

9.20 M.I.T. 2013

Lecture #26

Critique of Cultural determinism

Quotation from S. Bruce (1999), *Sociology: A Very Short Introduction* (Oxford Univ. Press):

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Opposition to Sociobiology:

Often, the arguments are against biology altogether when it concerns evolution, especially evolution applied to human beings. This is "Darwin's dangerous idea" (Dennett, 1995).

The opposition to evolution, especially of humans, is not only due to interpretations common among followers of religions, but is found in academia, e.g., among sociologists, cultural anthropologists, and educators.

The arguments contain commonly repeated errors:

John Alcock, *The Triumph of Sociobiology*, ch 7:

A false dichotomy

1. What is the error of the false dichotomy that has often been used by persons arguing against the relevance of biology to an understanding of human behavior?

(Such arguments have been common in writings of sociologists, cultural anthropologists, some feminists, and some educators.)

p 130

John Alcock, *The Triumph of Sociobiology*, ch 7:

A false dichotomy

1. What is the error of the false dichotomy that has often been used by persons arguing against the relevance of biology to an understanding of human behavior?

(Such arguments have been common in writings of sociologists, cultural anthropologists, some feminists, and also some educators.) p 130

...either culture or biology...

...either learned or innate, nature or nurture...

A related error: Pitting two different kinds of hypotheses against each other—proximate and evolutionary (ultimate) hypotheses

Quoting John Alcock, ch 7:

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John Alcock, *The Triumph of Sociobiology*, ch 7:

Margaret Mead's claims: Popular and widely believed, but ...

2. Summarize Derek Freeman's critique of the writing of Margaret Mead, the cultural anthropologist whose ideas presented in her **1928 book, *Coming of Age in Samoa***, became so popular in the 20th century. **p 131-133**

Freeman published a book in 1983 critical of Mead.

- What did she claim? (The claims turned out to be much too extreme.)
- How did she come to believe these claims?
- Why did she make such errors?
- Who was Frank Boas, her teacher, and what did he believe?

John Alcock, *The Triumph of Sociobiology*, ch 7:

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2. Summarize Derek Freeman's critique of the writing of Margaret Mead, the cultural anthropologist whose ideas presented in her **1928 book, *Coming of Age in Samoa***, became so popular in the 20th century. **p 131-133**

- **What did she claim?**

Samoan society is very different from American society in having relaxed attitudes towards premarital sex by young women, in the absence of rape and freedom from emotional turbulence during adolescence.

- **How did she come to believe these claims?**

At age 23, she had been told this story by another cultural anthropologist and wanted to verify it. She learned the basics of the language, went to Samoa and spent 12 weeks questioning a group of 25 young women.

John Alcock, *The Triumph of Sociobiology*, ch 7:

Margaret Mead's claims: Popular and widely believed, but ...

2. Summarize Derek Freeman's critique of the writing of Margaret Mead, the cultural anthropologist whose ideas presented in her **1928 book, *Coming of Age in Samoa***, became so popular in the 20th century. **p 131-133, continued:**

- **Why did she make such errors?**

She did not remain in Samoa for extensive observations, and believed what the girls told her too easily. They were often kidding her. She heard what she wanted to hear.

- **Who was Frank Boas, her teacher, and what did he believe?**

“The first modern cultural anthropologist of note”; “wished to assert the essential autonomy of culture from biology” because “it had become tainted by association with racism, social darwinism, and eugenics”

→ These are the same issues faced by sociobiologist when they have applied their ideas and methods to humans.

- In summary, Margaret Mead tried to do a scientific study, but she made big mistakes.
- She published a popular book that had a wide influence despite the errors. These errors did not become known for certain for many years.

John Alcock, *The Triumph of Sociobiology*, ch 7:
Contrasting views of human nature

3. Contrast the “blank slate” view of human nature with sociobiological views.

p 134 - 136

What do “blank slate” views of human nature **predict** about social structure and practices?

Note how much more difficult it is to make believable predictions like this for animals than it is for humans.

