

# SOCIOLOGICAL THEORY

*Michaelmas 2024*

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Theoretical Perspectives

## **8. Functionalism and cultural evolution**

[http://users.ox.ac.uk/~sfos0060/  
SociologicalTheory.shtml](http://users.ox.ac.uk/~sfos0060/SociologicalTheory.shtml)

# Functionalist explanation

- functionalist: explain something in terms of its *beneficial consequences*
  - heart's function is to circulate blood (William Harvey, 17<sup>th</sup> century)
- Functionalism: 'to provide a satisfactory explanation of social life we need to show how the phenomena which are its substance come together to place society in harmony with itself and with the outside world' (Durkheim 1895)
  - inequality is functional for society (Davis and Moore 1945)—like biological explanation at the level of the species
  - reforms are functional for the system of oppression, e.g. welfare state, sexual liberation, racial desegregation (*lecture 7*)
  - Fijian taboo against eating certain seafood while pregnant—food poisoning (Henrich 2016)

# Problems

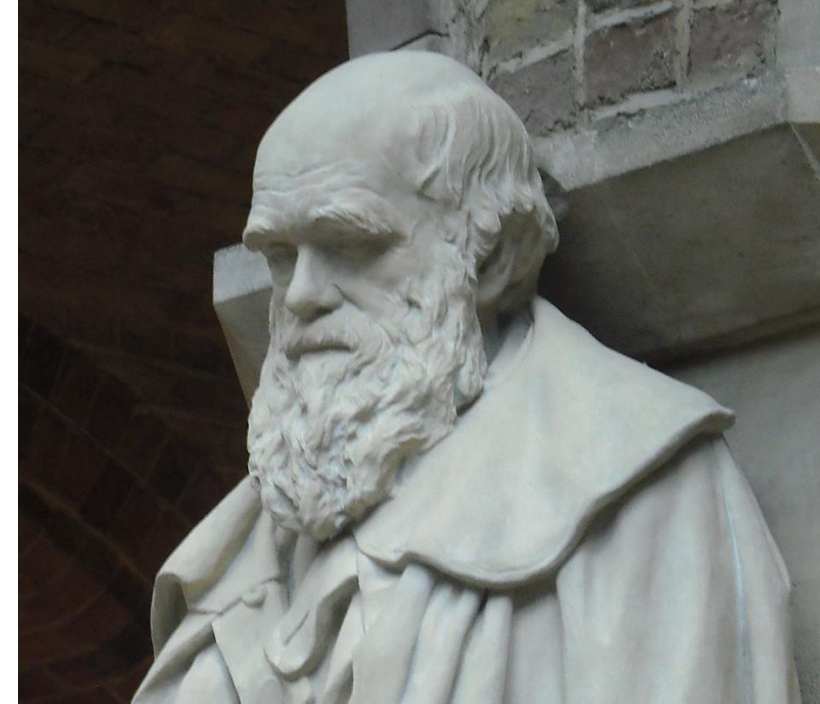
1. Tautology: how can *beneficial* be defined? what functions are really necessary for societies (or social systems)?
2. Mechanism: how do consequences become *causes*? what is the feedback mechanism?

## Providing a feedback mechanism

- ‘The ruling class does not rule’ (Block 1977):
  - politicians depend on economic growth, for tax revenue and for public support
  - capitalists will decide not to invest if unfavourable policies are implemented—or even if atmosphere is uncongenial (Keynes 1936)
  - feedback mechanism does not require collective conspiracy: unintended consequences of individual decisions

