

Chapter 17

The Descent of Man

17.1 Readings and Homework

- Readings:

- Required: Darwin Selections: pp. 175-177, 213-22, 243-54 , 280-85 (Huxley)
- Recommended:
 - * Descartes on animal machines
 - * Leibniz on automata

- Homework

Choose the correct answer(s) in the following on the basis of your reading

1. What does Darwin intend to prove in the Descent of Man? What does he consider proved by previous work from other scientists?
2. How do animals compare to humans as far as emotions are concerned?
3. How do animals compare to humans as far as reasoning capacities are concerned?
4. How do animals compare to humans as far as social instincts are concerned?

5. How do animals compare to humans as far as moral faculties are concerned?
6. Do you think there is any fundamental difference between animals and humans? Do you think this means animals and humans cannot come from the same ancestor? Explain.

17.2 Introduction

The question is to assess whether natural selection applies to all organic beings, that is, *to human beings just as much as to other species*. Darwin is going to answer positively to this question.

Darwin takes for granted:

1. the antiquity of the human species (Lyell)
2. that the differences between humans and primates are less important than the differences between the highest and the lowest primates. (Huxley)

The subject is clearly controversial. To say that Darwin's theory applies to humans is to deny a special creation and a special status for humans on Earth. This contradicts directly many of the tenets of religion.

It is pretty easy to see what the argument concerning the human body are going to be. But Darwin has also to deal with what is often taken as the distinctive traits of humans that separate them from the animal realm: reason and morality. How reason and morality can have appeared through natural selection?

17.3 Mental faculties

Darwin's argument is to deny that there is a fundamental difference between men's and the other animal's mental faculties. The whole chapter is trying to argue against the view of a fundamental gap between animals and humans when it comes to thinking, in placing reason at the top of a continuous scale of mental faculties.

- The hierarchy of mental powers – all shared with animals
 1. Emotions – simple: happiness, terror, suspicion, deceit, maternal affection, indignation

2. Emotions – more complex: jealousy, emulation, shame, pride, sense of humor (dogs do practical jokes), excitement, wonder, ennui, curiosity (monkey and surprise snake-box), dread
3. Intellectual faculties: Imitation (education), attention (training monkeys), memory, imagination (dog barking at the moon – superstition!)
4. Reason – let’s see this in more detail:

- **Reason**

- Reason is usually contrasted with
 - instincts;
 - habits which come from mere association of ideas.
- Darwin argues that
 - instincts are but inherited habits
 - association of ideas is a process which is close to reason
- **The point is that there is only a difference in degree, not in nature, between animals’ and humans’ way of ”reasoning”.**
- Example: The savage and the dog searching for water: According to Darwin,
 - they are both acting according to a “rude process of reasoning”, which is coming from the observation of a regular coincidence of two phenomena, which thus become “associated in their mind”: lower levels and presence of water;
 - they are both to be contrasted with the cultivated man, who looks for an explanation or law behind the regularity.
 - The difference between the savage and the dog is a difference in the speed of the association process.
- In order to distinguish this kind of behavior from instinct, Darwin produces evidence of **some animal behavior, based on association of ideas, which are contradictory to instinct**: the retriever who killed the game.

- **Discussion**

1. Anthropomorphism
2. Instinct, association of ideas, and reasoning: what's the difference?

That there is a continuity between sensations, experience, memory, ideas and reasoning is a thesis of the *empiricist*

According to Leibniz: whereas we share "empiricist" ways of reasoning with animals, we are also capable of searching for the causes, which is true human thinking. This, according to Leibniz, is not shared with animals: innate ideas and logical reasoning. Only this way can we reach "necessary or eternal truth".

See the *Principles of Nature and Grace*, 5.

So: What's specifically human? Is there anything specifically human?

3. Darwin's main target: "the system of animated machines".
 - Descartes – behaviors follow only from the disposition of the organs
 - animals are machines

Descartes's physicalism is motivated by his dualism: the human soul is of a different *nature* from the soul of the "brutes" or irrational animal.

- How can we recognize other minds?