Contrasting views of human nature

- We have discussed this issue previously.
- Note **two new things** here:
 - Gould’s claim about “biological potentiality” vs “biological determinism”: He claimed that a human has “a brain capable of a full range of human behaviors and predisposed toward none”
 - Lack of rigorous tests of predictions of cultural determinism. Alcock suggests some predictions the critics should be testing (p 135-136). Behavior ought to vary highly from society to society. He gives examples.
 - Do you agree with Alcock’s arguments—in part or completely?

Females attracting males

4. Attributes that determine men's attraction to young women (on the average) have shown considerable consistency, even across cultures. ("Beauty" is not a myth or a politically determined creation, as claimed by Naomi Wolf in her 1990 book, *The Beauty Myth*.)

What is the major, general signal value of these attributes, fitting the expectations of sociobiologists? **p 137-139**

- See next slide.
- Note that what is fashionable does not always match what men actually prefer in a mate. Only the latter is of great interest to sociobiologists.
- Note also that in poorer societies, higher BMI (body mass index) may indicate greater wealth and therefore be attractive.

What attracts male humans to females, on average?

- See Table 7.1 in Alcock (p 138): *Some attributes in women that men find attractive and their probably signal value as indicators of high reproductive value*
 - The attributes listed indicate health, fertility, sexual maturity and youth.
 - Together, these are indicators of “lifetime reproductive potential”.
 - Keep in mind that there is always a range, and there are always exceptions to the general rule. Sociobiological hypotheses are not about “always” and are not disproved by “sometimes”.

There is some variability in measures of the relative importance of different factors, e.g, the Body Mass Index and the waist-to-hip ratio.

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Alcock cites a 1998 British study of preferences shown by British male undergraduates:

Optimum body-mass index and maximum sexual attractiveness
M J Tovée, S Reinhardt, J L Emery, P L Cornelissen
THE LANCET • Vol 352 • August 15, 1998

The authors found that the BMI was a much better predictor than the waist-to-hip ratio. Other studies have not shown such an extreme difference. In fact, the ratio has been often been reported to be more important.

Both measures are important indicators.

- Preferred BMI preference range: 17-24. [kg/m²]
- Preferred waist-to-hip ration usually reported: 0.7

John Alcock, *The Triumph of Sociobiology*, ch 7:

Cultural differences in male preferences?

5. Give a sociobiological interpretation of the finding that Yomybato men tend to prefer females with a figure that is heavier and with a larger waist-to-hip ratio than preferred by most men in more advanced cultures.

p 141-142

Yomybato men's preferences:

- Alcock's suggestion (somewhat fuzzy, & not yet fully tested):
p 141-142:
 - Obesity was all but impossible in pre-colonial Amerindian groups, and being underweight was probably more common.
 - If a woman was slightly overweight, there was a greater probability of her being fertile.
- This suggestion should apply to other groups.
- If the findings are due to isolation from modern cultural influences, it should be similar for other groups that have been isolated from modern societies.
- We need more information about the advantages of extra body weight for withstanding diseases, etc.
- Also note: One exception does not disprove the general finding.

More recent report with a unique method:

Please see:

Dixson, Barnaby J., Katayo Sagata, Wayne L. Linklater, and Alan F. Dixson. "Male preferences for female waist-to-hip ratio and body mass index in the highlands of Papua New Guinea." *American journal of physical anthropology* 141, no. 4 (2010): 620-625.

Data from the study

Table removed due to copyright restrictions.

Illustration from the study

Figure removed due to copyright restrictions.

What attributes determine preferences shown by females in choosing males?

- How would you expect such preferences to differ from those of males for females?

