts, if any, actually *allow of* an analytic definition.

By this token, philosophical anthropology as conceptual analysis considers *what counts* as a human being, either in ordinary language, or in a specialized mode of discourse like ethology, or even in the context of a specific philosophical or scientific problem, theory or argument. More generally, like its traditional precursors philosophical anthropology as conceptual analysis pays attention not just to actual but also to possible instances of anthropological concepts. This is particularly important when it comes to considering what, if anything, the nature or essence of human beings consists in. For such an essence would have to be possessed not just by all and only those creatures that are human, but by all and only those creatures we would be prepared to *count* as human—a tall order, as we shall see.

Ignoring or distorting the distinctly conceptual dimension of anthropological investigations can have deleterious consequences. As we have seen, one of the central anthropological questions is whether humans are unique by dint of their special mental powers. The answer depends *not just* on empirical findings (whether observations in the field or experiments in the laboratory, whether behavioural or neurological), *but also* on how one explains and employs

heavily contested *concepts* like that of a mind, of thought, of behaviour, etc. Now, because of our requirements as social primates, our mental concepts capture neither genetic nor neurophysiological differences, but differences in the kinds of *behavioural* and *perceptual* capacities we human beings are interested in. As a result, the criterion for the possession of mental powers by a species is not the DNA or even the brain of its members. These only come into play when one proceeds to explaining the ultimate or proximate causes of *why* these specimen possess the mental powers they do. They do not determine *whether* the animals possess such powers in the first place.

Nevertheless, the connection between the mind and behavioural capacities is denied by many contemporary philosophers. According to Searle, for instance, 'behaviour is simply irrelevant' to the attribution of thoughts, because 'my car radio exhibits much more intelligent verbal behaviour, not only than any animal but even than any human that I know'. 16 If one were to trust this passage, one would not envy Searle his company. The production of noise by a radio hardly even qualifies as behaviour. But if it does, it is exceedingly stupid. The radio fails the Turing test miserably. Even to its non-linguistic environment, moreover, it cannot react in an intelligent, i.e. responsive and flexible manner. This is why during a traffic jam, in the midst of a chorus of honking, it is capable of uttering things like 'Right now everything is serene and quiet here'. It is not the radio that behaves intelligently, but at best the person whose utterances it transmits; and even that very much depends on the station the radio is tuned to.

The operations of complex computers and robots appear far more intelligent. According to Searle, however, even they are incapable of consciousness or thought. In his opinion, the essential prerequisite for both is the presence of neurophysiological phenomena rather than the capacity for complex and flexible behaviour:

Suppose we had a science of the brain which enabled us to establish conclusively the causal bases of consciousness in humans. Suppose we discovered that certain electrochemical sequences [XYZ] were causally necessary and sufficient for consciousness in humans...Now if we found XYZ present in snails but absent in termites, that would seem very strong empirical evidence that snails had consciousness and termites did not.<sup>17</sup>

J. Searle, 'Animal Minds', Midwest Studies in Philosophy XIX (1994), 216.
Op. cit., note 16, 215–216.

But one can establish that XYZ is the causal base of consciousness only if the phenomenon of consciousness has been identified on independent grounds. These grounds are the conditions for the applicability of the concept of consciousness. And these conditions are not merely a matter of epistemology - of how we come to know whether a creature is conscious. They are a matter of semantics – of what it is for a creature to be conscious. More generally, the conditions for the application of our established mental concepts determine at least the initial topics of any empirical investigation into the causal preconditions of mental phenomena. Searle dismisses as irrelevant the criteria for consciousness and thought employed not just by lay-people but also by cognitive ethologists. According to him it is part of the meaning of mental terms that they apply only to creatures with a certain neural outfit. This is at odds with the established understanding of these terms, on which Searle himself tacitly relies in identifying mental phenomena. It also has the unpalatable consequence that, contrary to Searle's avowed stance, extreme scepticism about animal minds is legitimate, since even the most knowledgeable among us are ignorant about the precise causal base of consciousness and about the extent to which it is common to humans and animals.

# 4. Impure Conceptual Analysis

As the last section shows, in anthropology conceptual and factual questions are intertwined. We must pay heed to the conditions for the applicability of mental terms. At the same time, however, the question to which creatures these terms actually apply obviously depends on facts about these creatures. This leads me to a first caveat concerning the idea that philosophical anthropology is the conceptual analysis of anthropological concepts. On the one hand, matters of meaning antecede matters of fact: it makes sense to investigate a phenomenon X only if it is clear what counts as X. On the other hand, we must avoid what I call 'Socratism', the mistake of thinking that one cannot establish empirical facts about X unless one already has an analytic definition of what 'X' is in Plato's Meno (80a – e), Socrates devises the following paradox. It is impossible to enquire into what X is since one cannot look for or recognize the correct answer, without already knowing it from the start. The underlying argument runs roughly as follows:

- $P_1$  To recognize the correct definition of X we already have to know what X is
- $P_2$  The definition of X tells us what X is

- C<sub>1</sub> We would already need the correct definition in order to recognize it
- C<sub>2</sub> The search for a correct definition is pointless.

