

# Human behavior

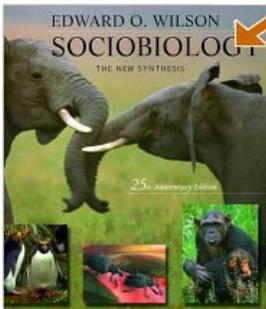
evolutionarily explained

*Next time*

Please write down 1-3 subjects/questions which you think are the 'burning issues' in behavioral ecology today or in the near future.

*Short history of a controversy*

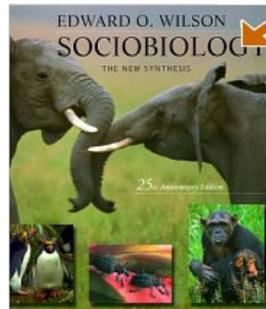
## Wilson's book



**Sociobiology:** the study of social behavior in animals, its **ultimate** reasons (evolution), **proximate** mechanisms, evolutionary history, and distribution across species.

*Short history of a controversy*

## Wilson's book

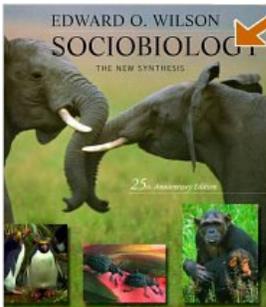


**Chapter No. 27:** The sociality of Man

... 'a can of worms' is an understatement.

*Short history of a controversy*

## Wilson's book

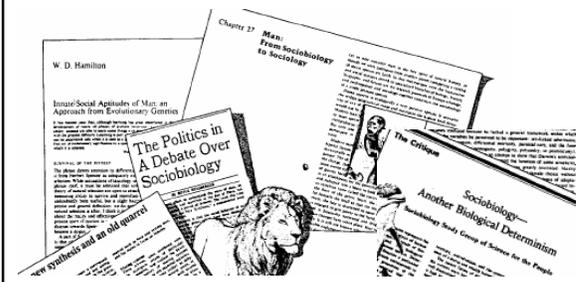


**Chapter No. 27:** The sociality of Man

This was so lastingly controversial that the subject of human behavior and its evolution rebranded itself as 'Evolutionary Psychology'.

*Short history of a controversy*

## Controversy!



Short history of a controversy

### Controversy!

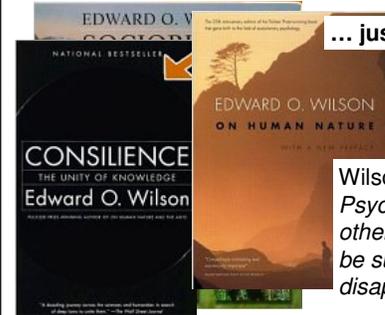
Sociobiological hypotheses...

consistently tend to provide a genetic justification of the *status quo*, and of existing privileges for certain groups according to class, race, or sex. Historically, powerful countries or ruling groups within them have drawn support for the maintenance or extension of their power from these products of the scientific community. For example, John D. Rockefeller, Sr. said "The growth of a large business is merely a survival of the fittest... It is merely the working out of a law of nature and a law of God." These theories provided an important basis for the enactment of sterilization laws and restrictive immigration laws by the United States between 1910 and 1930 and also for the eugenics policies which led to the establishment of gas chambers in Nazi Germany.

Gould, Lewontin, et al.

Short history of a controversy

### Wilson's other books



... just made it worse:

Wilson: *Sociology, Psychology, and all other related fields will be superfluous and disappear in biology.*

Short history of a controversy

### 'Human nature'?

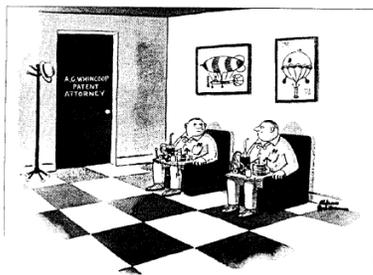
How much of our behavior is the result of 'free will', a 'soul' or what we perceive as such, how much is the result of environmental influences (culture and upbringing) and how much is influenced by our evolutionary history and the neurobiological and physiological constraints in which we operate.