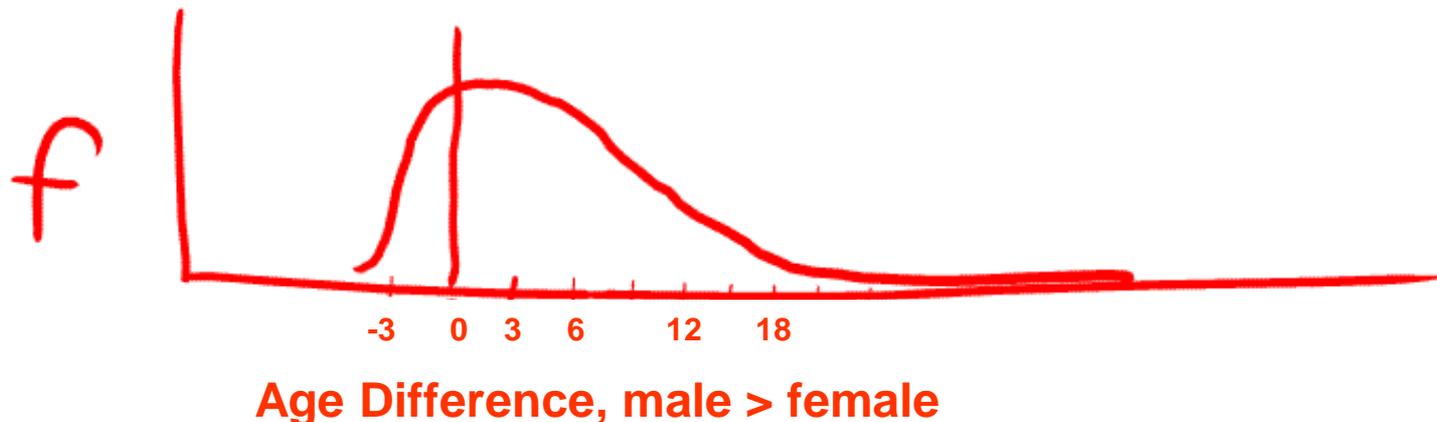
Remember the discussion of this in the book by Scott.

What attributes determine preferences shown by females in choosing males?

- How would you expect such preferences to differ from those of males for females?

Females have different concerns (as discussed in previous classes), so “maximum reproductive potential” has a different meaning.

Note differences in age preferences: Mean age difference at marriage is 3 years, with males being 3-yr older.



John Alcock, *The Triumph of Sociobiology*, ch 7:
Staying with a group: an innate preference

6. Humans everywhere have a strong tendency to stay and act within groups, and these groups may compete with each other, sometimes violently.

Try to specify a list of evolutionary fitness benefits of “groupism” feelings.

p 143-147

Staying with a group: an innate preference

Examples of fitness benefits of groupism feelings:

- Higher probability of finding a mate
- Higher probability of rescue and survival
- Higher probability of better defense against predators
- Higher probability of better defense against hostile human groups
- Advantages in food acquisition: gathering, hunting, with sharing and specialization
- Help in child rearing and education
- Advantages in learning from older, more experienced group members

7. From Appendix, ch 7, Q3: p 228

Quote from a sociology textbook: “In our view, the theory that there is actually a biological basis for reciprocity [among humans] remains unproven; general self-interest and an ability to see beyond the short term may be all that is required to generate such ... behavior” (Wallace and Wolf, 1999: *Contemporary Sociological Theory, 5th edition, p 391*)

What misunderstanding(s) are embodied in this statement?

7. From Appendix, ch 7, Q3: p 228

From a sociology textbook:

Wallace, Ruth A., and Alison Wolf. *Contemporary sociological theory: Continuing the classical tradition*. Englewood Cliffs, NJ: Prentice Hall, 1991.

- p 391

What misunderstanding(s) are embodied in this statement?

Confusion of proximate and ultimate causes

John Alcock, *The Triumph of Sociobiology*, ch 7:
Languages as evidence of cultural determinism?

8. Appendix, ch 7, Q2:

Languages vary greatly among human societies. If someone claims that this fact clearly demonstrates the greater importance of culture than biology in the control of human behavior, what would a sociobiologist say in response?

John Alcock, *The Triumph of Sociobiology*, ch 7:
Languages as evidence of cultural determinism?