 $P_1$  is mistaken, at least in conjunction with  $P_2$ , which identifies knowing what X is with knowing a definition of X. As Kant pointed out, definition marks at most the end-point of philosophical inquiry, not its beginning. And as Wittgenstein pointed out, to look for and recognize the correct definition of X, all one needs is a pretheoretical understanding of 'X', something we normally learn within language-acquisition, by coming to master the use of 'X'.

As we have seen, empirical theories about mental properties, *presuppose* at least a certain *preconception* of what counts as a mental property. But this does not mean that one needs a cast-iron precise definition of these properties in advance of empirical theory-building, contrary to Socratism. Our concepts are tools which we fashion for our purposes, in science the purpose of describing, explaining and predicting phenomena. In scientific theory-building, definitions are to be read from *right to left*: we introduce labels for observed or postulated phenomena. What is correct is that such theory-building must be *accompanied* by a reflection on the possibly provisional understanding of the concepts that informs specific theories, experiments or lines of research. Without such reflection, the theories may simply miss their purported topic.

There is another respect in which the idea of philosophical anthropology as conceptual analysis requires modification. *Pace* Quine, the distinction between conceptual (a priori) and factual (empirical) questions and statements is both legitimate and important (see Glock 2003: ch. 3). Yet it may not be exhaustive. There is a sphere of *methodological* considerations that straddles or sits uneasily between the two.<sup>18</sup>

Among those sympathetic to a distinction between conceptual and factual issues and hence to the idea of philosophical anthropology as conceptual analysis some may be tempted to think that verification affords a direct link between meaning (concepts) and methodology. This temptation should be resisted, however. *Under what conditions* a term is applicable to something is part of its meaning. But *how* the (non-) application of a term is to be verified/falsified ('the method of verification') is not necessarily part of its meaning. For

Another possible addition to the dichotomy is the common sense certainties or hinge propositions highlighted by Moore and Wittgenstein or Collingwood's 'absolute presuppositions'.

it may depend on *factual* considerations of either a specific or theoretical kind.

Even if there is a link between meaning and verification, not all aspects of the method for verifying a proposition of its verification are part of its meaning, but only those which are linked to the way the relevant concepts are explained. Thus it is definitely wrong to suggest, for instance, that the fact that we can learn about who won the boat race by reading a newspaper goes some way to explaining the meaning of 'boat race'. Similarly, that the length of playing fields is measured through the use of tripods is a matter of physics, while to say that measuring involves the possibility of comparing the lengths of different objects is partly constitutive of the meaning of 'length'.<sup>19</sup>

Turning to the comparison between humans and animals, one methodological issue concerns the respective merits of experiment and observation. Should we set more store by observations in the field or by controlled experiments? The latter allow of more reliable corroboration and of systematically alternating the parameters of the situation. The former are more significant for biological purposes, notably the purposes of evolutionary theory and ecology. These are not straightforwardly empirical matters, since they concern what kind of empirical evidence should carry what kind of weight. But nor are they straightforwardly or exclusively issues of a conceptual kind. It is not part of the meaning of 'mind' or 'behaviour', for instance, that behaviour observed under natural conditions should reveal more about a subject's mental capacities than behaviour elicited as part of an experiment. Nonetheless the contrast carries a potential for anthropological puzzles and quandaries with a philosophical dimension. For one thing, while atypical behaviour by a specimen - e.g. symbol use by enculturated bonobos under experimental conditions - clearly evinces mental capacities, it is far from clear what the presence of these capacities shows about the nature of the species, in our case the proximity between bonobos and us (see sct. 6). For another, there is the following methodological dilemma. On the one hand, the more controlled and predictable animal behaviour, the more artificial and hence less significant are the findings. Ape-language studies are ecologically unsound, in so far as the symbolic systems acquired by enculturated apes are remote from their systems of communication in the wild. At the same time, rigorous procedures (e.g. duplication or 'double-blind

<sup>&</sup>lt;sup>19</sup> See H.J. Glock, *A Wittgenstein Dictionary* (Oxford: Blackwell, 1996), 382–5.

strategies') may simply undermine the subject's willingness to cooperate. On the other hand, the more unrestricted and spontaneous animal behaviour, the less rigorous the procedure and the more it relies on 'mere anecdotes'.<sup>20</sup>

In both ethology and developmental psychology, the use of anecdotes is hotly contested. This issue is obviously methodological, yet without being predominantly philosophical. Even if all philosophical problems concerning knowledge by testimony were resolved, there would remain empirical or theoretical questions concerning the reliability of field observation and episodic memory and the significance of individual cases to specific theoretical claims.