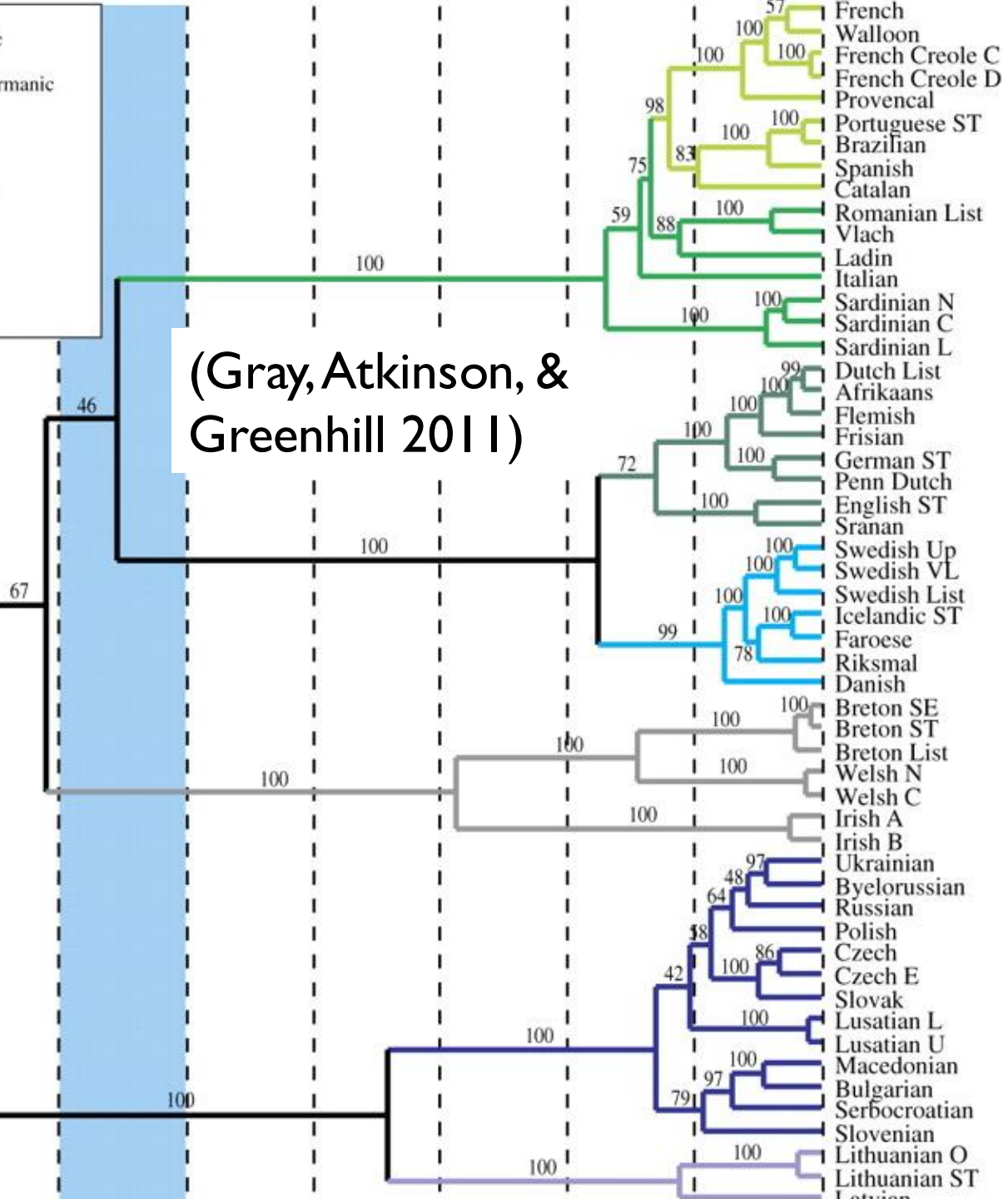
*Functionalism can also be justified by evolution ...*

# Darwin's natural selection



Three elements:

- variation—mutation, random with respect to fitness
- heritability—genes
- differential replication—genes making the fittest organisms are most likely to be replicated
- Can we find a similar ‘evolution of culture’ (Pitt Rivers 1875)?
  - cultural evolution  $\neq$  evolutionary psychology
  - coevolution (Durham 1991)



## Phylogeny first illustrated by language (18C)

- ‘The formation of different languages and of distinct species, and the proofs that both have been developed through a gradual process, are curiously the same’  
(Darwin 1871)

# Heritability

- Children inherit parents' culture as well as genes
  - psychological drive to imitate

*But*

- Children inherit from others aside from their parents—genetic and cultural lineages diverge
- Biased transmission (Richerson & Boyd 2005)
  - content-based
    - rational belief formation (*lecture 1*)
  - frequency
  - similarity
  - prestige
- Modern society has formal institutions to pass on culture

# Differential replication

Social groups with 'less-well-adapted' culture

1. die—natural selection
  2. migrate to, or are conquered by, 'better adapted'
  3. adopt 'better adapted'
- Rate of extinction in pre-state societies:  
1/10 groups (defined by warfare) per generation
    - 500–1000 years minimum for trait to spread by differential replication of societies (Richerson & Boyd 2005)
  - Fertility
    - extreme e.g. the Shakers, U.S. religious group which forbade sex





Adaptedness *vis à vis* environment:

- e.g. Norse in Greenland (Dugmore et al. 2012)
  - ‘better adapted’ is not straightforward!
  - difficulty of adopting another culture

# Culture promoting cooperation

What happens when individual interest diverges from group?