8. Appendix, ch 7, Q2:

Languages vary greatly among human societies. If someone claims that this fact clearly demonstrates the greater importance of culture than biology in the control of human behavior, what would a sociobiologist say in response?

The important issue is language vs no language, not the details of a particular language. Humans are born with an innate ability to learn any language.

John Alcock, *The Triumph of Sociobiology*, ch 7:

Evolutionary psychology: Does our biology make us do it?

(Hopefully you can deal with statements of the sort quoted in Q1 by now.) Alcock discusses Stephan Jay Gould's criticism of sociobiology.

Analyze this criticism of sociobiology in the context of the culture versus biology dichotomy.

John Alcock, *The Triumph of Sociobiology*, ch 7:

Evolutionary psychology: Does our biology make us do it?

(Hopefully you can deal with statements of the sort quoted in Q1 by now.) Alcock discusses Stephan Jay Gould's criticism of sociobiology.

*Analyze this criticism of sociobiology in the context of the **culture VERSUS biology** dichotomy.*

It is not an either-or matter.

Critique of Alcock p 147:

See final chapter of Alcock.

Critique of Alcock p 147:

Note his narrow definition of "ultimate goal."

Is evolution a "meaningless tale told by an idiot"?

(I find this extreme statement to be an unnecessary conclusion.)

In my view, what is really incredible and amazing is that the simple and repeated process of genetic spread and change, following the biological law of natural selection, has led to such complex creatures with such cognitive capacities and with such an ability to ponder the nature of the world and its beings.

“Romantic love”—a final topic for discussion

- Is the phenomenon of romantic love, the “falling in love” experience, an invention of medieval court life, as has been repeatedly asserted?
- Does it occur only in certain cultures?
- State a sociobiological hypothesis concerning its origins.

“Romantic love”—a final topic for discussion

- Is the phenomenon of romantic love, the “falling in love” experience, an invention of medieval court life, as has been repeatedly asserted?

The idea was invented by people who could not accept the idea of innate motivations in humans

- Does it occur only in certain cultures? No, it is very widespread.
- State a sociobiological hypothesis concerning its origins.

About "falling in love":

Does it occur only in young people? No

Are prominent leaders in the community exempt? Think of an example in current events in the news.

If it has evolved as a human FAP, it is adaptive in a socio-biological sense.

Like many evolved tendencies, it can produce conflicts not only in the society, but within the individual. (And this can cause "cognitive dissonance" which the individual will struggle to resolve in one way or another.)

Consider WHY it must have had to evolve in early human groups. Think of the close bonds acquired in growing up in an extended family, within which there were bad consequences of inbreeding. It was necessary for genetic fitness to have a motivation that could occur in strength after sexual maturity--strong enough to cause a young person to leave his natal group,

Result: Roaming in search of a mate; forming secret liaisons; eloping, and all the other characteristics of the falling-in-love phenomenon (including behaving "stupidly" and irrationally, disregarding long-established habits, etc.)

Examples of recent publications on topics
of this class:

Please see:

Andreoni, James, and Ragan Petrie. "Beauty, gender and stereotypes: Evidence from laboratory experiments." *Journal of Economic Psychology* 29, no. 1 (2008): 73-93.

Please see:

Becker, D. Vaughn, Douglas T. Kenrick, Stephen Guerin, and Jon K. Maner. "Concentrating on beauty: Sexual selection and sociospatial memory." *Personality and Social Psychology Bulletin* 31, no. 12 (2005): 1643-1652.

Please see:

Buss, David M. "Strategies of Human Mating." *Psychological Topics* 15, no. 2 (2006): 239-260.

Please see:

Cloutier, Jasmin, Todd F. Heatherton, Paul J. Whalen, and William M. Kelley. "Are attractive people rewarding? Sex differences in the neural substrates of facial attractiveness." *Journal of Cognitive Neuroscience* 20, no. 6 (2008): 941-951.

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9.20 Animal Behavior
Fall 2013

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