Studying human behavior

### Subfields

- **Experimental psychology:** mechanism-driven, e.g. visual perception
- **Evolutionary psychology:** ultimate explanations for human behavior
- **Comparative psychology:** parallels with non-human animals (cognition & mechanisms)
- **Human behavioral ecology:** ancient ecology of human societies and its influence on behavior evolution
- **Anthropology:** humans & their societies today, cultural differences
- **Economics / evolutionary economics:** evolutionary explanations for economic behavior, explanations taking mechanisms, constraints, and rules-of-thumb into account

### Evolution of human behavior - examples



Separated at birth, the Mulford twins meet accidentally.

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### Evolution of human behavior - examples

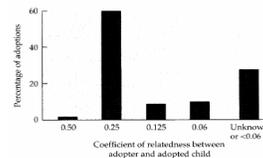
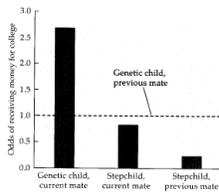


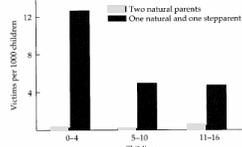
Figure 14.2 The indirect fitness hypothesis for adoption can be tested by examining the coefficient of relatedness between adoptive parents and their adopted children, in 11 island societies in Oceania, adopter and adoptee were usually close relatives, yielding indirect fitness gains for the adopters. After Silk (1199).

## Evolution of human behavior - examples



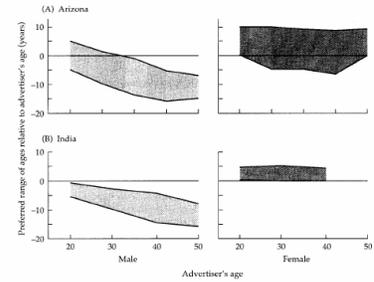
**Figure 14.19 Parental favoritism.** The odds that a man will give money to a child for college are much higher if the man is the genetic father of the potential recipient than if he is a stepparent to the child. The four categories of offspring examined in this study were genetic offspring living with their father, genetic offspring living with their father's previous mate and the man's stepchildren living either with him or with a previous mate. The amount given to a genetic offspring living with a previous mate was used as a standard against which the other donations were measured. After Anderson et al. (27).

**Figure 14.20 Child abuse and the relatedness of parents and offspring.** Child abuse is far more likely to occur in households with a stepparent than in households with two genetic parents. After Daly and Wilson (277).



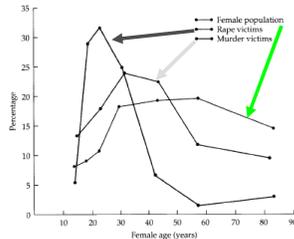
## Evolution of human behavior - examples

**Figure 14.7 Men and women from different cultures show similar mate preferences.** Men advertise for younger women and women advertise for older men in both (A) the Arizona Solo and (B) the Times of New Delhi, India. The advertisers indicated their own age and the maximum and minimum ages they would accept in potential partners. After Kenrick and Keefe (631)



## Evolution of human behavior - examples

**Figure 14.16 Testing alternative hypotheses for rape.** If rape were motivated purely by the intent to attack women violently (a proximate hypothesis) we would expect that the distribution of rape victims would match that of female murder victims. Instead, rape victims are especially likely to be young (fertile) women, a result consistent with ultimate hypotheses proposing that rape is linked to male reproductive tactics. Data on rape victims come from 1934-1975 police reports for 26 U.S. cities. After Thornhill and Thornhill (1194).



## Evolution of human behavior

### Examples from readings

- Hunting as a costly signal (Meriam turtle hunting, Bird et al.)
- Encephalization as consequence of group size, showing gradual evolution of cognition and language (Dunbar)

#### Questions:

*Is behavior in these cases optimized by evolution?*

*How reliable is the measurement of function in these cases?*

*Do you think these results apply in modern western societies?*

*(How would you test this?)*

## Evolution of human behavior – open questions

- Relative role of genetic and environmental effects – and how much of this is 'culturally' determined
- Human evolution – how flexible are behavioral traits, and are many still adaptations for the pleistocene?
- Human general altruism – where does it come from?
- Human reproduction – what determines fitness?
- (Is gender a social construct?)