- ‘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 give aid to each other and to sacrifice themselves for the common good, would be victorious over most other tribes’ (Darwin 1871)
  - but every individual has an incentive to defect! (Hobbes)
- Some institutions and values promote cooperation—could they be subject to group selection (Richerson et al. 2016)?
  - between-group variation / total variation much higher for culture than genes
    - group benefit / individual cost required is not too high

## Functionalist account of religion (Wilson 2002)

- Rise of Christianity (Stark 1996)
  - Roman cities are chaotic and deadly
  - Christians help each other during pandemics
    - (i) they are more likely to survive—natural selection
    - (ii) pagans are impressed and thus convert
- 19C U.S. communes (Sosis & Bressler 2003)
  - secular 3x more likely to dissolve
  - religious impose more costs e.g. celibacy

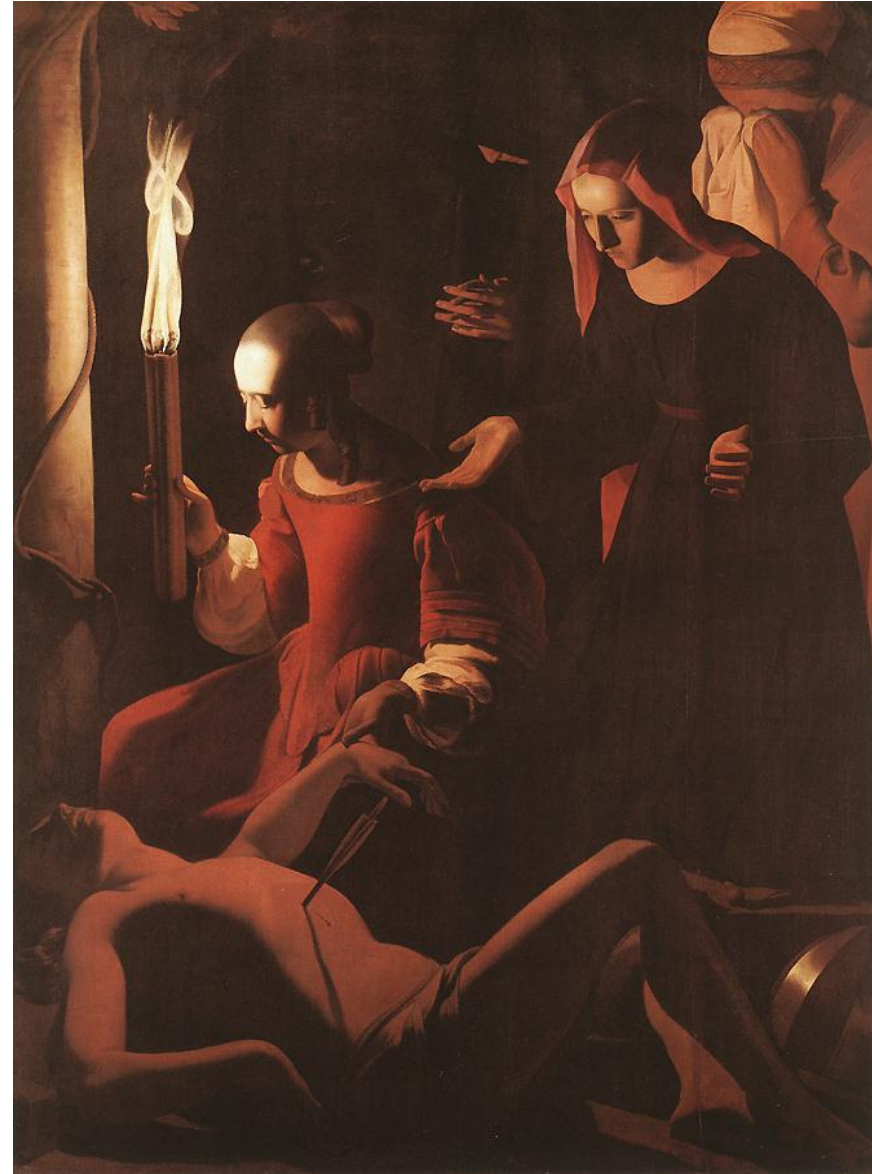




## Religion as 'virus of the mind' (Dawkins 1993)

- ideas that incite action that (i) harms the (genetic) interests of the individual, but (ii) replicates the ideas
- religious martyrdom
  - contrast value-rationality [lecture 3]!

Georges du Mesnil de La Tour  
*St Sebastien Attended by St Irene*  
(1634-43)



# Institutions cultivating evolution

- Capitalism
- Science (Hull 1988)
  - harnesses self-interest of individual scientists: desire for credit, awarded through citation
  - balances heritability (need to cite predecessors) and variation (reward given for primacy); ensure publication of results

- scientific ideas
  - variation not undirected but intentionality insufficient
  - replicated through teaching and citation
  - via scientists, interact with reality (their environment); the best proliferate, the worst go extinct
    - no one tries to disprove their own ideas; falsification happens because competing scientists have an interest in defeating their rivals

Selection processes are *inefficient* but *effective*

# Problems

- How to measure ‘adaptedness’?
  - military conquest
  - some culture is superior, e.g. Arabic numerals and 0 facilitate calculation (Jablonka & Lamb 2005)
- Difficult to find equivalents of genes (Aunger ed. 2000; Jablonka & Lamb 2005)
  - meme: unit of information in the brain (Dawkins 1982)
  - behaviour or idea?
  - how many memes to define Christianity?