Another hot potato, which I shall touch only briefly in this context, is a well-known methodological principle of comparative psychology. According to 'Morgan's canon', we should only attribute higher mental capacities to a creature if this is the *only* explanation of its behavioural capacities.<sup>21</sup> In my view, Morgan's canon is heavy artillery indeed, and I propose to replace it by something more modest. Call it Glock's canon if you please, even though it's in fact more like a handgun. We should only attribute higher mental capacities to a creature if this is the best or most plausible explanation of its behavioural capacities. This weaker principle would put paid to the malpractice of explaining intelligent animal behaviour by reference to far-fetched feats of associative learning, for the sole purpose of avoiding reference to genuine planning or reasoning.<sup>22</sup> Irrespective of whether I am right on this, however, the controversies surrounding Morgan's canon once more defy a neat classification into the conceptual and the factual. Should something like parsimony ('Occam's razor') be the only or overriding methodological consideration? Or should other desiderata of scientific theories – explanatory power, simplicity, conservatism, modesty, precision, facility of computation, avoidance of perplexities – be given equal weight? One would suppose that the parameters of theory-building should depend at least partly on what works in what scientific field. And by what standards are associationist explanations more parsimonious than mentalistic ones in the first place? If by the standards of associationism, the reasoning is circular.

<sup>&</sup>lt;sup>20</sup> See J. Dupré, *Humans and Other Animals*. Oxford: Oxford University Press, 2002), ch. 1.

<sup>&</sup>lt;sup>21</sup> C. L. Morgan, *An Introduction to Comparative Psychology* (London: Walter Scott, 1894, 53–55).

<sup>&</sup>lt;sup>22</sup> H.-J. Glock, 'Can Animals act for Reasons?', *Inquiry*, **52** (2009), 232–254.

Such issues are methodological and at least partly philosophical; yet in what sense are they conceptual?<sup>23</sup>

Finally, there are important *heuristic* connections between conceptual and factual investigations. One of them might be summed up by the scholastic principle *ab esse ad posse*. Even if for purely conceptual (philosophical) purposes it matters only what could be the case, we are well advised to look at actual cases. For these can alert us to possibilities we have ignored. Philosophical reasoning may be a priori in the sense of requiring an explication of our conceptual apparatus rather than the collection of novel facts; but it is not for that reason infallible.

# 5. The Anthropological Difference and Biological Continuity

In summary, I conceive of philosophical anthropology as a kind of impure conceptual analysis. Philosophical anthropology thus understood – namely as conceptual-cum-methodological reflection – complements and interacts with empirical or scientific anthropology, while nevertheless remaining *distinct* as concerns its particular contribution. In the remainder, I want to scrutinize the idea of an anthropological difference from this perspective. More specifically, I shall explore conceptual and methodological aspects of qualms about the very idea of an anthropological difference that are inspired by science.

Current debates about the mind are increasingly dominated by evolutionary theory and by naturalism. In its metaphilosophical capacity, naturalism is the idea that philosophy has no distinctive contribution to make over and above that of the special sciences. In this climate it appears that proponents of an anthropological difference are misguided 'human exceptionalists' who ignore the 'continuity across species' that has been discovered by evolutionary biology

For discussions of various issues raised by Morgan's canon and Occam's razor in biology see: H. Kummer, V. Dasser and P. Hoyningen-Huene, 'Exploring Primate Social Cognition: Some Critical Remarks', Behaviour 112 (1990), 84–98; A. Baker, 'Occam's razor in science: a case study from biogeography', Biology and Philosophy 22 (2007), 193–215; S, Fitzpatrick, 'The Primate Mindreading Controversy' and E. Sober 'Parsimony and Models of Animal Minds' in: R.W. Lurz (ed.) The Philosophy of Animal Minds (Cambridge: Cambridge University Press 2009); H. Wilder, 'Interpretative Cognitive Ethology', in M. Bekoff and D. Jamieson (eds.), Readings in Animal Psychology (Cambridge/Mass.: MIT Press, 1996), 29–46.

and neurophysiology.<sup>24</sup> In this vein, various biological principles of continuity have been invoked to show that the differences between humans and animals can only be a matter of degree.<sup>25</sup> From this perspective, any attempt to draw qualitative distinctions between humans and animals appears deplorably anthropocentric and out of touch with natural science. This blanket charge is unwarranted. There is no gainsaying the empirical fact that there is both biological (in particular, genetic and neurophysiological) similarity and evolutionary continuity between us and certain non-linguistic animals. But it does not follow that they must approximate to our mental life.

According to evolutionary theory all of life derives from one or at most a few common origins, and we share a common ancestor with all the animals around us. But the extent to which evolution is uniformly a gradual process is controversial, as the debate over the possibility of punctuated equilibria shows, a debate which pits the gradualist mainstream against saltationists like Gould and Leontwin:<sup>26</sup>

Even if *natura non facit saltus*, moreover, continuity along lineages of evolutionary development does not settle the question of what mental capacities the animals around us possess. To suppose otherwise amounts to what one might call 'the evolutionary fallacy'. That fallacy is based on a mistaken picture of evolution, one which regards evolutionary development as a linear hierarchy and is summed up by the slogan that humans descended from apes. In fact, however, evolution results not in such a hierarchy, but rather in a branching tree. Although it is probable that our closest evolutionary *ancestors* without language shared many of our other mental capacities, these ancestors are extinct; and there is no guarantee that the biologically closest *extant species* is mentally close to us. If all vertebrates except *homo sapiens* had been vanquished by a wayward meteorite, it would be absurd to conclude that starfish and sea cucumbers must be mentally close to us.<sup>27</sup>

D. Jamieson, 'Animal language and thought', in E. Craig (eds.), *The Routledge Encyclopedia of Philosophy* (Routledge: London, 1998).

S. J. Gould and N. Eldredge 'Punctuated Equilibria: The Tempo and Mode of Evolution Reconsidered', *Paleobiology* **3** (1977), 115–51.

<sup>&</sup>lt;sup>25</sup> R. Crisp, 'Evolution and Psychological Unity', in Bekoff and Jamieson, op. cit. note 23, 309–23; C. Allen and M. Bekoff, *Species of Mind* (Cambridge/Mass.: MIT Press), xi.

For a parallel argument concerning the possession of language see S. Pinker, *The Language Instinct* (Penguin: Middlesex, 1994), 346.

It so happens that our closest extant relatives, the chimpanzees, share ca. 98% of our DNA. However, it does not follow that they share 98% of our mental life. If we set store by this 'DNA fallacy', we would also have to conclude that worms and flies share about 75% of our mental capacities. The trouble with this kind of reasoning is straightforward: small biochemical differences in genotype – roughly, the DNA sequence—may lead to significant differences in phenotype – the observable features, including not just morphology and physiology, but also behavioural repertoire.

In fact, this already holds at the level of neurophysiology. Although the brains of chimpanzees are made of the same matter, they are significantly smaller than those of humans (on average, 400 ccm to 1400 ccm), even if body-size is taken into consideration. And in addition to the anatomical there are also neurophysiological differences. <sup>28</sup> In any event, however, our mental vocabulary captures *neither* genetic *nor* neurophysiological differences, but differences in the kinds of behavioural and perceptual capacities we humans are interested in (as argued in sct. 3). To that extent, our mental concepts themselves may be anthropocentric; yet it does not follow that it is anthropocentric to insist that these concepts preclude application to non-linguistic creatures. <sup>29</sup>

A final question, which I can only broach here, is this. Does the biological continuity between human and non-human animals imply that both should be subject to the same kind of explanation? The answer is yes, in so far as explanations of the neuro-physiological preconditions of mental capacities, their ecological function and their evolutionary origin is concerned. But biological continuity does not militate against the idea that behaviour of a particular complexity and flexibility is subject to intentional or rational explanations – roughly, explanations by reference to a subject's intentions, beliefs and desires – that do not get a foothold with respect to more primitive forms of life.<sup>30</sup> Nor does it militate against the idea that such

<sup>&</sup>lt;sup>28</sup> G. Roth, 'The neurobiological basis of consciousness in man and animals', *Evolution and Cognition* **5** (1999), 137–148.

G. Roth and U. Dicke, 'Evolution of the brain and intelligence', *Trends in Cognitive Science*, **9** (2005), 250–257.

D. Davidson, Subjective, Intersubjective, Objective (Oxford: Oxford University Press, 2001), 96.

D. Dennett, *The Intentional Stance* (Cambridge and Massachusetts: MIT Press, 1987); H.-J. Glock, 'Can animals act for Reasons?', *Inquiry*, **52** (2009), 232–254.

behaviour promotes, and is in turn promoted by, an evolution of a different, namely cultural rather than biological kind.<sup>31</sup>

# 6. Anti-Essentialism and the Biological Notion of a Apecies

As it stands, the quest for the anthropological difference is the quest to specify necessary and sufficient conditions for being human, features that, by necessity, all and only human beings possess. This quest seems to presuppose that human beings share a common nature or essence. And that idea has been challenged in both philosophy – in the wake of Dewey, Wittgenstein, Popper and Quine – and in science, in the wake of Darwin.