17.4 Leibniz and the automata

Principles of Nature and Grace, Based on Reason By G. W. Leibniz

5. The perceptions of non-human animals are interconnected in a way that has some resemblance to reason. But differs from reason because it is grounded only in the memory of facts or effects, and not at all in the knowledge of causes. That is what happens when a dog shrinks from the stick with which it has been beaten because memory represents to it the pain the stick has caused. In fact human beings, to the extent that they are empirics - which is to say in three quarters of what they do - act just like non-human animals. [An empiric is someone who goes by obvious superficial regularities and similarities without asking Why? about any of them.] For example, we expect there to be daylight tomorrow because we have always experienced it that way; only an astronomer foresees it in a reasoned way (and even his prediction will prove wrong some day, when the cause of daylight goes out of

existence). But genuine reasoning depends on necessary or eternal truths like those of logic, arithmetic and geometry, which make indubitable connections between ideas and reach conclusions that cant fail to be true. Animals that never think of such propositions are called brutes; but ones that recognise such necessary truths are rightly called rational animals, and their souls are called minds. These souls are capable of reflective acts - acts of attention to their own inner states - so that they can think about what we call myself, substance, soul, or mind: in a word, things and truths that are immaterial. This is what renders us capable of science, or of demonstrable knowledge.

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28. People behave in the same way as animals in so far as the following of one perception from another occurs only in accordance with the principle of memory. They are like the doctors of the empirical school of medicine, who rely on practical experience alone, without any theorising. Three-quarters of the time, our behaviour is purely like that of the empiricists. For example, when we expect the sun to rise tomorrow, we are behaving as empiricists, since that is what has always happened up till now. It is only astronomers who come to this judgment on the basis of reasoning.

29. But it is knowledge of necessary and eternal truths which distinguishes us from mere animals, and which gives us reason and the sciences, by elevating us to knowledge of ourselves and of God. This is what in us is called the rational soul, or spirit.

17.5 Descartes and the animal-machine

Rene Descartes: Discourse on the Method

From: <http://www.literaturepage.com/read/descartes-discourse-on-method-34.html>

And here I specially stayed to show that, were there such machines exactly resembling organs and outward form an ape or any other irrational animal, we could have no means of knowing that they were in any respect of a different nature from these animals; but if there were machines bearing the image of our bodies, and capable of imitating our actions as far as it is morally possible, there would still remain two most certain tests whereby to know

that they were not therefore really men. Of these the first is that they could never use words or other signs arranged in such a manner as is competent to us in order to declare our thoughts to others: for we may easily conceive a machine to be so constructed that it emits vocables, and even that it emits some correspondent to the action upon it of external objects which cause a change in its organs; for example, if touched in a particular place it may demand what we wish to say to it; if in another it may cry out that it is hurt, and such like; but not that it should arrange them variously so as appositely to reply to what is said in its presence, as men of the lowest grade of intellect can do. The second test is, that although such machines might execute many things with equal or perhaps greater perfection than any of us, they would, without doubt, fail in certain others from which it could be discovered that they did not act from knowledge, but solely from the disposition of their organs: for while reason is an universal instrument that is alike available on every occasion, these organs, on the contrary, need a particular arrangement for each particular action; whence it must be morally impossible that there should exist in any machine a diversity of organs sufficient to enable it to act in all the occurrences of life, in the way in which our reason enables us to act. Again, by means of these two tests we may likewise know the difference between men and brutes. For it is highly deserving of remark, that there are no men so dull and stupid, not even idiots, as to be incapable of joining together different words, and thereby constructing a declaration by which to make their thoughts understood; and that on the other hand, there is no other animal, however perfect or happily circumstanced, which can do the like. Nor does this inability arise from want of organs: for we observe that magpies and parrots can utter words like ourselves, and are yet unable to speak as we do, that is, so as to show that they understand what they say; in place of which men born deaf and dumb, and thus not less, but rather more than the brutes, destitute of the organs which others use in speaking, are in the habit of spontaneously inventing certain signs by which they discover their thoughts to those who, being usually in their company, have leisure to learn their language. And this proves not only that the brutes have less reason than man, but that they have none at all: for we see that very little is required to enable a person to speak; and since a certain inequality of capacity is observable among animals of the same species, as well as among men, and since some are more capable of being instructed than others, it is incredible that the most perfect ape or parrot of its species, should not in this be equal to the most stupid infant of its kind or at least to one that was crack-

brained, unless the soul of brutes were of a nature wholly different from ours. And we ought not to confound speech with the natural movements which indicate the passions, and can be imitated by machines as well as manifested by animals; nor must it be thought with certain of the ancients, that the brutes speak, although we do not understand their language. For if such were the case, since they are endowed with many organs analogous to ours, they could as easily communicate their thoughts to us as to their fellows. It is also very worthy of remark, that, though there are many animals which manifest more industry than we in certain of their actions, the same animals are yet observed to show none at all in many others: so that the circumstance that they do better than we does not prove that they are endowed with mind, for it would thence follow that they possessed greater reason than any of us, and could surpass us in all things; on the contrary, it rather proves that they are destitute of reason, and that it is nature which acts in them according to the disposition of their organs: thus it is seen, that a clock composed only of wheels and weights can number the hours and measure time more exactly than we with all our skin.

I had after this described the reasonable soul, and shown that it could by no means be educed from the power of matter, as the other things of which I had spoken, but that it must be expressly created; and that it is not sufficient that it be lodged in the human body exactly like a pilot in a ship, unless perhaps to move its members, but that it is necessary for it to be joined and united more closely to the body, in order to have sensations and appetites similar to ours, and thus constitute a real man. I here entered, in conclusion, upon the subject of the soul at considerable length, because it is of the greatest moment: for after the error of those who deny the existence of God, an error which I think I have already sufficiently refuted, there is none that is more powerful in leading feeble minds astray from the straight path of virtue than the supposition that the soul of the brutes is of the same nature with our own; and consequently that after this life we have nothing to hope for or fear, more than flies and ants; in place of which, when we know how far they differ we much better comprehend the reasons which establish that the soul is of a nature wholly independent of the body, and that consequently it is not liable to die with the latter and, finally, because no other causes are observed capable of destroying it, we are naturally led thence to judge that it is immortal.

17.6 Moral Faculties

From Prof. Schmaus' course notes:

17.6.1 Moral Faculties in evolution

- Darwin regarded the evolution of moral qualities as a more interesting problem than the evolution of intellectual qualities (247)
- Foundation of our moral qualities is in social instincts
 - animals that have these instincts:
 - a. find pleasure in the company of others
 - b. warn others of danger
 - c. defend and help each other in various ways
 - these instincts do not extend to entire species, but only to the community
 - since these instincts may benefit the species, they were probably acquired through natural selection
- in chapter 2, Darwin had speculated that our progenitors were social animals (211)
 - in social animals, esp. insects, natural selection may preserve variations beneficial to the society
 - in higher animals, however, he knows of no physical traits that have been selected only for the good of the society (211-2)
 - a. however, some traits may have the good of the society for a secondary effect (212)
 - b. e.g., an animal's horns may be selected through competition for mates, but are also useful to defend the flock or herd (212)
 - mental traits, however, are a different matter (212, q.v.) (ch. 5)
 - a. these evolved for the benefit of the community
 - b. individual gained indirectly
- Whether evolution favors such instincts is still debated today
 - group selection controversy - free rider problem
 - will return to this issue in reading by Nowak et al. and in Richards

17.6.2 The concept of a moral being

- For Darwin, a moral being is one who is capable of **reflecting on her past actions and motives**, approving of some and disapproving of others (247, q.v.)
- Humans are the only moral being
- That said, our moral capacities come out of the evolutionary process: here and in chapter 4 outlines four stages in the development of the moral sense
 1. social instincts
 - a. take pleasure in society
 - b. feel sympathy
 - c. perform services for others
 - d. these are directed only to members of same group, not whole species
 2. our appreciation of the approval and disapproval of our fellow human beings
 - a. dissatisfaction we feel when social instinct yields to some other
 - b. if one follows some impulse in such a way as to violate her social instincts, she reflects and compares the memory of the impulse with the present feeling of dissatisfaction resulting from unsatisfied social instinct, and resolves to act differently in the future – this is conscience (247)
 - c. best way to strengthen conscience is through intellectual development, strengthening imagination and memory (248, q.v.)
 3. the development of our intellectual faculties, especially language
 - a. community can then express its opinion how people ought to act
 - b. but our regard for the opinion of others is still the foundation for following public opinion
 4. habit
- development of virtues (248, q.v.)

1. all people desire their own happiness
 2. praise or blame is bestowed on actions and motives according as they lead to happiness
 3. as reasoning powers develop, one is able to trace more remote effects of one's actions on one's character and the general good
 4. thus the self-regarding virtues come under public scrutiny
 5. sometimes, people make mistakes and base their ideas of virtue on bad customs and superstition (248)
- N.B. the appeal to the utilitarian "greatest happiness principle"
 1. and the argument that intelligence is important to morality
 2. this alone puts him in conflict with religion
 - ultimately, people do not simply let the approval of others be their guide, but follows their consciences (248, q.v.)
 - nevertheless, first foundation or origin of moral sense is in social instincts

Compare with Cleanthes and Philo in Hume

End of Prof. Schmaus's notes

We will come back on morality later.

Just as with reasoning, what is at stake is whether there is something specific about humans that make them capable of true morality – if yes, this might be turned into an argument in favor of a difference in nature between humans and animals, and thus into an objection to the theory of evolution.