Phil 134/ 234 G
Moral Psych: W 18

Prof. Aaron Z. Zimmerman
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Handout #1: Darwin on the Evolution of Human Morality

Chapter 3: Darwin's Arguments for the Similarity of People to Other Animals

A. The Thesis of The Descent of Man

In the introduction to *Descent*, Darwin states his topic:

"The sole object of this work is to consider, firstly, whether man, like every other species, is descended from some pre-existing form; secondly, the manner of his development; and thirdly, the value of the differences between the so-called races of man."

His answer to the first question is yes, *Homo sapiens* are "descended" from apes.

His answer to the second question is complicated: he argues for a number of different hypotheses as to how homo sapiens evolved, perhaps the most controversial hypothesis in *Descent* is that various traits owe their existence to sexual selection: e.g. the peacock's colorful eye-riddled plumage bestowed a fitness advantage on those male peacocks who had it because of the mating preferences of female peacocks.

(Two questions here that will give you some sense of why sexual selection was a controversial proposal: (1) How did the female preference for colorful males evolve? (This question is especially pressing if we assume that brightly colored plumage is maladaptive because it exposes those peacocks with bright plumes to greater rates of predation. There's also the energy cost of growing and maintaining these feathers.) (2) Is there any evidence that female peacocks actually prefer colorful males? Darwin didn't have an answer to these questions. The possibility of sexual selection wasn't well understood until Fisher proposed a general framework in 1958 and the Lande-Kirpatrick model was developed in the early 80s. (Of course, this leaves open the question of which of the phenotypic traits we observe—if any— evolved via sexual selection.)

Here's a link to Kirpatrick's paper:

http://www.aaron-zimmerman.com/wp-content/uploads/2015/01/Kirpatrick.pdf)

Darwin's answer to the third question he poses above is that the races are all members of the same species and the differences between them are superficial (skin color and hair texture). Darwin attributes the differences between races to sexual selection (they are adaptations to different mating customs and preferences).

All of Darwin's hypotheses in *Descent* remain controversial, though there is not much (if any) controversy within well-established or well-recognized scientific communities on

the first thesis that homo sapiens evolved from apes, and there is a great deal of consensus that racial categories are at best superficial if not incoherent.

B. The Thesis of The Descent of Man Chapter 3

In chapters 1-2 Darwin catalogued the physical or anatomical similarities between people and other animals in an attempt to argue that Homo sapiens evolved from other species via natural selection.

Question of clarification: What is natural selection? How does it differ from artificial selection? Which differences between plants and animals are best explained by natural selection?

Natural selection is a concept used to explain biological change over long intervals of time. The idea is that

(1) **Natural variation**: There is a natural (non-mental) mechanism of phenotypic variation.

Phenotype: observable or manifest traits of an organism.

Genotype: genetic traits of an organism. (That which, in conjunction with causally relevant features of its environment is thought to explains an organism's phenotype.)

Darwin knew that there had to be some mechanism or set of mechanisms that produces manifest differences in the bodies and behaviors of plants and animals: i.e. phenotypic variation. We now know that one of the most important mechanisms of variation is genetic mutation and (in sexually reproducing organisms) genetic combination. But as far as historians can tell, Darwin didn't know much of anything about the role played by genetic material in creating phenotypic variation when he wrote the Origin of the Species and the Descent of Man (he was unaware of Gregor Mendel's early experiments in genetics that were conducted right around the time Darwin was writing). So Darwin did not know much of anything about the mechanisms of phenotypic variation. To provide a non-theological or "naturalistic" explanation of the differences between species, Darwin simply assumed that there were mechanisms of the requisite sort. (He was right.)

Nevertheless, Darwin was well aware of the role that farmers, breeders and herdsmen played in shaping the phenotypic characteristics of their crops and herds. (One of his favorite examples is the domestication of wolves and the creation of breeds of domestic dogs.) Some offspring have describable characteristics (e.g. large size, nice texture, mellow dispositions, herding instincts) that other offspring of the same breeding population lack. (To repeat, Darwin wasn't privy to our contemporary (genetic) explanation of how this occurs.) By allowing animals and plants with these desirable characteristics to reproduce and not allowing those with undesirable characteristics to reproduce, farmers and breeders were able to develop (e.g.) fatter cows, shepherding dogs and juicier tomatoes. Darwin argued that the same effect might be produced **without the**

intentions of farmers and breeders (or a deity) by various natural features of the environments in which animals live and reproduce.

(2) **Natural selection**: There is a natural (non-mental) mechanism of selection "for" various phenotypic traits and "against" others.

Note 1: I put "for" and "against" in scare quotes here because it is important to remember that the selection in question is supposed to be unintentional. (This is what distinguishes natural from artificial selection.)

Note 2: It is also important to remember that what has been selected for isn't necessarily desirable and what's been selected against isn't necessarily undesirable on any reasonable notion of "desirable" that might be defended. If you like, you can define "desirable," so that a trait that evolves in a population via natural mechanisms of election was "desirable" for the organisms in that population. But (a) you should be aware that "desirable" doesn't have to be defined in this way. (You can coherently think that bad traits sometimes evolve via natural selection.) And (b*) the desirability in question will be relative* as the effect a phenotypic trait has on the reproductive fitness of an organism that has it depends in important ways on the organism's environment.

An example: white fur in rabbits.

We can imagine that a genetic mutation gave rise to white fur in rabbits. In the arctic, this trait is selected "for" in the sense that rabbits with white fur survive to reproduce at a greater rate than do those with brown fur because white fur provides camouflage in the snow. Because of different rates of predation (which yield differential rates of reproduction), over time arctic rabbits come to have white fur in greater and greater numbers. Eventually, all artic rabbits may have white fur except for those who develop differently colored fur because of biologically random mutations. Not so rabbits in climates that lack snow. When genetic mutations gives rise to white fur in desert rabbits, these white rabbits are perhaps less likely to avoid predation than the brown rabbits in the population and so less likely to survive to reproduce. As a result white fur color never comes to predominate in these desert populations.

With this in mind consider the question of whether white fur is desirable or good. The answer to this question, of course, is that it depends on the environment. Even if we define "good" in terms of adaptivity (or the promotion of fitness) we can only conclude that white fur is adaptive or good for rabbits in snowy climates (insofar as it promotes their survival and reproduction in these climates); but it is bad for them in the desert.

And there are other, more philosophical questions we might ask here about the kind of value that is invoked in evolutionary explanations: (a) Is an organism's survival and or reproduction always good for that animal? (If a person decides not to have children is she doing something that is bad for her or forgoing a benefit for her?) (b) What is the relation between something being good for some plant, animal, person or group of such and its being good simplicter (or morally good)? Is the concept of something's being good

simplicter (rather than good for some plant, animal or person) even coherent? We'll return to some of these questions when we look at Darwin's "optimistic" reading of colonialism as group selection for European ("good") moral culture.

(3) **Natural selection perpetuates adaptations**: When selective pressures come to bear (predators, climate change etc) adaptive traits are selected for; maladaptive traits are selected against and this further differentiates populations of a single species from one another. A series of such adaptations yields differences in species. Eventually these different species cannot interbreed to produce viable offspring. This (in conjunction with other factors) accounts for observable biological variety.

These three theses constitute the rough framework of Darwin's theory of natural selection.

In chapter 3, Darwin's aim is to rebut a criticism of his thesis based on the differences between people and other animals. "We have seen in the last two chapters that man bears in his bodily structure clear traces of his descent from some lower form; but it may be urged that, **as man differs so greatly in his mental power from all other animals, there must be some error in this conclusion**."

There are actually two responses one might have to this criticism: (a) the hypothesis that humans evolved from apes via natural selection is compatible with a radical difference in kind between humans and apes which is not itself the result of minor changes in populations over time and the extinction of species with the "intervening" phenotypes (one might, for instance, posit a "massive mutation" that gave rise to the first homo sapiens instead of searching for fossil records of early hominids that are phenotypically "in between" apes and humans); (b) the "least evolved" humans are not so different from the "most evolved" apes.

In a (horribly racist) passage at the beginning of chapter 3, Darwin explains that his intent is to rebut the criticism on hand by arguing for (b).

"No doubt the difference in this respect is enormous, even if we compare the mind of one of the lowest savages, who has no words to express any number higher than four, and who uses hardly any abstract terms for common objects or for the affections, with that of the most highly organised ape. The difference would, no doubt, still remain immense, even if one of the higher apes had been improved or civilised as much as a dog has been in comparison with its parent-form, the wolf or jackal…. If no organic being excepting man had possessed any mental power, or if his powers had been of a wholly different nature from those of the lower animals, then we should never have been able to convince ourselves that our high faculties had been gradually developed. But it can be shewn that there is no fundamental difference of this kind. We must also admit that there is a much wider interval in mental power between one of the lowest fishes, as a lamprey or lancelet, and one of the higher apes, than between an ape and man; yet this interval is filled up by numberless gradations."

Thus, Darwin and his critics agree that the theory of natural selection implies (or at least suggests) a fourth thesis:

(4) **The Continuity between People and other Animals**: As Darwin states at the outset of chapter 3, *"*My object in this chapter is to shew that *there is no fundamental difference between man and the higher mammals in their mental faculties."* Indeed, according to Darwin, there is no difference in kind between humans and other animals that is not itself the result of minor changes in populations over time and the extinction of species with the "intervening" phenotypes.

C. Darwin's Evidence that "There is no Fundamental Difference Between Man and the Higher Mammals in their Mental Faculties"

1. Same senses and fundamental percepts, concepts or intuitions: "As man possesses the same senses as the lower animals, his fundamental intuitions must be the same."

2. Same basic desires, drives and instincts: Man has also some few instincts in common, as that of self-preservation, sexual love, the love of the mother for her new-born offspring, the desire possessed by the latter to suck, and so forth.[1]

3. Same sensations, moods and behaviors guided by them: "The lower animals, like man, manifestly feel pleasure and pain, happiness and misery. Happiness is never better exhibited than by young animals, such as puppies, kittens, lambs, &c., when playing together, like our own children. Even insects play together, as has been described by that excellent observer, P. Huber, who saw ants chasing and pretending to bite each other, like so many puppies."

4. Same basic emotions and constitutive physiological responses: "The fact that the lower animals are excited by the same emotions as ourselves is so well established, that it will not be necessary to weary the reader by many details. Terror acts in the same manner on

[1] Notice that some of these instincts may be instances of "evolutionary altruism" insofar as they lower the reproductive fitness of the organism possessing them while augmenting the fitness of conspecifics (i.e. the other members of her species with whom she interacts). We will consider this issue briefly when we discuss Sober and Wilson's work on altruism. But's it's instructive to see that Darwin was himself well aware of behaviors and traits that persist despite failing to augment the fitness of the organisms that have them. "some intelligent actions, after being performed during several generations, become converted into instincts and are inherited, as when birds on oceanic islands learn to avoid man. These actions may then be said to be degraded in character, for they are no longer performed through reason or from experience. But the greater number of the more complex instincts appear to have been gained in a wholly different manner, through the natural selection of variations of simpler instinctive actions. Such variations appear to arise from the same unknown causes acting on the cerebral organisation, which induce slight variations or individual differences in other parts of the body; and these variations, owing to our ignorance, are often said to arise spontaneously. We can, I think, come to no other conclusion with respect to the origin of the more complex instincts, when we reflect on the marvellous instincts of sterile worker-ants and bees, which leave no offspring to inherit the effects of experience and of modified habits."

them as on us, causing the muscles to tremble, the heart to palpitate, the sphincters to be relaxed, and the hair to stand on end. Suspicion, the offspring of fear, is eminently characteristic of most wild animals."

"Animals manifestly enjoy excitement, and suffer from ennui, as may be seen with dogs, and, according to Rengger, with monkeys."

5. A great deal of overlap in complex emotions and behaviors guided by them: "Most of the more complex emotions are common to the higher animals and ourselves. Every one has seen how jealous a dog is of his master's affection, if lavished on any other creature; and I have observed the same fact with monkeys. This shews that animals not only love, but have desire to be loved. Animals manifestly feel emulation. They love approbation or praise; and a dog carrying a basket for his master exhibits in a high degree self-complacency or pride. There can, I think, be no doubt that a dog feels shame, as distinct from fear, and something very like modesty when begging too often for food. A great dog scorns the snarling of a little dog, and this may be called magnanimity."

"All animals feel *Wonder*, and many exhibit *Curiosity*. They sometimes suffer from this latter quality, as when the hunter plays antics and thus attracts them; I have witnessed this with deer, and so it is with the wary chamois, and with some kinds of wild-ducks. Brehm gives a curious account of the instinctive dread, which his monkeys exhibited, for snakes; but their curiosity was so great that they could not desist from occasionally satiating their horror in a most human fashion."

6. A great deal of overlap in basic forms of learning (e.g. imitation).

"The parents of many animals, trusting to the principle of imitation in their young, and more especially to their instinctive or inherited tendencies, may be said to educate them. We see this when a cat brings a live mouse to her kittens; and Dureau de la Malle has given a curious account (in the paper above quoted) of his observations on hawks which taught their young dexterity, as well as judgment of distances, by first dropping through the air dead mice and sparrows, which the young generally failed to catch, and then bringing them live birds and letting them loose."

7. A great deal of overlap in cognitive capacities: attention, memory, imagination (Darwin is convinced by their behaviors while sleeping that non-human animals dream), and reason.

"We can only judge by the circumstances under which actions are performed, whether they are due to instinct, or to reason, or to the mere association of ideas: this latter principle, however, is intimately connected with reason. A curious case has been given by Prof. Möbius, of a pike, separated by a plate of glass from an adjoining aquarium stocked with fish, and who often dashed himself with such violence against the glass in trying to catch the other fishes, that he was sometimes completely stunned. The pike went on thus for three months, but at last learnt caution, and ceased to do so. The plate of glass was then removed, but the pike would not attack these particular fishes, though he would

devour others which were afterwards introduced; so strongly was the idea of a violent shock associated in his feeble mind with the attempt on his former neighbours. If a savage, who had never seen a large plate-glass window, were to dash himself even once against it, he would for a long time afterwards associate a shock with a window-frame; but very differently from the pike, he would probably reflect on the nature of the impediment, and be cautious under analogous circumstances. Now with monkeys, as we shall presently see, a painful or merely a disagreeable impression, from an action once performed, is sometimes sufficient to prevent the animal from repeating it. If we attribute this difference between the monkey and the pike solely to the association of ideas being so much stronger and more persistent in the one than the other, though the pike often received much the more severe injury, can we maintain in the case of man that a similar difference implies the possession of a fundamentally different mind?"

"The following cases relate to dogs. Mr. Colquhoun winged two wild-ducks, which fell on the further side of a stream; his retriever tried to bring over both at once, but could not succeed; she then, though never before known to ruffle a feather, deliberately killed one, brought over the other, and returned for the dead bird. Col. Hutchinson relates that two partridges were shot at once, one being killed, the other wounded; the latter ran away, and was caught by the retriever, who on her return came across the dead bird; "she stopped, evidently greatly puzzled, and after one or two trials, finding she could not take it up without permitting the escape of the winged bird, she considered a moment, then deliberately murdered it by giving it a severe crunch, and afterwards brought away both together. This was the only known instance of her ever having wilfully injured any game." Here we have reason though not quite perfect, for the retriever might have brought the wounded bird first and then returned for the dead one, as in the case of the two wild-ducks. I give the above cases, as resting on the evidence of two independent witnesses, and because in both instances the retrievers, after deliberation, broke through a habit which is inherited by them (that of not killing the game retrieved), and because they shew how strong their reasoning faculty must have been to overcome a fixed habit."

Darwin's Conclusion: "It has, I think, now been shewn that man and the higher animals, especially the primates, have some few instincts in common. All have the same senses, intuitions, and sensations, — similar passions, affections, and emotions, even the more complex ones, such as jealousy, suspicion, emulation, gratitude, and magnanimity; they practise deceit and are revengeful; they are sometimes susceptible to ridicule, and even have a sense of humour; they feel wonder and curiosity; they possess the same faculties of imitation, attention, deliberation, choice, memory, imagination, the association of ideas, and reason, though in very different degrees. The individuals of the same species graduate in intellect from absolute imbecility to high excellence."

D. Putative counter-evidence (marked differences between humans and other animals:

"Man cannot, on his first trial, make, for instance, a stone hatchet or a canoe, through his power of imitation. He has to learn his work by practice; a beaver, on the other hand, can make its dam or canal, and a bird its nest, as well, or nearly as well, and a spider its wonderful web, quite as well, the first time it tries as when old and experienced."

Note that scientists continue to investigate these claims. Here's some recent evidence that the beaver's dam building behavior is indeed instinctive in the way Darwin asserts:

http://juneauempire.com/stories/050408/out_275269543.shtml

"It has been asserted that man alone is capable of [a] progressive improvement; [b] that he alone makes use of tools or fire, [c] domesticates other animals, or [d] possesses property; that no animal (e] has the power of abstraction, or [f] of forming general concepts, is [g] self-conscious and comprehends itself; that [h] no animal employs language; [i] that man alone has a sense of beauty, is liable to caprice, [j] has the feeling of gratitude, mystery, &c.; [k] believes in God, or [l] is endowed with a conscience."

Darwin's responses:

(a) animals hunted by trappers learn to be wary of traps and birds learn to be cautious of wires and the pass this knowledge on to future generations

(b) "It has often been said that no animal uses any tool; but the chimpanzee in a state of nature cracks a native fruit, somewhat like a walnut, with a stone." They also use stones and branches for weapons and sticks to "fish" for termites. Elephants drive away flies with branches. Crows and other corvids use tools to ferret out food.

(e/f) "when a dog sees another dog at a distance, it is often clear that he perceives that it is a dog in the abstract; for when he gets nearer his whole manner suddenly changes if the other dog be a friend…. It has been urged against the views here maintained that it is impossible to say at what point in the ascending scale animals become capable of abstraction, &c.; but who can say at what age this occurs in our young children? We see at least that such powers are developed in children by imperceptible degrees."

(g) "It may be freely admitted that no animal is self-conscious, if by this term it is implied, that he reflects on such points, as whence he comes or whither he will go, or what is life and death, and so forth. But how can we feel sure that an old dog with an excellent memory and some power of imagination, as shewn by his dreams, never reflects on his past pleasures or pains in the chase? And this would be a form of self-consciousness."

(h) "That which distinguishes man from the lower animals is not the understanding of articulate sounds, for, as every one knows, dogs understand many words and sentences. In this respect they are at the same stage of development as infants, between the ages of ten and twelve months, who understand many words and short sentences, but cannot yet utter a single word. It is not the mere articulation which is our distinguishing character, for parrots and other birds possess this power. Nor is it the mere capacity of connecting definite sounds with definite ideas; for it is certain that some parrots, which have been taught to speak, connect unerringly words with things, and persons with events. The lower animals differ from man solely in his almost infinitely larger power of associating

together the most diversified sounds and ideas; and this obviously depends on the high development of his mental powers."

Final Questions on *Descent*, ch 3: How good is Darwin's argument that "there is no fundamental difference between man and the higher mammals in their mental faculties"? Which of these faculties might be invoked to explain the moral judgments of human kind? Are there differences in degree that might vindicate the commonly held belief that only people are capable of acting morally or immorally?

Chapter 4: Darwin on the Evolution of our Sense of Right and Wrong

1. The Distinctness and Importance of the Moral Faculty

At the outset of Descent, chapter 4, Darwin rejects the kind of radical skepticism about moral judgment advanced by *psychological egoists* (like Hobbes) who embrace what the primatologist Frans de Waal calls "veneer theory."

Psychological egoism: Each person always does what she judges to be in her self-interest.

Veneer theory: Speakers use moral judgments to mask or hide their interests from others. In particular, S will assert that X is immoral (or vicious) just in case she believes X would frustrate S's own interests (or impair her wellbeing) and S will assert that X is good (or virtuous) just in case she thinks X would advance her interests (or augment her wellbeing).

Of course, the **psychological egoist veneer theorist** (who endorses the above two theses) allows that "X is immoral" means something different from "X frustrates my goals" for otherwise the first sentence couldn't be used by S to mask or hide her intention to get other people to refrain from Xing so as to achieve those goals. But the idea is that: (a) despite this difference in meaning, a speaker asserts "X is immoral" when and only when she thinks X frustrates her goals, and (b) the best explanation for this is that moral language serves (consciously, unconsciously or semi-consciously) to advance the interests it helps mask. Moral talk and display are normally hypocritical.

Darwin rejects egoism insofar as he joins Hume, Kant and others in arguing that moral cognition cannot be reduced to an identification of one's interests and a calculation of what would best advance those interests. Instead, we often act from "social instinct" even when doing so diminishes our individual pleasure, happiness or reproductive fitness.

"Man seems often to act impulsively, that is from instinct or long habit, without any consciousness of pleasure, in the same manner as does probably a bee or ant, when it blindly follows its instincts. Under circumstances of extreme peril, as during a fire, when a man endeavours to save a fellow-creature without a moment's hesitation, he can hardly feel pleasure; and still less has he time to reflect on the dissatisfaction which he might subsequently experience if he did not make the attempt. Should he afterwards reflect over

his own conduct, he would feel that there lies within him an impulsive power widely different from a search after pleasure or happiness; and this seems to be the deeply planted social instinct."

According to Hume and Kant, I can actually judge that X would advance my interests but that X would nevertheless be immoral. (Similarly, I can judge that being caught by the police and sentenced for a crime that I committed would be fair or just while nevertheless judging that it would be bad for me (and so contrary to my interests) to get caught.)

Hopefully, Aristotle (among others) argue, the gulf between self-interest and morality won't be too wide, so I don't always or even regularly need to sacrifice my happiness for the sake of some moral end or other. But sometimes I can judge that lying, cheating or stealing would benefit me and yet decide not to lie, cheat or steal because I don't want to hurt the person to whom I would be lying, nor hurt the person I would be cheating, nor damage the person from whom I would be stealing. Perhaps, as Kant claimed, even more abstract thoughts about the injustice or partiality of a proposed course of action can motivate me to refrain from its pursuit.

Darwin begins chapter 4 by approvingly quoting Mackintosh's and Kant's celebration of this **sense of duty**.

"I fully subscribe to the judgment of those writers who maintain that of all the differences between man and the lower animals, the moral sense or conscience is by far the most important."

But Darwin ends chapter 4 by describing instinctive acts of altruism and casting doubt on the Kantian distinction between: **(a)** ***acting from duty*** *by doing the right thing out of a motive of obligation contrary to (or at least independent from) benevolent instinct*, and **(b)** ***merely acting in accordance with duty*** *(whether our of benevolent impulse or because doing the right thing is judged to be in the agent's interests).*

"I am aware that some persons maintain that actions performed impulsively, as in the above cases, do not come under the dominion of the moral sense, and cannot be called moral. They confine this term to actions done deliberately, after a victory over opposing desires, or when prompted by some exalted motive. *But it appears scarcely possible to draw any clear line of distinction of this kind*." (my emphasis)

And Darwin breaks with Kant further in arguing for **a *reductive account of the moral sense*** according to which it is a complex of simpler faculties that can be found in non-human animals (such as sympathy and the ability to understand the minds of other animals) conjoined with humankind's greater capacities for reasoning, imagination and abstraction.

Darwin's Reductive Account of the Moral Sense: "The following proposition seems to me in a high degree probable—namely, that any animal whatever, endowed with well-marked social instincts, the parental and filial affections being here included, would

inevitably acquire a moral sense or conscience, as soon as its intellectual powers had become as well developed, as in man."

Darwin's account of the main components of the moral sense:

(1) **Social instincts**: (a) certain **specific instincts** causing animals to perform specific actions for those with whom they are closely associated (as observed in many mammals but also in "lower" animals like ants). In mammals, the relevant instincts include nursing and feeding children and the other forms of caretaking displayed by the members of a well-functioning family of mammals; (b) a **general "wish or readiness" to aid associates** that when conjoined with means/ends reasoning issues in non-instinctual, more flexible forms of pro-social or benevolent behavior.

(2) **Prudence**: an animal's ability to forgo a present pleasure or benefit (or endure a present pain) when it knows that doing so is necessary to secure a greater long term pleasure or benefit (or avoid a greater long term pain). Observed in dogs and other mammals to some degree.

(Note that there is some interesting evidence (drawn in part from the famous "marshmallow experiments") that children who exhibit this kind of self-control at an early age have happier or more successful lives on many measures than children who lack this capacity.)

http://pages.uoregon.edu/harbaugh/Readings/UGBE/Mischel 1989 Science, Delay of Gratification.pdf

(3) **Emotion-Laden Memory**: (a) Feelings of guilt that arise when an animal reflects on its past imprudence. (This typically happens when the animal is experiencing the pain it could have avoided by forgoing an immediate pleasure: e.g. the smoker who gets lung cancer and then regrets her lifetime of smoking.) (b) Feelings of satisfaction that arise when an animal reflects on sacrifices that "paid off" insofar as they were essential to the acquisition of greater pleasures or benefits. (The smile on your face when you receive your diploma.)

(4) **Language**: Their greater linguistic abilities allow humans to express their desires and preferences to one another and to be moved by what they know to be the desires and preferences of others. Gossip generates involved reputations. And Darwin argues that the desire for a good reputation plays a big role in motivating people to act in ways others judge good or desirable.

(5) **Habits**: Through repetition and association the "social instincts" are strengthened, as is the desire for a good reputation.

Darwin's Hypothesis about the Origins and Nature of Non-human Morality

Darwin's hypotheses are: (a) that non-human animals exhibit features (1)-(5) to some degree; (b) that non-human animals therefore have something like human morality; and

(c) that when an animal has features (1)-(5) and conjoins them with capacities for reasoning, imagination and abstraction (i.e. what Darwin calls great "intellectual faculties") this ***inevitably*** gives that animal a conscience or sense of right and wrong.

(6) **Intellectual capacities**: these allow an animal to think of conduct in a general way and frame rules, laws and imperatives meant to thwart conduct that has given rise to remorse in the past and recommend conduct that has regularly led to satisfaction.

Darwin's General Analysis of Morality: (1)+(2)+(3)+(4)+(5)+(6)= a "conscience" or a "sense of right and wrong".

"Although man…has no special instincts to tell him how to aid his fellow-men, he still has the impulse, and with his improved intellectual faculties would naturally be much guided in this respect by reason and experience. Instinctive sympathy would also cause him to value highly the approbation of his fellows; for, as Mr. Bain has clearly shewn, the love of praise and the strong feeling of glory, and the still stronger horror of scorn and infamy, "are due to the workings of sympathy." Consequently man would be influenced in the highest degree by the wishes, approbation, and blame of his fellow-men, as expressed by their gestures and language. Thus the social instincts, which must have been acquired by man in a very rude state, and probably even by his early ape-like progenitors, still give the impulse to some of his best actions; but his actions are in a higher degree determined by the expressed wishes and judgment of his fellow-men, and unfortunately very often by his own strong selfish desires. But as love, sympathy and self-command become strengthened by habit, and as the power of reasoning becomes clearer, so that man can value justly the judgments of his fellows, he will feel himself impelled, apart from any transitory pleasure or pain, to certain lines of conduct. He might then declare-not that any barbarian or uncultivated man could thus think — I am the supreme judge of my own conduct, and in the words of Kant, I will not in my own person violate the dignity of humanity."

Questions: What has Darwin left out? How have thoughts about (or concepts of) fairness, justice, equality, rights and autonomy "evolved" or come to the forefront of contemporary thinking about morality?

2. The Further Contingency of the Human Conscience or Sense of Right and Wrong

Though Darwin thinks features (1)-(6) are sufficient to give rise to a conscience or sense of right and wrong, he insists that distinctively human morality has further features that are contingent upon our biology and social structure.

For instance, Darwin argues that **many if not all of our moral obligations are contingent** in the sense that **we (or the creatures who would have evolved in our place had evolution taken a different course) would not have these obligations if we (or the creatures in question) had a different biology and consequently a different means of reproducing, eating, moving etc**. In particular, if human societies were organized like beehives, "unmarried females…would think it a sacred duty to kill their brothers."

Darwin's Analysis of Human Morality: (1)-(6)+biologically or historically contingent features F1…Fn= human morality.

Questions: Is Darwin right to think that (1), (2), (3), (4), (5) and (6) are **sufficient** for a sense of right and wrong? Are they all **necessary** components of a sense of right or wrong or is Kant right in thinking that moral thought is possible without sympathy and allied emotions? What is the "space of all possible moralities"? Equivalently, which features of our moral thinking are features of all possible forms of moral thought and which are peculiar to humans?

Further questions: Suppose we accept that a given feature of our moral thinking owes its existence to a species-specific feature of our biology or sociology. Suppose, that is, that we have identified a feature of our moral thinking that is not a feature of all possible moral thinking. Does this undermine our confidence in this aspect of our moral thought in any way? Ought it do so?

Consider Darwin's example: Is it possible for human beings to organize themselves socially in the manner in which bees do? (I can't image this; but my imagination isn't great.) Suppose that we can entertain this scenario in sufficient detail to evaluate its implications. **Might we agree with Darwin that if "we" (or animals as similar to us as is compatible with our living like bees) lived like bees we would think all unmarried female "bee-people" obligated to kill their brothers**, and even agree that if we lived liked bees, unmarried female bee people really would be obligated to kill their brothers, **while nevertheless insisting: (a) that an actual, human (wholly "non-bee") unmarried woman who kills her brother therein acts immorally, where (b) the immorality of this act "holds independently" of our (human, wholly non-bee) attitudes to it?**

I think the answer to this last question is **yes**. The fact that our biology is implicated both in what is good for us and in what we are obligated to do does nothing to undermine the reality of these moral obligations. That is, the biological contingency of the wrongness of a certain action (like killing one's brother) does not help us decide whether our attitudes towards wrongdoers (e.g. brother-killers) partly "constitutes" the wrongness of their acts or whether, instead, the wrongness we attribute to their actions is something wholly independent of these attitudes. After all, the fact that human societies are not organized like bee societies is relevant to (or part of the reason why) it is not okay for a woman to kill her brothers (and it's relevant to our other first-order moral duties as well).

For what it's worth, Darwin agrees with this view insofar as he argues that the biological contingency of a certain features of human morality shouldn't be thought to have skeptical consequences. (See footnote 6 to page 122 where Darwin replies to Miss Cobbe's article "Darwinism in Morals," *Theological Review*, 1872, 188-91.)

3. Darwin's Evidence That Non-Human Animals Exhibit Features (1)-(5) and Therefore Have Something Like Human Morality

"Social animals perform many little services for each other: horses nibble, and cows lick each other, on any spot which itches: monkeys search each other for external parasites; and Brehm states that after a troop of the Cercopithecus griseoviridis has rushed through a thorny brake, each monkey stretches itself on a branch, and another monkey sitting by, 'conscientiously' examines its fur, and extracts every thorn or burr."

Note 1: When hypothesizing about the causal mechanisms of sociable behaviors and instincts Darwin rejects psychological hedonism (i.e. the claim that the only basic motivations are a desire for pleasure and aversion to pain):

"With respect to the impulse which leads certain animals to associate together, and to aid one another in many ways, we may infer that in most cases they are impelled by the same sense of satisfaction or pleasure which they experience in performing other instinctive actions; or by the same sense of dissatisfaction as when other instinctive actions are checked. We see this in innumerable instances, and it is illustrated in a striking manner by the acquired instincts of our domesticated animals; thus a young shepherd-dog delights in driving and running round a flock of sheep, but not in worrying them; a young fox-hound delights in hunting a fox, whilst some other kinds of dogs, as I have witnessed, utterly disregard foxes. What a strong feeling of inward satisfaction must impel a bird, so full of activity, to brood day after day over her eggs… Some instincts are determined solely by painful feelings, as by fear, which leads to self-preservation, and is in some cases directed towards special enemies. No one, I presume, can analyse the sensations of pleasure or pain. In many instances, however, it is probable that instincts are persistently followed from the mere force of inheritance, without the stimulus of either pleasure or pain. A young pointer, when it first scents game, apparently cannot help pointing. A squirrel in a cage who pats the nuts which it cannot eat, as if to bury them in the ground, can hardly be thought to act thus, either from pleasure or pain. Hence the common assumption that men must be impelled to every action by experiencing some pleasure or pain may be erroneous. Although a habit may be blindly and implicitly followed, independently of any pleasure or pain felt at the moment, yet if it be forcibly and abruptly checked, a vague sense of dissatisfaction is generally experienced."

Note 2: Darwin invokes **group selection** to account for the evolution of parental love and affection as well as the more attenuated sympathy humans feel for those relative strangers with whom they identify. "Those communities, which included the greatest number of the most sympathetic members, would flourish best, and rear the greatest number of offspring."

Note though that group selection is not needed to explain the evolution of parental affection when parents don't successfully reproduce a great deal. (I.e. in many cases, the trait of sacrificing for one's offspring (if it is heritable) will be inherited by future generations at greater rates than will its absence because the recipients of these sacrifices (i.e. the offspring of sacrificing parents) will outbreed the offspring of parents who don't sacrifice for them and this will make up for the costs of parental sacrifice (i.e. the fewer offspring that sacrificing parents leave when compared to those parents who don't

sacrifice for their existing offspring).

Note too that if parents who sacrifice for their offspring don't have fewer offspring than parents who don't sacrifice for their offspring, parental sacrifice will not diminish individual fitness. In such a case, **parental altruism** (sacrificing food, comfort etc. for one's children) **isn't evolutionarily altruistic** (i.e. it doesn't diminish an organism's **reproductive** fitness). **This is one way of pointing out that an act of altruism needn't diminish an altruistic individual's reproductive fitness**. (When a sterile person dies to save a friend, she acts altruistically but does not diminish her reproductive fitness because it is already at 0.) **The concept we associate with "altruism" is distinct from the concept that biologists associate with "sacrificing individual reproductive fitness."**

Nevertheless, helping others (especially unrelated or distantly related others) at some cost to herself may inhibit an organism's individual fitness (making her an evolutionary altruist) when compared with other individuals who gain the reproductive benefits of others helping them without incurring the putative reproductive costs of helping others (making them so-called "cheaters"). But natural selection can still preserve the purportedly heritable instinct to help in such cases so long as (a) groups whose members have the instinct (i.e. groups with so called "altruistic" members) have a collective reproductive advantage over groups filled with "cheaters," and (b) the inter-group selective pressures are measurably "stronger than" the intra-group pressures. Indeed, Darwin argues that all animals that live or function in groups must have pro-social instincts and exhibit pro-social behaviors. "All animals living in a body, which defend themselves or attack their enemies in concert, must indeed be in some degree faithful to one another; and those that follow a leader must be in some degree obedient." And this entails that group selection has frequently proven stronger than individual selection.

"The feeling of pleasure from society is probably an extension of the parental or filial affections, since the social instinct seems to be developed by the young remaining for a long time with their parents; and this extension may be attributed in part to habit, but chiefly to natural selection. With those animals which were benefited by living in close association, the individuals which took the greatest pleasure in society would best escape various dangers, whilst those that cared least for their comrades, and lived solitary, would perish in greater numbers. With respect to the origin of the parental and filial affections, which apparently lie at the base of the social instincts, we know not the steps by which they have been gained; but we may infer that it has been to a large extent through natural selection. So it has almost certainly been with the unusual and opposite feeling of hatred between the nearest relations, as with the worker-bees which kill their brother drones, and with the queen-bees which kill their daughter-queens; the desire to destroy their nearest relations having been in this case of service to the community. Parental affection, or some feeling which replaces it, has been developed in certain animals extremely low in the scale, for example, in star-fishes and spiders. It is also occasionally present in a few members alone in a whole group of animals, as in the genus Forficula, or earwigs."

Darwin makes it clear, however, that **we cannot assume that all pro-social behavior is innate, (genetically) inherited or that it consists in instincts that evolved via natural**

selection. Some benevolent behaviors are learned or recently invented. Some result from religious or philosophical ideology. Of course, to learn a pro-social behavior an organism must have the capacity to learn such things and these capacities will ultimately owe their existence to natural selection, but the learning capacity in question may enable the organism that has it to acquire a number of different (mutually incompatible) behaviors. So a learning capacity can evolve through natural selection without the behaviors it enables having so evolved.

As Darwin argues, "It is, however, impossible to decide in many cases whether certain social instincts have been acquired through natural selection, or are the indirect result of other instincts and faculties, such as sympathy, reason, experience, and a tendency to imitation; or again, whether they are simply the result of long-continued habit."

Darwin discusses another curious phenomenon that is hard to explain from a Darwinian perspective: birds who leave behind eggs and fragile offspring when they migrate. Surely this behavior diminishes the mother birds' fitness. One might try to explain this in terms of selection at the species level, but Darwin rejects this attempt. In fact, he provides no evolutionary explanation for it of any kind. (The explanation might just be mechanical: i.e. the inflexibility of the migratory instinct explains why random genetic mutation hasn't yet given rise to birds who resist the migratory instinct in order to tend to their young. If such a mutation were to occur, those mother birds who had it would seemingly have a fitness advantage over mothers who lack it, but it cannot occur for morphological or genetic reasons. **Please let me know if you have come across good work on this question.**)

Here's Darwin on the phenomenon: "We can perceive that an instinctive impulse, if it be in any way more beneficial to a species than some other or opposed instinct, would be rendered the more potent of the two through natural selection; for the individuals which had it most strongly developed would survive in larger numbers. Whether this is the case with the migratory in comparison with the maternal instinct, may be doubted. The great persistence, or steady action of the former at certain seasons of the year during the whole day, may give it for a time paramount force."

Sociability in homo sapiens: Darwin is also agnostic on whether sympathy is innate or learned. Recall, however, that he thinks some form of fellow feeling is inevitable in all (normal) members of a species that lives in groups.

"We are indeed all conscious that we do possess such sympathetic feelings; but our consciousness does not tell us whether they are instinctive, having originated long ago in the same manner as with the lower animals, or whether they have been acquired by each of us during our early years. As man is a social animal, it is almost certain that he would inherit a tendency to be faithful to his comrades, and obedient to the leader of his tribe; for these qualities are common to most social animals. He would consequently possess some capacity for self-command. He would from an inherited tendency be willing to defend, in concert with others, his fellow-men; and would be ready to aid them in any way, which did not too greatly interfere with his own welfare or his own strong

desires….

The virtues which must be practised, at least generally, by rude men, so that they may associate in a body, are those which are still recognised as the most important. But they are practised almost exclusively in relation to the men of the same tribe; and their opposites are not regarded as crimes in relation to the men of other tribes. No tribe could hold together if murder, robbery, treachery, &c., were common; consequently such crimes within the limits of the same tribe 'are branded with everlasting infamy'; but excite no such sentiment beyond these limits. A North-American Indian is well pleased with himself, and is honoured by others, when he scalps a man of another tribe; and a Dyak cuts off the head of an unoffending person, and dries it as a trophy."

4. Darwin on the "Authority" of Morality

The "Function" of Moral Thought: What are the main causes and effects of moral thought, judgment and sentiment? Which of these effects are parts of its evolved "function." That is, which effects are both heritable and contribute to the reproductive fitness of those who exercise moral judgment (or the relevant "group") and therein help explain its persistence over time?

One such function, as Darwin has already noted, is **modification of the behavior of other people**. I assert (in a disapproving tone of voice) that you oughtn't to have Xed, that it was wrong for you to have Xed, or that Xing is immoral or depraved in order to get you not to X anymore. When Xing is something that tends to harm other members of the community in which an organism lives, a general prohibition on Xing (and the associated judgment that Xing is itself wrong or immoral) function to inhibit or mitigate these harms insofar as members of the community can internalize these norms. We can leave it open whether everyone obeys such a prohibition out of a desire for the approval of others or whether some people can "do the right thing for the right reason" in the Humean sense by in effect deciding not to X because Xing is harmful and they don't want to harm others whether or not this will give them a bad reputation or cost them the approval of others.

But Darwin notes that moral judgment acquires **another function** in the lives of those animals capable of reflection and self-control.

"We have not, however, as yet considered the main point, on which, from our present point of view, the whole question of the moral sense turns. Why should a man feel that he ought to obey one instinctive desire rather than another? Why is he bitterly regretful, if he has yielded to a strong sense of self-preservation, and has not risked his life to save that of a fellow-creature? Or why does he regret having stolen food from hunger?"

Questions: Who among us actually feels remorse for failing to sacrifice for others? And would you really regret having stolen food from hunger? Why doesn't Darwin discuss a more paradigmatic case of wrongdoing as when someone regrets having betrayed his friend or spouse?

Perhaps children learn to judge others before they judge themselves, but they eventually learn guilt, remorse and allied emotions. (Recall that Darwin also attributes these emotions to various non-human animals.) **From the first person perspective, my desire for wealth that motivates me to steal at time t and the aversion I experience to my theft at t+n when experiencing remorse for the theft are just two different impulses or experiences. So then why do I experience the remorse?** And why do (most) people judge that remorse is appropriate in such cases, by in effect siding or identifying with the (pro-social) moral sentiment rather than the (antisocial) motive? In Darwin's words,

"Although some instincts are more powerful than others, and thus lead to corresponding actions, yet it is untenable, that in man the social instincts (including the love of praise and fear of blame) possess greater strength, or have, through long habit, acquired greater strength than the instincts of self-preservation, hunger, lust, vengeance, &c. Why then does man regret, even though trying to banish such regret, that he has followed the one natural impulse rather than the other; and why does he further feel that he ought to regret his conduct? Man in this respect differs profoundly from the lower animals."

Darwin's explanation of the perceived **authority** of moral sentiment:

"A man cannot prevent past impressions often repassing through his mind; he will thus be driven to make a comparison between the impressions of past hunger, vengeance satisfied, or danger shunned at other men's cost, with the almost ever-present instinct of sympathy, and with his early knowledge of what others consider as praiseworthy or blameable. This knowledge cannot be banished from his mind, and from instinctive sympathy is esteemed of great moment. He will then feel as if he had been baulked in following a present instinct or habit, and this with all animals causes dissatisfaction, or even misery."

This brings us to Darwin's answer to our initial question: What if anything justifies us in saying that humans are capable of acting morally and immorally but that the behaviors of non-human animals cannot be appropriately assessed in these terms?

Darwin's concession to Kant: "He who is forced to overcome his fear or want of sympathy before he acts, deserves, however, in one way higher credit than the man whose innate disposition leads him to a good act without effort. As we cannot distinguish between motives, we rank all actions of a certain class as moral, if performed by a moral being. **A moral being is one who is capable of comparing his past and future actions or motives, and of approving or disapproving of them. We have no reason to suppose that any of the lower animals have this capacity; therefore, when a Newfoundland dog drags a child out of the water, or a monkey faces danger to rescue its comrade, or takes charge of an orphan monkey, we do not call its conduct moral. But in the case of man, who alone can with certainty be ranked as a moral being, actions of a certain class are called moral, whether performed deliberately, after a struggle with opposing motives, or impulsively through instinct, or from the effects of slowly-gained habit.**"

As an illustration of this difference Darwin returns to the strength of the migratory instinct, which is maladaptive when it leads the mother bird to abandon her young:

"Whilst the mother-bird is feeding, or brooding over her nestlings, the maternal instinct is probably stronger than the migratory; but the instinct which is the more persistent gains the victory, and at last, at a moment when her young ones are not in sight, she takes flight and deserts them. When arrived at the end of her long journey, and the migratory instinct has ceased to act, what an agony of remorse the bird would feel, if, from being endowed with great mental activity, she could not prevent the image constantly passing through her mind, of her young ones perishing in the bleak north from cold and hunger.

At the moment of action, man will no doubt be apt to follow the stronger impulse; and though this may occasionally prompt him to the noblest deeds, it will more commonly lead him to gratify his own desires at the expense of other men. But after their gratification when past and weaker impressions are judged by the ever-enduring social instinct, and by his deep regard for the good opinion of his fellows, retribution will surely come. He will then feel remorse, repentance, regret, or shame; this latter feeling, however, relates almost exclusively to the judgment of others. He will consequently resolve more or less firmly to act differently for the future; and this is conscience; for conscience looks backwards, and serves as a guide for the future….

If any desire or instinct leading to an action opposed to the good of others still appears, when recalled to mind, as strong as, or stronger than, the social instinct, a man will feel no keen regret at having followed it; but he will be conscious that if his conduct were known to his fellows, it would meet with their disapprobation; and few are so destitute of sympathy as not to feel discomfort when this is realised. If he has no such sympathy, and if his desires leading to bad actions are at the time strong, and when recalled are not over-mastered by the persistent social instincts, and the judgment of others, then he is essentially a bad man; and the sole restraining motive left is the fear of punishment, and the conviction that in the long run it would be best for his own selfish interests to regard the good of others rather than his own."

Question: Has Darwin accurately explained the difference between human moral cognition and the (proto) moral cognition of non-human animals? What, if anything, has been left out of Darwin's description of our moral judgments and emotions?

5. Darwin on the Non-innate, Non-Universal Features of Various Moralities

The Variability Objection to Darwin's Account of the Evolution of our Sense of Right and Wrong: If features (1)-(6) account for human morality, why is there so much disagreement on moral matters? Why do different communities hold different moral views? Why has moral opinion changed so much over the course of known human history?

"The imperious word *ought* seems merely to imply the consciousness of the existence of a rule of conduct, however it may have originated. Formerly it must have been often vehemently urged that an insulted gentleman *ought* to fight a duel. We even say that a pointer *ought* to point, and a retriever to retrieve game. If they fail to do so, they fail in their duty and act wrongly."

Darwin's response: We don't know how these variations in moral code come to the fore, but the desire for a good reputation explains widespread adherence to a (more or less arbitrary) norm or law once it is regarded as authoritative by a significant proportion of any given community.

"Dr. Landor acted as a magistrate in West Australia, and relates that a native on his farm, after losing one of his wives from disease, came and said that, "he was going to a distant tribe to spear a woman, to satisfy his sense of duty to his wife. I told him that if he did so, I would send him to prison for life. He remained about the farm for some months, but got exceedingly thin, and complained that he could not rest or eat, that his wife's spirit was haunting him, because he had not taken a life for hers. I was inexorable, and assured him that nothing should save him if he did." Nevertheless the man disappeared for more than a year, and then returned in high condition; and his other wife told Dr. Landor that her husband had taken the life of a woman belonging to a distant tribe; but it was impossible to obtain legal evidence of the act. The breach of a rule held sacred by the tribe, will thus, as it seems, give rise to the deepest feelings, – and this quite apart from the social instincts, excepting in so far as the rule is grounded on the judgment of the community. How so many strange superstitions have arisen throughout the world we know not; nor can we tell how some real and great crimes, such as incest, have come to be held in an abhorrence (which is not however quite universal) by the lowest savages….

The judgment of the community will generally be guided by some rude experience of what is best in the long run for all the members; but this judgment will not rarely err from ignorance and weak powers of reasoning. Hence the strangest customs and superstitions, in complete opposition to the true welfare and happiness of mankind, have become all-powerful throughout the world. We see this in the horror felt by a Hindoo who breaks his caste, and in many other such cases. It would be difficult to distinguish between the remorse felt by a Hindoo who has yielded to the temptation of eating unclean food, from that felt after committing a theft; but the former would probably be the more severe."

6. The Recent Evolution of Morality: From Parochial Tribalism to Belief in Universal Human Rights

Following Hume, Darwin acknowledges that **concern, love or sympathy is (in general) directly proportional to perceived similarity or relatedness and inversely proportional to perceived difference or distance.**

Self-interest is in general stronger than familial concern, which is in turn stronger than love of friends, which is turn stronger than love for the members of one's city, which is in

turn stronger than love for the members of one's state, which is in turn stronger than love for the members of one's race or religion, which is in turn stronger than one's love for the members of one's species which is turn stronger than one's love for animals more generally. Darwin cites this phenomenon to explain slavery and colonialism. **Darwin's view (echoing Hume's) is not that universal benevolence is impossible, but that it is rare and that it is much more common for love and respect to be focused on those with whom one more closely identifies than on strangers (i.e. those with whom one does not closely identify).** (We will see an experimental vindication of these ideas when we turn to the more recent work of the psychologist Daniel Batson.)

"Slavery, although in some ways beneficial during ancient times, is a great crime; yet it was not so regarded until quite recently, even by the most civilised nations. And this was especially the case, because the slaves belonged in general to a race different from that of their masters. As barbarians do not regard the opinion of their women, wives are commonly treated like slaves. Most savages are utterly indifferent to the sufferings of strangers, or even delight in witnessing them. It is well known that the women and children of the North American Indians aided in torturing their enemies. Some savages take a horrid pleasure in cruelty to animals, and humanity is an unknown virtue. Nevertheless, besides the family affections, kindness is common, especially during sickness, between the members of the same tribe, and is sometimes extended beyond these limits."

But Darwin thinks this kind of parochialism is remediable: that European morality is less parochial than the morality of "savages" and that humankind is capable of overcoming the bias for the "near and dear" altogether.

Darwin's general take on the differences between the moralities of Europeans and "Savages":

"The chief causes of the low morality of savages, as judged by our standard, are, firstly, the confinement of sympathy to the same tribe. Secondly, powers of reasoning insufficient to recognise the bearing of many virtues, especially of the self-regarding virtues, on the general welfare of the tribe. Savages, for instance, fail to trace the multiplied evils consequent on a want of temperance, chastity, &c. And, thirdly, weak power of self-command; for this power has not been strengthened through long-continued, perhaps inherited, habit, instruction and religion."

Darwin on what Singer calls the "Expanding Circle of Concern":

"As man advances in civilisation, and small tribes are united into larger communities, the simplest reason would tell each individual that he ought to extend his social instincts and sympathies to all the members of the same nation, though personally unknown to him. This point being once reached, there is only an artificial barrier to prevent his sympathies extending to the men of all nations and races. If, indeed, such men are separated from him by great differences in appearance or habits, experience unfortunately shews us how long it is, before we look at them as our fellow-creatures. Sympathy beyond the confines

of man, that is, humanity to the lower animals, seems to be one of the latest moral acquisitions. It is apparently unfelt by savages, except towards their pets. How little the old Romans knew of it is shewn by their abhorrent gladiatorial exhibitions. The very idea of humanity, as far as I could observe, was new to most of the Gauchos of the Pampas. This virtue, one of the noblest with which man is endowed, seems to arise incidentally from our sympathies becoming more tender and more widely diffused, until they are extended to all sentient beings. As soon as this virtue is honoured and practised by some few men, it spreads through instruction and example to the young, and eventually becomes incorporated in public opinion."

Darwin on the eventual triumph of virtue: "After having yielded to some temptation we feel a sense of dissatisfaction, shame, repentance, or remorse, analogous to the feelings caused by other powerful instincts or desires, when left unsatisfied or baulked. We compare the weakened impression of a past temptation with the ever-present social instincts, or with habits, gained in early youth and strengthened during our whole lives, until they have become almost as strong as instincts. If with the temptation still before us we do not yield, it is because either the social instinct or some custom is at the moment predominant, or because we have learnt that it will appear to us hereafter the stronger, when compared with the weakened impression of the temptation, and we realise that its violation would cause us suffering. Looking to future generations, there is no cause to fear that the social instincts will grow weaker, and we may expect that virtuous habits will grow stronger, becoming perhaps fixed by inheritance. In this case the struggle between our higher and lower impulses will be less severe, and virtue will be triumphant."

Philosophical Task: Evaluate Darwin's optimistic account of moral change—on which it is positive development to ever more universal and deeply entrenched forms of sympathy and love—in light of the events that have transpired since the publication of *Descent* in 1871: recall that there have been two World Wars, several genocides and attempted genocides, the recent resurgence of fundamentalist religions, growing inequality, dangerous changes in the climate, the resurgence of white nationalism in the United States and Europe, etc. (Of course, there has also been an advance in medical and labor-saving technologies.) Are humans becoming more moral? Or are we becoming worse (by our own lights)? Does all this talk of "high" and "low" lead Darwin to uncritically assume that European culture is superior to the culture of those "savages" Europeans exterminated or colonized? Does it lead him to assume that human are better than other animals? How are these value-laden, normative assumptions related to biological science? Does Darwin reject Hume's claim that we ought always to distinguish "ought" from "is" and clearly indicate when we are inferring normative conclusions from value-neutral (or "scientific") premises?

Chapter 5: Darwin on Cultural Evolution

1. The Relationship between Intelligence (or Cognitive Flexibility) and the Predominance of Cultural Evolution over Biological Evolution

In chapter 5, Darwin turns from biological to cultural evolution.

Biological evolution: changes in the biology (e.g. anatomy, DNA) of organisms ultimately yielding different biological species. Darwin explained the history of biological evolution by positing phenotypic variation, which is then subjected to various mechanisms of selection.

The chief evidence for a particular instance of biological change in a species or genus in Darwin's day was anatomical change and fossil evidence of it. The chief evidence today is change in DNA and evidence of it.

Cultural evolution: changes in the sociology (e.g. laws and rituals not itself reducible to changes in anatomy or DNA) of organisms ultimately yielding different cultures (i.e. communities, nations, etc.) explained by various mechanisms of selection (group selection chief among them).

Wallace's Thesis: **Once human intelligence evolved** (where intelligence—however it is measured—is supposed to be something like the phenomena which now leads us to attribute "intelligence" to an "average" member of our species), **biological evolution slowed and cultural evolution picked up speed**. **There has been relatively little biological evolution among homo sapiens in comparison with the evolution of human cultures.**[2]

Darwin cites as examples of cultural evolution: the development of weapons, tools, agricultural techniques, clothes, food, sheds, calendars, scientific theories (or means of predicting future conditions of the weather, etc.), laws and norms (especially those that effect and maintain a division of labor). These are not supposed to be the results of anatomical changes (or changes in DNA).

"The evidence that all civilised nations are the descendants of barbarians, consists, on the one side, of clear traces of their former low condition in still-existing customs, beliefs, language, &c.; and on the other side, of proofs that savages are independently able to raise themselves a few steps in the scale of civilisation, and have actually thus risen. The evidence on the first head is extremely curious, but cannot be here given: I refer to such cases as that of the art of enumeration, which, as Mr. Tylor clearly shews by reference to the words still used in some places, originated in counting the fingers, first of one hand and then of the other, and lastly of the toes. We have traces of this in our own decimal system, and in the Roman numerals, where, after the V, which is supposed to be an abbreviated picture of a human hand, we pass on to VI, &c., when the other hand no doubt was used. So again, "When we speak of three-score and ten, we are counting by the

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[2] Darwin attributes the thesis to Wallace's article in *Anthropological Review*, May 1864, p. clviii. Recent evidence suggests that genetic change is accelerating and that there may be substantive genetic differences that have arisen since the evolution of humans: Laland, K.N. et al. (2010) How culture shaped the human genome: bringing genetics and the human sciences together. Nat. Rev.Genet. 11, 137–148

vigesimal system, each score thus ideally made, standing for 20 – for 'one man' as a Mexican or Carib would put it." [20 being the sum of a man's fingers and toes.] According to a large and increasing school of philologists, every language bears the marks of its slow and gradual evolution. So it is with the art of writing, for letters are rudiments of pictorial representations. It is hardly possible to read Mr. M'Lennan's work and not admit that almost all civilised nations still retain traces of such rude habits as the forcible capture of wives. What ancient nation, as the same author asks, can be named that was originally monogamous? The primitive idea of justice, as shewn by the law of battle and other customs of which vestiges still remain, was likewise most rude. Many existing superstitions are the remnants of former false religious beliefs. The highest form of religion – the grand idea of God hating sin and loving righteousness – was unknown during primeval times."

Questions: How much biological evolution have homo sapiens undergone? How much cultural evolution? What is the relation between the effect of a culture on the reproductive fitness of those groups who embrace it and the moral or other value of that culture? Might a culture we judge morally repugnant on reflection (utilizing the biologically evolved moral sense that Darwin attributes to us) nevertheless persist via group selection because those nations or communities that instantiate it (or more or less adhere to its customs and laws) have a reproductive advantage over those nations or groups that do not? Might this be true of some (if not all) of the Judeo-Christian framework (however that framework is further defined)?

Relevant here are Jared Diamond's contrary claims (in *Guns, Germs and Steel*) that the colonization of the Americas, Africa and much of Asia by Europeans is explained more by biological and environmental factors (such as the latitudinal mobility of European people, plants and animals in comparison with the relative longitudinal immobility of African people, plants and animals) than by cultural or ideological factors.

2. Group Selection for Greater Intelligence

Darwin argues that **intelligence is adaptive at the group level** insofar as it persisted and spread because groups composed of more intelligent creatures are (in virtue of this intelligence) more likely to reproduce and persist than groups comprised of less intelligent creatures.

"We can see, that in the rudest state of society, the individuals who were the most sagacious, who invented and used the best weapons or traps, and who were best able to defend themselves, would rear the greatest number of offspring. The tribes, which included the largest number or men thus endowed, would increase in number and supplant other tribes."

Question: Is this an accurate explanation of the development of weaponry? What are the comparative roles of the physical environment (the availability of iron ore, etc) and intelligence (as Darwin is thinking of it) in explaining the trajectory this history wound up taking?

It becomes clear that Darwin is trying to explain the birth of peoples or nations and he does this by marrying **the group selection of greater intelligence** (described above) to a **thesis of absorption** according to which conquered tribes are assimilated into the tribes that conquered them so that offspring of the conquered come to assume that they are descendants of a single set of ancestors (see fn. 2, p. 153).

"It is…highly probable that with mankind the intellectual faculties have been mainly and gradually perfected through natural selection; and this conclusion is sufficient for our purpose."

And yet, no sooner does Darwin claim that the average intelligence of the members of "civilized" nations" is greater than the average intelligence of the members of those "barbarous" ones they are "everywhere supplanting" (colonizing), then he turns to an alternative explanation (which is to his mind a complimentary one): namely that the cultural innovations—that are due, according to Darwin, to exercises of greater than average intelligence—are preserved through imitation.

Question: **Mightn't Darwin be right that highly intelligent people invented fitness-enhancing technology (fire, guns, tractors etc) and mightn't this technology supply a fitness advantage for the members of the inventor's community (in comparison to rival groups or tribes) *without* its augmenting the average intelligence of that group?** Don't most of those who are the recipients of the fitness advantages brought by fire, guns and tractors lack the intelligence it would take to invent (or be part of the process that led to the invention of) fire, guns and tractors? Mightn't an invention increase the average fitness of the inventor's community (or those with whom she shares the technology) while decreasing their average intelligence? Is recently invented technology having this effect right now? (Perhaps playing video games makes one less rather than more suited to acquiring the knowledge of computer science necessary to create video games.)

Darwin's response to this worry: "Now, if some one man in a tribe, more sagacious than the others, invented a new snare or weapon, or other means of attack or defence, the plainest self-interest, without the assistance of much reasoning power, would prompt the other members to imitate him; and all would thus profit. The habitual practice of each new art must likewise in some slight degree strengthen the intellect."

Question: How convincing is Darwin's response? Does the incorporation of a new technology invariably "strengthen the intellect"?

3. Group Selection for Greater Virtue

"When two tribes of primeval man, living in the same country, came into competition, if (other circumstances being equal) the one tribe included a great number of courageous, sympathetic and faithful members, who were always ready to warn each other of danger, to aid and defend each other, this tribe would succeed better and conquer the other. Let it be borne in mind how all-important in the never-ceasing wars of savages, fidelity and

courage must be. The advantage which disciplined soldiers have over undisciplined hordes follows chiefly from the confidence which each man feels in his comrades. Obedience, as Mr. Bagehot has well shewn, is of the highest value, for any form of government is better than none. Selfish and contentious people will not cohere, and without coherence nothing can be effected. A tribe rich in the above qualities would spread and be victorious over other tribes: but in the course of time it would, judging from all past history, be in its turn overcome by some other tribe still more highly endowed. Thus the social and moral qualities would tend slowly to advance and be diffused throughout the world….It must not be forgotten that although a high standard of morality gives but a slight or no advantage to each individual man and his children over the other men of the same tribe, yet that an increase in the number of well-endowed men and an advancement in the standard of morality will certainly give an immense advantage to one tribe over another. A tribe including many members who, from possessing in a high degree the spirit of patriotism, fidelity, obedience, courage, and sympathy, were always ready to aid one another, and to sacrifice themselves for the common good, would be victorious over most other tribes; and this would be natural selection. At all times throughout the world tribes have supplanted other tribes; and as morality is one important element in their success, the standard of morality and the number of well-endowed men will thus everywhere tend to rise and increase…. In regard to the moral qualities, some elimination of the worst dispositions is always in progress even in the most civilised nations. Malefactors are executed, or imprisoned for long periods, so that they cannot freely transmit their bad qualities. Melancholic and insane persons are confined, or commit suicide. Violent and quarrelsome men often come to a bloody end. The restless who will not follow any steady occupation—and this relic of barbarism is a great check to civilization—emigrate to newly-settled countries; where they prove useful pioneers. Intemperance is so highly destructive, that the expectation of life of the intemperate, at the age of thirty for instance, is only 13.8 years; whilst for the rural labourers of England at the same age it is 40.59 years. Profligate women bear few children, and profligate men rarely marry; both suffer from disease. In the breeding of domestic animals, the elimination of those individuals, though few in number, which are in any marked manner inferior, is by no means an unimportant element towards success. This especially holds good with injurious characters which tend to reappear through reversion, such as blackness in sheep; and with mankind some of the worst dispositions, which occasionally without any assignable cause make their appearance in families, may perhaps be reversions to a savage state, from which we are not removed by very many generations. This view seems indeed recognised in the common expression that such men are the black sheep of the family."

Questions: Are people today more virtuous than early homo sapiens? Which virtues might have spread and persisted in the manner Darwin suggests? Are there any virtues that do not increase the average reproductive fitness of the members of the virtuous agent's community?

The Puzzle of Altruism: Immediately after he suggests that the virtues of obedience, fidelity and courage lend this fitness advantage to groups whose members have them, Darwin worries that the very same traits diminish the individual fitness of those who have

them when this is compared to those in their group who lack them. This has come to be known **as *the traditional evolutionary "problem of altruism"*:**

"But it may be asked, how within the limits of the same tribe did a large number of members first become endowed with these social and moral qualities, and how was the standard of excellence raised? It is extremely doubtful whether the offspring of the more sympathetic and benevolent parents, or of those who were the most faithful to their comrades, would be reared in greater numbers than the children of selfish and treacherous parents belonging to the same tribe. He who was ready to sacrifice his life, as many a savage has been, rather than betray his comrades, would often leave no offspring to inherit his noble nature. The bravest men, who were always willing to come to the front in war, and who freely risked their lives for others, would on an average perish in larger numbers than other men. Therefore, it hardly seems probable that the number of men gifted with such virtues, or that the standard of their excellence, could be increased through natural selection, that is, by the survival of the fittest; for we are not here speaking of one tribe being victorious over another."

Darwin's solution to the problem:

(1) Begin with *reciprocation*:

"In the first place, as the reasoning powers and foresight of the members became improved, each man would soon learn that if he aided his fellow-men, he would commonly receive aid in return."

(2) Reciprocation augments *sympathy* for those with whom one has successfully interacted.

(3) Such sympathy gives rise to *genuinely benevolent actions* in which we help others without expecting help in return.

"From this low motive he might acquire the habit of aiding his fellows; and the habit of performing benevolent actions certainly strengthens the feeling of sympathy which gives the first impulse to benevolent actions."

(4) Aiding one's friends and family (or fellow tribes-people) without first calculating whether this is in one's self-interest somehow becomes a *habit*.

(5) Such habits are *inherited*.

"Habits, moreover, followed during many generations probably tend to be inherited."

(6) And these habits are *reinforced by social rewards and sanctions* (negative and positive gossip leading to good and bad reputations) where the effects of spreading such gossip generally raises the individual reproductive fitness of those that do so (by increasing their interactions with those who have the relevant slate of virtues and

decreasing their interactions with those who lack them).

"At how early a period the progenitors of man in the course of their development, became capable of feeling and being impelled by, the praise or blame of their fellow-creatures, we cannot of course say. But it appears that even dogs appreciate encouragement, praise, and blame. The rudest savages feel the sentiment of glory, as they clearly show by preserving the trophies of their prowess, by their habit of excessive boasting, and even by the extreme care which they take of their personal appearance and decorations; for unless they regarded the opinion of their comrades, such habits would be senseless….To do good unto others – to do unto others as ye would they should do unto you – is the foundation-stone of morality. It is, therefore, hardly possible to exaggerate the importance during rude times of the love of praise and the dread of blame. A man who was not impelled by any deep, instinctive feeling, to sacrifice his life for the good of others, yet was roused to such actions by a sense of glory, would by his example excite the same wish for glory in other men, and would strengthen by exercise the noble feeling of admiration. He might thus do far more good to his tribe than by begetting offspring with a tendency to inherit his own high character."

For a more precise model, see Kitcher's paper posted here: http://www.aaron-zimmerman.com/wp-content/uploads/2015/01/Kitcher-Altruism-J-Phil.pdf

4. Social Darwinism

"With savages, the weak in body or mind are soon eliminated; and those that survive commonly exhibit a vigorous state of health. We civilised men, on the other hand, do our utmost to check the process of elimination; we build asylums for the imbecile, the maimed, and the sick; we institute poor-laws; and our medical men exert their utmost skill to save the life of every one to the last moment. There is reason to believe that vaccination has preserved thousands, who from a weak constitution would formerly have succumbed to small-pox. Thus the weak members of civilised societies propagate their kind. No one who has attended to the breeding of domestic animals will doubt that this must be highly injurious to the race of man. It is surprising how soon a want of care, or care wrongly directed, leads to the degeneration of a domestic race; but excepting in the case of man himself, hardly any one is so ignorant as to allow his worst animals to breed…. if we were intentionally to neglect the weak and helpless, it could only be for a contingent benefit, with an overwhelming present evil. We must therefore bear the undoubtedly bad effects of the weak surviving and propagating their kind; but there appears to be at least one check in steady action, namely that the weaker and inferior members of society do not marry so freely as the sound; and this check might be indefinitely increased by the weak in body or mind refraining from marriage, though this is more to be hoped for than expected."

Question: What moral standard does Darwin assume in arguing that the world is worse on the whole because people with physical and mental "handicaps" or impairments are able to reproduce at higher rights than they would in the absence of social welfare programs? What is the relation between the concept of "bad" utilized in the judgment that losing one's hearing or sight or legs is "**bad** for you" and the concept of "bad" utilized in the

judgment that "it is **bad** for society (or society is worse overall) to have people who (because of genetic defect) lack hearing or sight or legs to reproduce at a rate equivalent to the rate at which those who lack these defects reproduce"? When Darwin says that he "hopes" (though does not expect) that the "weaker and inferior members of society" will refrain from marriage and reproduction, what kind of values does he express or betray? How do these values compare with the values affirmed in our declaration of independence and constitution: e.g. the claim that all men are created equal, or that we are all equal in the eyes of the law?

(1) Darwinian Premise Asserting the Positive Value of "Proper" Biological Functioning: Lacking hearing or sight or legs is **bad** for an animal.
Therefore,
(2) Darwin's Preliminary Conclusion Asserting the Disutility (or Negative Value) of Biological "Impairments": A population of animals is better off insofar as its members have hearing, sight and legs.
Therefore,
(3) (Darwin's Cousin Galton's) Eugenic Conclusion: We ought to encourage those who have hearing, sight and legs to reproduce and discourage those who lack these traits from reproducing.

Question: How good are these inferences? What is the relation between biological value and moral value?

Darwin seems to think the inference from (1) to (2) is fine. He just resists the inference his cousin Galton makes from this preliminary conclusion to his ultimate conclusion (3), which is a prescription for eugenics.

"The aid which we feel impelled to give to the helpless is mainly an incidental result of the instinct of sympathy, which was originally acquired as part of the social instincts, but subsequently rendered, in the manner previously indicated, more tender and more widely diffused. Nor could we check our sympathy, even at the urging of hard reason, without deterioration in the noblest part of our nature."

Philosophical Task: Assess the steps of the above inference and with it the legitimacy or utility of biological conceptions of value.