Darwin himself subscribed to the idea of mental continuity: 'there is no fundamental difference between man and the higher mammals in their mental faculties'. Yet he also wrote: 'Of the high importance of the intellectual faculties there can be no doubt, for man mainly owes to them his predominant position in the world'.<sup>32</sup> This tension notwithstanding, Darwin seems to have despaired of the attempt to identify something like an anthropological difference. He remarks that he once made a collection of attempts to pinpoint the distinguishing feature of humans and came up with over twenty: 'but they are almost worthless, as their wide difference and number prove the difficulty, if not the impossibility, of the attempt'.<sup>33</sup>

Some of his followers were even more vocal in their opposition. Ernst Haeckel coined the suitably ugly label 'anthropism' for 'the powerful and widespread syndrome of erroneous ideas which places the human organism in opposition to the whole rest of nature, and conceives of it as the premeditated goal of organic creation and as a god-like creature fundamentally distinct from the latter'. And he condemned the 'anthropistic theory of consciousness' which treats thought as a prerogative of human beings.<sup>34</sup>

M. Tomasello, *The Cultural Origins of Human Cognition* (Cambridge and Massachusetts: Harvard University Press, 1999).

<sup>&</sup>lt;sup>32</sup> Cp. Ch. Darwin *The Descent of Man*, in *So Simple a Beginning: the four Great Books of Charles Darwin*, ed. with an Introduction by Edward Wilson (New York: Norton, 2006), ch.III/798 and ch.V/868.

The Descent of Man, and Selection in Relation to Sex, 2nd Edn. (New York: Burt, 1874), 89.

E. Haeckel, *Die Welträtsel* (Bonn: Strauss, 1900), 14–15, 199). In a similar vein, W. Sombart called the idea that man is an entirely special creature

Before discussing the anti-essentialist objection, it is worth remembering what is at issue in the debate. Both proponents and opponents of the idea of a human nature tend to agree on one point. The pertinent notion of a human being is not a rich notion like that of a person (which has variously been construed as a metaphysical, moral, legal or forensic one); it is rather a biological notion—the notion of homo sapiens. This creates an obvious difficulty for pinpointing an anthropological difference. According to the traditional conception of the essence of a kind of thing K is a set of features that eternally or timelessly characterize all and only things that are K and without which something could not be K. However, the Darwinist challenge goes, in so far as species are things that undergo evolutionary change, they cannot possess such essences.  $^{36}$ 

An essentialist might respond that species may be capable of changing, yet only in their *accidental* (or contingent) not in their essential (or necessary) features. In that case, however, it would be impossible for one species to emerge from another, e.g. homo sapiens from homo erectus. For according to essentialism species differ precisely in at least one essential feature, their *differentia specifica*. Furthermore, essentialism maintains that all individuals can be unequivocally sorted into kinds – species in the biological case – namely according to their essential features. But the only determinate and clear-cut classifications of individual organisms into species that are compatible with contemporary genetics and evolutionary theory are of a genealogical or diachronic kind. They concern the different branches of the evolutionary tree.

In what follows I shall assume that 'species' signifies an interesting biological category in the first place.<sup>37</sup> If that assumption is false,

'hominism' and opposed it to 'animalism', for which humans are merely part of nature (*Vom Menschen*, (Berlin: Duncker & Humboldt, 1938), 89.

Hacker, op. cit., note 11, 4; D.L. Hull, 'On Human Nature', in: D.L. Hull & M. Ruse (eds.) *The Philosophy of Biology* (Oxford: Oxford University Press, 1998), 383–397.

Thus Hull asserts: 'if the human species has evolved the way that other species have evolved, then it cannot have a traditional "nature" ('Historical entities and historical narratives', in C. Hookway (ed.), *Machines and Evolution: Philosophical Studies* (Cambridge: Cambridge University Press, 1984), 36). And R. de Sousa insists: 'the Darwinian revolution has made it impossible to take seriously ... the idea of a human essence' ('Learning to be Natural', in N. Roughley (ed.), *Being Human* (New York: de Gruyter, 2000), 292).

For a defence see J. Dupré, op. cit. note 20, ch. 4.

biological essentialism is in any event a non-starter. For reasons of space, I must also leave aside the 'ontological' question of whether species are sets, individuals or relations. Instead I shall concentrate on some currently popular definitions of species in biology that have direct implications for the tenability of essentialism.

The best-known definition of a species in contemporary biology has been the 'biological species concept' developed by Mayr.<sup>38</sup> According to this proposal, a species is a group of organisms with actual or potential reproductive links. The definition leaves an obvious lacuna, namely organisms that reproduce asexually. Furthermore, it has been notoriously difficult to specify what potential reproductive links amount to. And the criterion does not always coincide with the phenotypic classifications (the 'phenetic species concept') used in everyday life and much of biology. A related proposal is the 'cohesive species concept', which treats a species as the most inclusive group of organisms having the potential for genetic and/or geographic interchangeability. This suggestion has difficulties accommodating the genetic exchanges between species. And it no more allows for the definite assignment of each individual organism to a species than the biological species concept. This leaves so-called phylogenetic or cladistic species concepts, which treat species as a genealogical notion. A biological taxon is a temporally and geographically extended community of common decent; and a species is a separate branch of the evolutionary tree - a lineage of populations between two phylogenetic branch points (or 'speciation events', though that makes the definition sound more circular than it need be). Even this proposal faces objections.<sup>39</sup> But it holds a greater promise of determinately assigning individuals to biological taxa than any of its rivals. At the same time, given the fact of evolutionary development, it in no way guarantees that members of the same species are very similar in either phenotype or genotype.

In view of this situation, the most auspicious response for proponents of an anthropological difference is to concede the anti-essentialist point and to retreat from 'speciesism'. We should leave membership of a biological species to the – admittedly tender – mercies of genealogical (cladistic) taxonomies. Simplifying grossly, the biological definition of a human being should then run somewhat as follows:

Dupré, op. cit., note 20, chs. 3-4.

<sup>&</sup>lt;sup>38</sup> E. Mayr, *Populations, Species and Evolution* (Cambridge, and Massachusetts: Belknap Press, 1970).

anorganism o belongs to homo sapiens if and only if o is part of the same separate lineage of the evolutionary tree (a distinct chunk of the genealogical nexus) as we are.

Precisely where the separate human branch starts will be a matter for palaeontology to discover. Given human evolution, moreover synchronic and synchronic taxonomies, will *inevitably vary*. By itself, however, this does not rule out the idea of an anthropological difference, since that idea does or should concern *the present* first and foremost. The differences between us and our immediate ancestors are bound to be gradual. And the future course of evolution is at best a matter of tenuous speculation. What matters to *our self-understanding* first and foremost (not to mention our moral obligations) is the comparison between *us* and the animals *around us*. Accordingly, the task consists in establishing whether there are characteristic features that set extant humans apart from extant animals.

# 7. Responses to Anti-Essentialism: From Normality to Sociality

Even in that restricted capacity the anthropological difference faces plenty of obstacles. But at least we can confine ourselves to properties of individual organisms that are *synchronic* (non-genealogical). Standardly, two kinds of diachronic biological properties are distinguished, namely genotype and phenotype.<sup>40</sup>

Trying to locate the anthropological difference in the genotype faces the following dilemma. On the one hand, there is genetic variation in the human genome (although that variation is less pronounced than among chimpanzees, for instance). On the other hand, there is close genetic proximity between homo sapiens and the great apes.

More recently, additional dimensions have been suggested. Thus E. Jablonka and M. Lamb (*Evolution in Four Dimensions*, (Cambridge/Mass.: MIT Press, 2005)) distinguish four dimensions of evolution: genetics, epigenetics, which includes all characteristics of cells and organisms that are heritable without being written into the genome, behaviour (social learning) and symbolic inheritance systems, including language. But our comprehension of epigenetics is still in its infancy; in any event, it appears improbable that there is a particular epigenetic system that characterizes all and only human beings. And the other two mechanisms of transmission and variation do not apply at the level of individual organisms on which we are currently focusing. The social dimension will be discussed in the next section.

As mentioned above, small genetic differences may make for striking phenotypic differences. Nonetheless, the task of specifying a phenotypically anthropological difference proves to be far more vexing than one might initially suppose. One problem is familiar from debates in applied ethics, yet it has not received adequate attention in philosophical anthropology. There are *marginal cases*, members of our species which lack the allegedly unique features of human beings. This holds irrespective of whether these features be reproductive (ability to have offspring with other humans), morphological (possession of opposable thumbs) or mental (rationality, language); and it holds irrespective of whether the privations at issue are due to genetic, environmental or epigenetic factors.

An essentialist response to this difficulty is to invoke *potentiality*. Marginal cases possess the relevant features potentially, the story goes. Unfortunately, in severe cases that can mean no more than a counterfactual conditional of the following kind:

had the individual had a different genetic make-up and been exposed to appropriate environmental conditions, it would have acquired the feature.

And in that emaciated sense members of other species posses the features as well. Indeed, in the present day and age this is no longer just a matter of what is *conceptually* conceivable. The developments of genetic engineering may turn the creation of an ultra-intelligent *Über-affe* into a physical possibility, something that may remain technologically unfeasible yet within the realm of decent science fiction.

A second equally well-known response to marginal cases is to invoke normality. The distinguishing feature is supposed to be possessed by all *normal* human beings, those who have followed a normal developmental pathway. The obvious difficulty is to spell out what *normal* means here. In discharging this obligation, one must avoid two pitfalls. One is myopia, namely to mistake merely local commonalities for anthropological constants. Thus Hull has complained that proponents of human nature tend to generalise 'a developmental pathway with which the speaker is familiar in recent, locally prevalent environments'. As far as genetics is concerned, there is not one determinate developmental pathway connected with each species. Instead, there are only *reaction norms*, ranges of different developmental responses of a specified genotype to a

D.L. Hull, 'On Human Nature', in: D.L. Hull & M. Ruse (ed.) *The Philosophy of Biology* (Oxford: Oxford University Press, 1998), 591.

range of environments. Not just one lifecycle is possible, given the causal powers of the human genome. Indeed, in the human case the spectrum of possible life cycles is particularly wide.<sup>42</sup> The other pitfall to be avoided is circularity. The essentialist cannot lay down criteria for normal development which are based on potentially contentious ideas about anthropological universals and differences.

To be sure, there are some properties without which it is unlikely that individual humans can proliferate under any probable circumstances. But it is far from clear that they will be shared by all and only members of homo sapiens. For we also need to consider marginal cases at the animal end. Some animals – notably great apes, cetaceans and parrots – have acquired capacities that are often touted as anthropological differences. Most importantly, enculturated apes have acquired linguistic skills which display at least some of the features traditionally claimed to set language apart from more primitive systems of communication. The signs are conventional rather than natural or iconic; the users are capable of displacement, i.e. of communicating about objects beyond the immediately perceptible environment; and they also display a rudimentary syntax, i.e. different combinations of semantic elements are used to convey different messages. 43 Admittedly, no animal seems capable of acquiring linguistic skills that include semantic productivity and syntactic recursion. Yet this is cold comfort for proponents of an anthropological difference. First, turning this into a necessary condition of languagehood is stipulative; secondly, it rules out even more members of homo sapiens; thirdly, it hardly qualifies as the kind of anthropological difference which satisfies condition (c), something which is essential to our self-image. As Goodall remarked in a recent interview when she was confronted with the absence of syntactic recursion in chimpanzees: 'Why should that matter?'.

A somewhat less demanding response abandons essentialism and sets store by typicality rather than normality. We switch from a universal essence possessed by all and only humans to typical features. Evolutionary (cladistic) lineages tend to be associated with clusters of homeostatic properties; and all members of these lineages have at least some of these properties. These may include features that do

See Dupré, op. cit. note 20 and 'What is Natural about Human Nature', *Deutsches Jahrbuch Philosophie*, **3** (2010).

<sup>&</sup>lt;sup>43</sup> S. Savage-Rumbaugh S. Shanker and T. Taylor, *Apes, Language and the Human Mind* (Oxford: Oxford University Press, 1998;. S. Hurley and M. Nudds (eds.), *Rational Animals* (Oxford: Oxford University Press, 2006).

not play a role in the scientific explanation of human physiology and behaviour – by contrast to genetic or neurophysiological features, yet constitute a merely 'descriptive nature'. The crucial insight is this. There is nothing problematic about the idea that in contemporary circumstances humans typically develop in certain ways and hence have typical features and capacities. It is worth noting, however, that this amounts to a serious scaling down of the idea of an anthropological difference. By contrast to normality, typicality is a purely statistical rather than evaluative or normative notion. As a result invoking typicality will not deliver an anthropological difference of a traditional kind, namely one which sets all humans apart from all animals – in line with conditions (a) and (c).

For this reason I want to explore a different approach to the idea of an anthropological difference. This fourth reaction to the antiessentialist objection is compatible with and complements the appeal to typicality, while being at once weaker and more ambitious. It abandons the commitment to the idea that each individual human being has an essence setting it apart from all animals, while seeking something that goes beyond a statistical regularity. The magic word is 'sociality'. We should turn from the individual to communities. Humans are first and foremost social animals, and are characterized by a unique kind of social organisation. The anthropological difference is to be sought in the area of capacities present in all extant human societies, yet absent in typical non-human specimen and in non-human societies.

# 8. 'Anthropological Difference light' and the Role of Language

Let me dissipate a few potential misunderstandings of this proposal. It is not simply the Aristotelian idea that man is a social animal – zoon politikon (Politeia 1253a 9–11; 1332b 3–8). Many species of animals are social. And even though only human societies may be rational in the way Aristotle envisaged, he regarded rationality as an essence inherent in all and only individual human beings – though in varying degrees. My aim, by contrast, is to avoid the difficulties with this idea by looking at preconditions of specifically human sociality. This kind of approach to the human – animal divide is close to the one pursued by Michael Tomasello and his research group. <sup>44</sup> But

<sup>&</sup>lt;sup>44</sup> M. Tomasello, *The Cultural Origins of Human Cognition* (Cambridge and Massachusetts: Harvard University Press, 1999).

they reached that destination by a very different route, one involving empirical comparisons between great apes and human infants rather than by methodological and philosophical reflections. And my take on the anthropological difference is not committed to any of their specific claims about the peculiarities of either the onto- or the phylogenesis of human beings.

My guiding questions are: What features and capacities, if any, are present in all human societies and absent in animal societies? Which capacities are prerequisite for the functioning of human societies? To state an obvious example, no human society comprised exclusively of severe autists would be viable.

In pursuing these questions, two points need to be borne in mind. First, it is imperative to distinguish features that are absent in some societies (cultural development) from capacities that typical humans. For instance, even if one dismisses some reports as inaccurate, prejudiced or romantic, there is no reason to accept that all human societies display progressive cultural development. At the same time, typical members of these societies are capable of participating and promoting cultural development, given a suitable social context. Secondly, we can disregard capacities that animals can acquire only through *enculturation*, such as the aforementioned symbolic skills. These are not part of their typical developmental pathways in the pertinent natural environment.<sup>45</sup>

Once we have taken what one might call (albeit reluctantly) 'the social turn' and acknowledged these points, a lot of candidates for an anthropological difference are back in the fray. The search for the anthropological difference turns on the optimal characterisation of what distinguishes contemporary humans/human societies from contemporary animals/animal societies. It remains an open question, however, of whether there is such a thing as *the* anthropological difference.

At first sight, there are no less than three striking features prevalent in all human societies and absent in animals or animal societies:

M. Tomasello, *Origins of Human Communication* ((Cambridge and Massachusetts: MIT Press, 2008). M. Tomasello and H. Rakoczy, 'What makes Human Cognition Unique?', *Mind and Language* **18** (2003), 121–47.

One caveat. We may not know enough about the various channels of natural communication between cetaceans, in particular bottlenose dolphins, in order to decide how far they approximate linguistic communication.

- a special and highly complex system of communication, namely language
- a special and highly complex kind of social relationships, one which involves social institutions, and hence cooperation, norms and values, and (possibly) division of labour.
- a special kind of *plasticity*: the capacity to adapt to highly diverse circumstances and environments through tools (technology) and rational deliberation (planning), a capacity which in turn depend on our *special cognitive powers*.

Within this syndrome, language has a special status. This point has been dramatically neglected within recent contributions to philosophical and non-philosophical anthropology. Ironically enough, this includes the contributions by Tomasello, notwithstanding both his ground-breaking scrutiny of the special qualities of human interaction (joint attention, shared intentionality, cooperation) and his investigations into the origins of language. To be sure, diachronically language has evolved from non-linguistic forms of interaction and communication. But from a synchronic perspective, it enables and sustains the two other distinguishing features, for both conceptual and factual reasons.

The factual reasons are highly complex and diverse, yet they have been discussed at length from various perspectives, beginning with Vygotsky. And in the present context I can do no more than summarize the conceptual reasons. As I have argued at greater length elsewhere, ascribing thoughts—so-called propositional attitudes like belief and desire—makes sense only in the case of creatures capable of manifesting these thoughts in their behaviour. And only a very restricted range of thoughts can be ascribed on the basis of non-linguistic behavioural capacities. The crucial result is this. The beliefs, desires and cogitative processes that can be ascribed on that basis are not nearly complex enough to sustain the kind of cooperative and complex interaction which can be sustained through linguistic communication.

Accordingly, if I were forced to name a single anthropological difference, my money would be on language. But I remain

<sup>&</sup>lt;sup>46</sup> M. Tomasello, *Origins of Human Communication* ((Cambridge and Massachusetts: MIT Press, 2008).

<sup>&</sup>lt;sup>47</sup> H.-J. Glock, 'Philosophy, Thought and Language', in: J. Preston (ed.), *Thought and Language* (Cambridge: Cambridge University Press, 1997), 151–169.

H.-J. Glock, 'Animals, Thoughts and Concepts', Synthese 119 (2000), 35-64.

unconvinced that naming such a single difference is the most illuminating way of characterizing the differences between humans and animals. This is decidedly not to deny the qualitative nature of the gap separating us from them. One only needs to look around to detect the vast differences between our technology and chimpanzee tools, or our societies and chimpanzee communities, for instance. Yet why should these differences have to be reducible to a single fundamental one? Indeed, why should we need to insist that the underlying differences are categorical, describable in terms of our thinking vs. their perceiving, our rationality vs. their intelligence, or our communicating vs. their signalling, for instance. Insisting that we think and communicate about a lot more and in a lot more complex fashion may just be enough. For in this case, a difference in quality may arise out of a difference in quantity. That at any rate is one Hegelian and Marxist idea which may be due for a revival.<sup>48</sup>

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<sup>&</sup>lt;sup>48</sup> For help of a philosophical or editorial kind I should like to thank David Dolby, Anita Horn, Constantine Sandis, and Markus Wild. This essay has also profited from comments by audiences in Toledo, Grenada, Oxford, Waldshut and Zurich. Finally I should like to record my profound gratitude to the Hanse-Wissenschaftskolleg (Delmenhorst) for supporting this work through a fellowship.