Culture versus Cultures: Social Science Backlash Against Sociobiology

Lori Cormier
Dept. of Anthropology
UAB
“Racist Wilson, you can’t hide, we charge you with genocide!”

- Chanted by protestors (Committee Against Racism) at a 1978 symposium of the American Association for the Advancement of Science
- The stage was then rushed...and a pitcher of ice water was poured over E.O. Wilson’s head, saying “Wilson you’re all wet”
- Wilson later said, “I believe...I was the only scientist in modern times to be physically attacked for an idea”
Sociobiology

- In brief, Sociobiology is the study of the biological basis of all forms of social behavior
- Immediate backlash with sociobiology accused of fostering racist, misogynistic, and eugenic thinking...as well as being bad science
"It is, primarily, an extended speculation on the existence of genes for specific and variable traits in human behavior – including spite, aggression, xenophobia, conformity, homosexuality, and the characteristic behavioral differences between men and women in Western society...what is the direct evidence for genetic control of specific human social behavior? At the moment, the answer is none whatever."

"[Biological determinist 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. The latest attempt to reinvigorate these tired theories comes with the alleged creation of a new discipline, sociobiology.

...Wilson joins the long parade of biological determinists whose work has served to buttress the institutions of their society by exonerating them from responsibility for social problems."

"...biology, while it is an absolutely necessary condition for culture, is equally and absolutely insufficient: it is completely unable to specify the cultural properties of human behavior or their variations from one human group to another"

"...well, about 90% of the book was on nonprimates, and that looked interesting. There was a little bit on primates, which was more questionable. And there was a final chapter on humans that was completely empty. I don't think Wilson understood what he was talking about in that final chapter. There were real errors in what he did describe in any detail. I don't even understand why the chapter on humans was tacked on to the book. It didn't seem to belong”

--Noam Chomsky, Omni, 1983
Group selection has become a scientific dust bunny, a hairy blob in which anything having to do with "groups" clings to anything having to do with "selection." ... The problem is that it also obfuscates evolutionary theory by blurring genes, individuals, and groups as equivalent levels in a hierarchy of selectional units...
Most importantly, it has placed blinkers on psychological understanding by seducing many people into simply equating morality and culture with group selection, oblivious to alternatives that are theoretically deeper and empirically more realistic

--Steven Pinker, 2012, The Edge (on The Social Conquest of Earth)
The theoretical errors...are important, pervasive, and integral to its thesis in a way that makes it impossible to recommend. To borrow from Dorothy Parker, this is not a book to be tossed lightly aside. It should be thrown with great force. And sincere regret.


*note: reacting to disavowal of kin selection*
Sociobiology in Anthropology

- Schism between biological anthropologists and cultural anthropologists
- Primatologists by and large endorse sociobiology as guiding theory (as evolutionary ecology)
- Ethnographers...many hold disdain for sociobiology
- Problem of conflation in terminology
  - outside of anthropology...may be referring to different phenomenon when use terms “culture” “social” “social behavior” from ants to humans
- Within anthropology...primatologists and ethnographers may use identical terminology to refer to social systems of human and wild primates (regardless of whether instinctive or culturally learned behaviors)
Polyandry: *Cultural* Behavior in Nepal
Polyandry: *Instinctive* Behavior in Tamarin and Marmosets (New World Monkeys)
Polyandry

• Humans: relatively rare form of marriage (two husbands, one wife)
• Not genetic, human species engages in a variety of marriage forms: polygynous, monogamous, same-sex marriage, etc.)
• Primates: form of social organization found in tamarins and marmosets (South American monkeys, Callitrichidae)
• Apparently hard-wired; if two females are in a social group, ovulation is suppressed in the subordinate female
• Cultural norms for marriage patterns and wild primate instinctive social organization/mating behavior are very different phenomena
“Polygynous” Gorillas

**The term "alpha male" also notoriously misused...temporary status rather than a description of genetically superior males who exclusively breed**
Monogamy: Gibbon versus Robsten
"Bimaturism" in Orangutans

"Arrested development" males who "rape" females have similar reproductive success as fully developed males.
More Speculative Works...