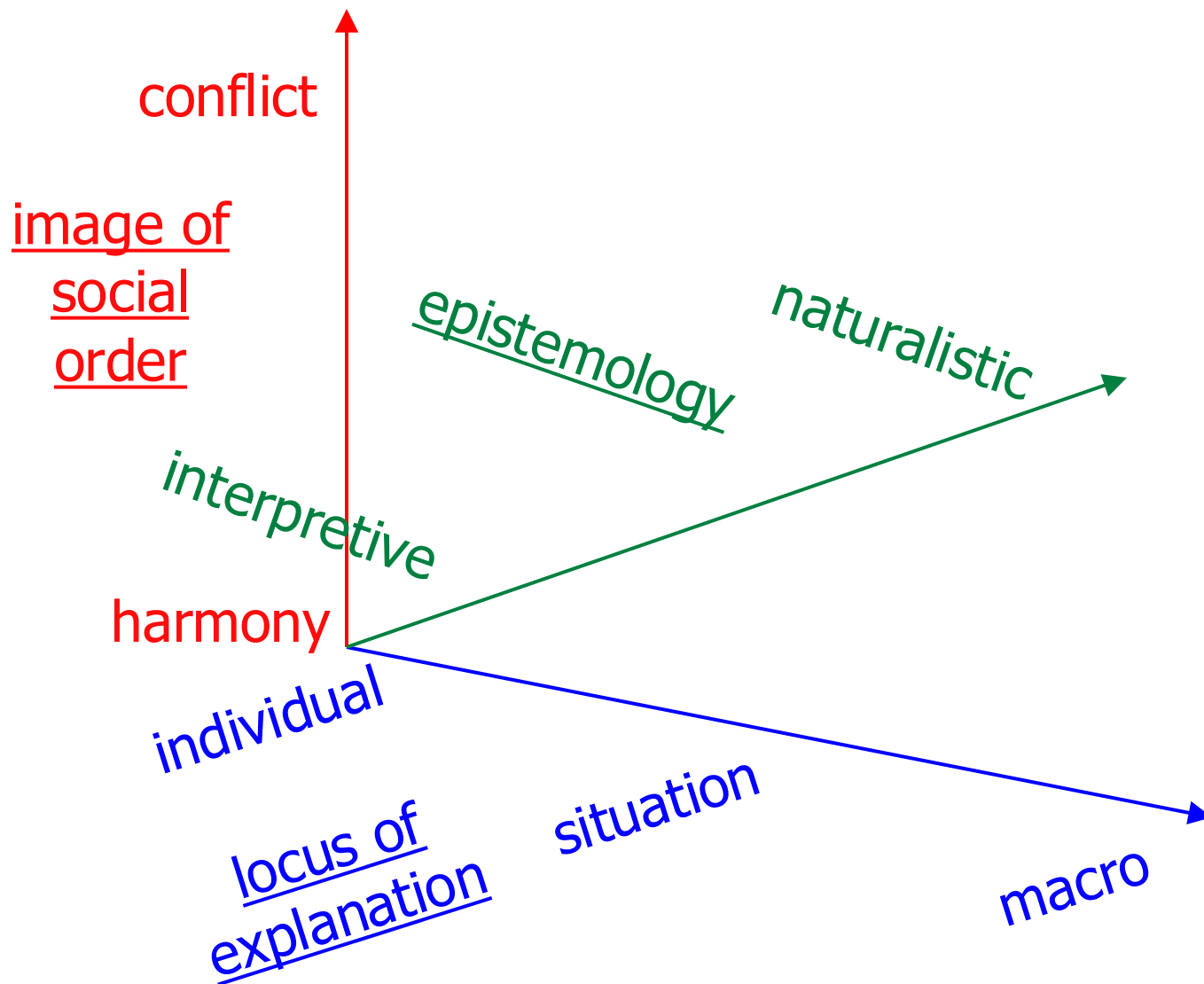
# Summary

- Evolution can justify functionalism
- Differential replication of culture by extinction of bearers, or by migration or imitation
- Technology (economic and military) is easier to analyze than values and institutions (cooperation among individuals)
- Evolution is harnessed by institutions like science

## Virtues:

- ‘population thinking’ (Richerson & Boyd 2005)—**variation** not just mean/‘ideal type’
- phylogenetic or ‘tree thinking’ (Gray, Atkinson, & Greenhill 2011)
- returns to big questions like religion, long-term cultural change





Evolution 



# Questions

- ‘An important function of social institutions in societies such as Britain or France or the USA is to maintain white supremacy.’ Do you agree?
- