

# Chapter 19

## Sociobiology

### 19.1 Readings and Homework

- Readings:
  - WILSON (409-14, 450-9);
  - GOULD (415-9);
  - RUSE AND WILSON (507-11);
  - DE WAAL (511-7)
- Further Reading: Holcomb and Byron, “Sociobiology”, SEP
- Study Questions:
  1. What is the theoretical problem of sociobiology?
  2. How sociobiology tries to answer the problem?
  3. Where do our moral behaviors come from, according to, respectively, ethical intuitionism and ethical behaviorism?
  4. What is Gould’s main objection against Wilson’s theory (you can give the Eskimo example)?
  5. What are the possible explanation for incest avoidance according to?
  6. In what sense is ethics a ”shared illusion” according to Ruse and Wilson?

## 19.2 Introduction

- The problem: how to make sense of apparent altruism in the animal realm within the theory of evolution?

- There are successful modelizations of how altruistic behaviors can be selected

- So that: sociobiology: successful expansion of the theory of evolution to the domain of animal sociability (before: only morphology)

- Can we go on and apply to human behavior? Much less successful.

The problem is obviously

- the importance of the contribution of the mind and the culture of human beings;

- the failure of genetic determinism.

## 19.3 Wilson

From Prof. Schmaus course notes:

### 19.3.1 Sociobiology

#### A. Sociobiology defined: (410-1)

1. "systematic study of the biological basis of all social behavior" (410, q.v.)

2. at present is concerned with animal societies

3. but is also interested adaptive features of society of early and contemporary primitive human societies (411)

#### B. sociology "sensu stricto" at present totally ignores evolutionary explanations (411)

1. for Wilson, this is a mistake

2. for Wilson, sociology, the other social sciences, and the humanities are branches of biology (q.v.)

C. in a later piece, titled "On Consilience," Wilson argues that sociobiology will play an important role in bringing about the **unity of our knowledge** (450)

1. he sees physics, chemistry, and biology as having already achieved a "consilience" (q.v.)

2. the time has come to bring in the social sciences and the humanities as well

**D. traditionally, academics have thought that there was some sort of an epistemological break between the natural and the human sciences**

1. the biological study of the human brain, he thinks, will provide a new foundation for the social sciences and humanities (450)

2. although it is true that all culture is learned, it is shaped by the brain, which is a product of evolution (451, q.v.)

a. the brain evolved as an instrument for survival, not for arriving at truth

b. furthermore, it evolved during the stone age (453)

c. one of the tasks of the sciences is to correct the distortions our brain introduces

### 19.3.2 Explaining Cultural differences (411-2)

**A. it's part of conventional wisdom that "all cultural variation is phenotypic rather than genetic in origin"** (411, q.v.)

**B. Wilson grants that:**

1. cultures can change quickly

2. there is little genetic difference among human populations

a. for instance, Lewontin has shown there is more variation in blood type within populations than between them (411)

b. so there is no reason to assume that the same is not true for genes affecting behavior

**C. however, Wilson thinks it goes too far to say that genetic variation makes no contribution at all to cultural differences**

1. a genetic contribution to personality traits has been shown (See 412 for list)

2. hence, if the proportions of these traits varied from population to population, this could go part of the way to explaining cultural differences

**D. Wilson sees the need for an "anthropological genetics" to study these differences**

**E. this study would take two approaches:**

**1. studying basic patterns of human behavior**

a. most elementary rules of human behavior will constitute a "biogram" in much the same way that zoologists will construct an "ethogram" of the

typical behavior patterns for other species

b. variations among cultures could indicate underlying genetic differences

**2. phylogenetic analysis**, comparing humans with other primate species (412)

a. to try to uncover basic primate traits

b. although this approach has been taken by certain popular authors, it has not yet been done with rigor

c. the proper way to do this (412-3)

1.) discard traits that vary from species to species or genes to genus

2.) look for traits that are constant throughout families (?) or the order Primates

## 19.4 Determinism vs. potentiality: Gould against Wilson

From Prof. Schmaus course notes:

A. Critics like Gould are willing to grant that **we are biological creatures** with certain sorts of biological potentials, who would lead very different sorts of lives if we were very different sorts of creatures

**B. however, Gould criticizes what he takes to be the biological determinism in Wilson's Sociobiology (415)**

1. Wilson claims that there are genes for things like aggression and gender differences and even that there are genetic difference underlying cultural differences (416)

2. his critics protest that there is no direct evidence for the genetic control of human behavior

[...]

**C. Gould sees Wilson giving only indirect evidence for his claims that employ the following argument strategies:**

**1. universality (416)**

a. that is, if certain behavior patterns are invariably found in all human cultures and in our closest primate relatives, they may be genetic

b. Gould argues that Wilson tends to dismiss counter-evidence to his claims that there are cultural universals (417)

c. But even if something were universal, that would not prove that it's genetically based

#### 19.4. DETERMINISM VS. POTENTIALITY: GOULD AGAINST WILSON<sup>225</sup>

- 1.) similar results do not imply similar causes
- 2.) in fact, biologists recognize this fact in their concept of biological analogies
  - a.) e.g. birds and bugs both have wings but they don't have a common ancestor who did
  - b.) Gould argues that many behavioral similarities between humans and other primates are only analogous

##### **2. Continuity**

- a. this argument in Wilson (417)
  - 1.) takes altruistic acts in other animal species
  - 2.) plausibly explains them in terms of either kin selection or selection for "reciprocal altruism"
  - 3.) then concludes that altruistic behavior in humans is also genetic
- b. Gould says that once again, similarity of result does not imply similarity of cause (417-8)

##### **3. adaptiveness (418)**

- a. there is no question that human social practices can be adaptive – he cites Marvin Harris's functionalist anthropological explanations of things like dietary taboos
- b. however, the fact that these are adaptive does not prove that they are genetic
- c. he takes the oft-cited example of the Eskimos putting grandma out to die to conserve food
  - 1.) one could argue that Eskimo families with altruistic genes that would allow for such sacrifice have been selected for
  - 2.) but one could also argue that families with a tradition of such sacrifice, who celebrate it in song and story, have an advantage over others who have no such traditions (418)

End of Prof. Schmaus course notes.

##### **Gould's point in a nutshell:**

1. The debate is not between environmentalism and science but between biological determinism and biological potentiality. Both views accept the underlying biological nature of human beings, but the latter denies biological beings, human or not, are genetically "programmed".
2. Biological determinism has always been used to defend existing social arrangements as biologically inevitable – conservatism

3. Arguments are based on a main principle: “Similar results need not to imply similar causes”, a principle which is invalid in biology: there more than one way to skin a cat – link with reductionism vs. supervenience

## 19.5 Wilson’s answer: “consilience” and ethics as an illusion

From Prof. Schmaus:

### 19.5.1 Introduction

- A. in spite of the vogue of Spencerism among wealthy Americans, evolutionary ethics never really caught on (507)
  1. on the contrary, Social Darwinism seems immoral to many people
  2. alternatives proposed by people like Kropotkin have not fared much better (508)
- B. besides, philosophers since Hume have argued that there is a logical gap between matters of fact and matters of morality
  1. the philosopher G. E. Moore calls this the naturalistic fallacy: trying to deduce statements that say what we ought to do from statements that say what is (508)
  2. the naturalistic fallacy says that what happens in nature is good
  3. as de Waal explains,
    - a. ”attempts to derive ethical norms from nature are highly problematic” (513)
    - b. biology can tell you how things are, but there is no logical connection between what it says is statistically ”normal” behavior and judgments of value that we attach to it

### 19.5.2 Ruse and Wilson on the evolution of morality

- A. Nevertheless, Ruse and Wilson think it’s ”too quick” to conclude that therefore evolution and ethics have nothing to do with one another (508)

19.5. WILSON'S ANSWER: "CONSILIENCE" AND ETHICS AS AN ILLUSION<sup>227</sup>

1. they start with two propositions science has established as fact:
    - a. social behavior of animals is under control of genes
    - b. human beings are animals
  2. then argue that there is a chain of reasoning that leads to the conclusion that there is a distinctly human but still biologically based ethical sense"
    - a. We are talking about social behavior here: we know that it can be in an individual's self-interest to cooperate with others (508)
    - b. and we know that nature can bring about altruism
      - 1.) if self-sacrificing behavior helps relatives who share genes, we say that it is brought about by selfish genes
      - 2.) to say that the genes are selfish is not to imply anything about the motives or intentions of the individual
        - a.) first we have tit-for-tat reciprocity (Pinker, 9)
        - b.) then cheater detection
        - c.) so then it there's an advantage to appearing generous and fair
        - d.) but the best way to do this is to actually be generous and fair (9-10)
- B. According to Wilson and Ruse, there are several ways to get altruism
    1. one is to go the way of the ants and be totally under the control of instincts
      - a. but if something new were to happen, we would be stuck with maladaptive behavior (508-9)
      - b. this may be okay for insects, which are cheap to produce
      - c. but there is heavy parental investment in human offspring
    2. the other extreme is to have super-brains and work out all the consequences of one's actions (508)
      - a. but then we might end up needing a longer childhood to develop (509)
      - b. also, if nothing were programmed in, we'd be unable to make up our minds quickly in a crisis (509)

3. instead of either of these extremes, what we have instead are "epigenetic rules"
  - a. innate dispositions that incline us towards certain courses of action, such as fear of heights, snakes, and spiders; incest avoidance
  - b. also include the belief that make us feel that we ought to help our fellows

### 19.5.3 De Waal: Are animals moral?

- A. de Waal thinks that ultimately this is a semantic question and thus a waste of time (517)
  1. he finds a continuity in the animal kingdom, with other species sharing many of the sentiments and cognitive abilities that underlie human morality (516)
  2. nevertheless, he hesitates to call members of any other species moral beings
- B. the question whether animals have morality is like the question whether they have culture, politics, or language
  1. argues that there is evidence that primates in particular have them to lesser degrees
  2. claims only similarity, not identity, between primate and human behavior
- C. de Waal thinks that human morality, like language, is too complex to be learned by trial and error and too variable to be genetically programmed (512)
  1. de Waal prefers to think that we are born with the ability to learn social norms, just as we are born with the ability to learn a language (513)
  2. nevertheless, human morality is not infinitely variable, but is rooted in certain things that have been produced by evolution and that can be detected in animals, such as:
    - a. capacities of empathy and sympathy
    - b. mutual aid



## 19.5. WILSON'S ANSWER: "CONSILIENCE" AND ETHICS AS AN ILLUSION<sup>229</sup>

- c. sense of fairness
- d. needs of the young for care (514)
- e. desire to belong to group
- D. also, as de Waal points out, even if we observe animals acting in ways that conform to our notions of morality, that does not mean that they are acting morally (515)
  1. according to philosophers, human morality involves making rational choices (513)
  2. but animal behavior does not rest on moral deliberation the way that ours does (515, q.v.)
  2. without language, animals cannot formulate and discuss moral principles (q.v.)
- E. however, de Waal also warns us that we ought not to make the mistake of assuming that all human beings are moral philosophers, either
  1. people are not always rational and may act for emotional reasons
  2. hence, he thinks it's "probably incorrect" to say that chimps showing kindness act out of instinct while humans acting this way do so out of moral decency (516)
- F. thus he defends the use of terms like "friendly" and "sympathy" in describing animal behavior
  1. others feel they have to substitute more scientific-sounding words like "affiliative" (512) for friendly and "succorant behavior" (514) for that which reflects sympathy, but have no trouble attributing violence and aggression to animals
  2. for de Waal, this is just unfair: if animals can have enemies, they can have friends, etc. (512, q.v.)

### 19.5.4 Is Morality an Illusion?

- A. Ruse and Wilson make clear that although evolution may produce deeply held beliefs about right and wrong, it does not justify them

1. our belief in morality is merely an adaptation to further our reproductive ends (510)
  2. it is a collective illusion "fobbed off on us by our genes to get us to cooperate" (q.v.)
  3. as Pinker puts it, if the difference between right and wrong is simply a matter of how evolution has shaped our brains (10)
    - a. why should we consider it to be any more real than the qualitative difference between, say, red and green, or between the taste of ripe fruit and rotten meat?
    - b. how can we argue that things like slavery and genocide are wrong and not merely distasteful to us?
- B. however, Ruse and Wilson do not wish to be understood as saying that ethics is nothing or as suggesting that evolutionary thinking leads to moral relativism (510)
    1. natural selection distinguish things like Be kind to children from things like Show respect to cabbages
    2. that is, it selects those things that foster group survival and harmony and thus reproductive success
    3. our biology achieves these ends by making us think there is some higher, objectively based moral code (510)
  - C. One traditional way to solve the problem has been to say that morality is based on God (Pinker, 10)
    1. but as Plato argued, this raises a dilemma: either God has good reasons behind his moral rules or he does not (10)
      - a. if he does not, why take them seriously? Suppose he told us to torture children?
      - b. if he does have good reasons, why dont we just appeal directly to them?
    2. but that raises the question as to where these reasons come from and what makes them good reasons
      - a. they certainly dont exist in any physical sense
      - b. do they exist in some abstract sense, in the way that the truths of mathematics do?

## 19.6. PINKER: IS WHAT IS GOOD FOR GROUP SURVIVAL NECESSARILY MORAL? 231

- D. Ruse and Wilson anticipate the objection that just as evolution has given us eyes to see things that really exist, we perceive moral rules that really exist in this way (510)
  1. in reply, they argue that we perceive as moral those things that are adaptive for us
  2. if termites that ate their dead had moral philosophers, their philosophers would say cannibalism is good (511)
- E. Ruse and Wilson argue that human evolution gives ethics a new "foundation" in our shared human nature and need for reciprocity (510, q.v.), which calls for:
  1. a deeper, more objective study of human nature
  2. turning ethics into an applied science
  3. similarly, de Waal thinks that biology is about to take ethics away from philosophy, and for similar reasons, having to do with the evolution of the neurobiological underpinnings of moral feelings (517, q.v.)

## 19.6 Pinker: Is What is Good for Group Survival Necessarily Moral?

- A. Pinker reports that anthropologists like Richard Schweder and Alan Fiske have found five different themes in common among all the cultural diversity in moral rules
  1. it is bad to harm others and good to help them
  2. fairness: return favors, reward benefactors, punish cheaters
  3. group loyalty, sharing and solidarity among its members and conforming to its norms
  4. deference to authority and respect for those of high status
  5. exalting purity, cleanliness, and sanctity while loathing defilement, contamination, carnality
- the psychologist Jonathan Haidt has found similar themes in peoples instinctual reactions to certain situations in our own culture
  1. examples:

- a. incest between consenting siblings (3)
  - b. old flag as cleaning rag
  - c. eating family dog
  - d. others: see pp. 6-7. Which of each pair is worse?
2. Haidt finds that instead of engaging in moral reasoning, they began with a conclusion they reach emotionally, and then try to rationalize it (4)
- this is also illustrated in the way people react to the trolley problem
    1. okay to flip the switch to save 5 men but kill five?
    2. okay to toss fat man off bridge to save five?
    3. answers are consistent across age, gender, ethnic, religious, nationality, and educational groups
    4. but some brain-damaged people think it is okay to toss the fat guy (5), and brain scans show people using different parts of their brains for each of these two questions (4-5)
  - Pinker suggests these five themes have evolutionary roots (7)
    1. monkey that wont pull chain that delivers food to him and shock to another monkey
    2. respect for authority: pecking orders in animal kingdom
    3. maintaining purity protects us from disease, etc.
    4. fairness is close to what scientists call reciprocal altruism (7)
    5. group loyalty may be rooted in feelings to help relatives (8)
    6. however, hes not claiming that anyone has found genes for morality (5)
  - these five themes help him to explain how the moral sense can be both universal and variable (8)
    1. same themes expressed differently in different cultures: e.g., purity expressed in dietary restrictions in different religions (8)
    2. Haidt finds liberals tend to value harm and fairness principles above the rest; conservatives value all more or less equally

19.6. PINKER: IS WHAT IS GOOD FOR GROUP SURVIVAL NECESSARILY MORAL?233

- It also helps him to explain how we may be subject to moral illusions (12)
  1. we may confuse morality with purity, status, conformity (12)
  2. see quotation from Leon Kass, who appears to value sense of repugnance over moral reasoning
  3. Pinker points out that people have shuddered at all sorts of morally irrelevant violations of purity, such as drinking from the same water fountain as a Negro or finding homosexuality offensive
  4. purity also figures into peoples assessments of the relative moral worth of Mother Teresa and Bill Gates (1)
- I'd argue that respect for authority and group loyalty can lead people to do things that are not merely morally irrelevant, but morally repugnant
  1. "I was only following orders."
  2. jailing the teacher in Sudan who allowed her class to name a teddy bear Muhammad
  3. preferential hiring practices
  4. even racism
- yet it is easy to see how these things can foster group survival and harmony and thus reproductive success
  1. consider the role that group loyalty, respect for authority, and ideals of purity played in maintaining the group of fundamentalist Mormons who have been in the news lately
  2. and look how many kids they produced!

I. Pinker suggests that although a full-blooded moral realism may strike some as extreme, there is a more acceptable, moderate version, in which a rational person will prefer morality (10-11)

  1. one reason has to do with the fact that there are many situations in real life in which two parties are better off if they act unselfishly than if they act selfishly (11)
  2. the other reason has to do with rationality itself: it can't depend on an egocentric point of view. One has to be able to state one's case in

such a way that one is forced to treat the other person the same way the Golden Rule

J. Pinker concludes

1. by saying that theres more to morality than our inherited moral sense, and the science of the moral sense does not make moral reasoning obsolete
2. and arguing that far from debunking morality, the science of the moral sense will help us sort out the illusions from the things that are defensible (12)

End of Prof. Schmaus' notes

## 19.7 Conclusion

- **Sociobiology** is the study of the biological underpinning of social behavior in both human and non-human animals
- **What Sociobiology should not involve:**

1. *Reductionism*

The positivist ideal, which sees the entire body of knowledge as organized tree-like system from fundamental physics at its roots and sociology as its last branches, is both unattainable and undesirable, because:

- Various domains of science involves various concepts and methods : there is single unified science
- There is no mere reduction of complex systems to the underlying simple systems. Instead, there is a relation of *supervenience*: a many-one relation between the low level and the high level domains

For example: *the biological facts supervene on the physical facts*

This means that, different biological facts correspond to different underlying physical situations. That said, there are various underlying physical situations which are compatible with a given biological fact.

Try with: sociology / psychology and psychology / biology

- Problem: Is not reductionism an important part of scientific methodology?

Distinction: methodological reductionism vs. metaphysical reductionism

To take a reductionist point of view as a method for the advancement of science does not imply that you should commit to the idea that all the properties of systems at the high level domain reduce to properties of systems at the lower level domain.

## 2. *Genetic determinism*

- Genetic determinism, i.e. the idea that all our properties are determined by our genetic “program” has been falsified during the last two decades: there is no one-one correspondence between genes and traits (one (or one set of) gene(s) does NOT correspond to one trait and one trait does not correspond to one gene). The relation is much more complex !

- If genetic determinism is false in general, it is also false for social, cultural and ethical behaviors.

One easy way to see this:

- if your culture and values are genetically determined, then you cannot change it!! But there is overwhelming evidence that we can change our social behavior, our cultural habits, our values. Hence, these are not fully determined by our genes

## 3. *Relativism*: all values are equal

(a) There are no good arguments for Relativism

- genetic fallacy: it is not because something is born thanks to a contingent history that it is relative to this history:

Example: the Earth is round, Laws of physics

- the differences are most often superficial: eating meat or eating your grand mother?

(b) Relativism is falsified:

There *are* universal values, and this, the relativist view cannot explain!

## • What remains interesting in Sociobiology

### 1. *Cultural behavior and ethical values do not conflict with evolution*:

Cultural behaviors may be “selected” by nature, but the transmission does not need to be through the genes ! Habits and values are selected, but are transmitted by tradition, teaching and learning. Nature selects these populations who perpetuate adaptive behavior through teaching and tradition. Notion of cultural evolution.

And this allows to explain that 1. we can change our values, and 2. some cultural habits seem to conflict with evolution!

2. *This is not saying that human are ‘above’ the animal realm: animals are not determined either!*

Overwhelming evidence of learning, tradition, communication among animals.

What do you think young kitten learn when they play together?

3. What is innate is not our cultural habits and moral values, but only *the ability to learn these habits and values*, which involves an *innate but open framework* ready to be filled in with specific values and habits.

- Comparison with language: Chomski and the notion of a universal grammar: there are some very general and open rules that are innate. We learn a language in filling in the gaps in the innate framework.

- In the same way, we could say that we have a general framework, that make us understand moral behavior when we are little kids. Now, the specifics of the moral values and behaviors are going to depend on the environment we are in.

For example, if “authority” and “fairness” are both part of the innate framework, we are going to value one above the other according to our experience. What is more wrong. Should the chief in your kids’ group have more candies than the others just because he is the chief?