Make case that rape is adaptive in human males

Draw heavily on chimps and Yanomamö to explain violence
Chimps and bonobos in the same genus, *Pan*. In both groups, females emigrate out of the troop. Chimps are strongly male-bonded, and aggressively defend territory; Bonobos are strongly mother-son and female-female bonded with high levels of sexual behavior, low levels of violence.
GENES AND CULTURE: CULTURE VERSUS CULTURES

KEY ISSUE: genetic human capacity for culture versus epigenetic human cultural diversity

• Human Capacity for Culture: understanding the biological basis of culture, cognitive theory on how culture is transmitted by humans; co-evolutionary phenomena

• Human Cultural Diversity: after “genes”
  - specific ideologies and behaviors that vary among cultures
  - controversy when sociobiological studies suggest a genetic basis for specific cultural behaviors
  - criticism of treating individual cultures as if they were separately evolved “species”
Sociobiological Case Study: Amazonian Yanomamö

- Cycle of blood revenge among male kin who retaliate against one another
- 44% of males 25 or older have participated in killing
- Men who kill have more wives and offspring than those who do not b/c
  1) killers rewarded with wives
  2) kin groups abduct wives in killing raids
- Suggests violence selected for and increases reproductive success/inclusive fitness

Yanomamö have patrilineal descent. Those they culturally perceive as "blood" relatives are not necessarily in a closer genetic relationship than those who perceived as "non-kin"
"Inclusive Fitness" Problems

PLURAL PATERNITY:
• common Amazonian belief that fetuses are made from the build up of semen
• Multiple sexual partners common; any man who has sex with a woman is considered a biological father
• Yanomamöö have extreme version...a man who brings food to a pregnant woman can consider himself a "biological" father

GENE FLOW
• Yanomamöö are not a "species" or an isolated breeding population
• gene flow with intermarriage and wife stealing; patrilineal kin are not a genetic clade
"Killers versus Non-Killers"

- Chagnon states that 30% of all deaths are due to violence
- Cultural belief that all death is caused by "killing" and violence
- Dark shamanism...magic, witchcraft...men claim responsibility for deaths of others who die from natural causes
- Age-related...the older a man is, the more likely he is to have "killed" and also the more likely he is to claim offspring
- Does not sufficiently control for age-related differences
Other Views of Yanomamö Violence

- Brian Ferguson: increased levels of violence a recent consequence owing to contact with missionaries; competing for territory near "goods"
- Patrick Tierney, Leslie Sponsel: Yanomamö not particularly violent; Chagnon instigated conflict, exaggerated it, and promoted the "story" in so-called "ethnographic film"
Contrast with Guaja

- Amazonian hunting and gathering people, who share a number of features with Yanomamö
- Ecological: tropical rain forest adaptation
- Social: patrilineal descent, plural paternity, genealogical amnesia
- Ideological: shamanism, animism, belief that animals are former humans
- Haplogroup Q/Y DNA (94% of indigenous South Americans)
“Awa-te noani ika”
[True human beings do not kill]

Actively Non-Violent

Mechanisms to Avoid Conflict (share with many hunter-gatherers)

- PRIMARY: Avoidance: prerequisite is low population density, resource availability, and sufficient territory to "walk away" --modern world... “walk away strategy not feasible”
- Joking Relationships: reduce social tensions
- Egalitarian: non-hierarchical, without winners/losers
- Individualistic: low value on consensus, "polyvocalic," perspectivalism
Guajá as Recent Hunter-Gatherers

- Ethnohistory...part of linguistically related tribes on Tocantins River at 1500
- Previously an agricultural group, likely very similar to other warring Amazonian tribes
- Fled to the west in wake of colonization...some evidence that were enslaved by Jesuits
- Massive depopulation of Amerindians, initially created negative space where people used to be
  --made hunting and gathering logistically possible
  --nomadic strategy helped evade colonizers
Conclusions

• Culture and genetics...do have evidence for co-evolution (e.g., agriculture, lactose tolerance, and dairy farming; agriculture, mosquito proliferation, and sickle cell trait)
• Ethological versus Ethnographic: terminological conflation of instinctive non-human social behavior with learned cultural behavior
• Culture versus Cultures: evolution of human capacity for culture as a given, evolution of behaviors in a specific culture often speculative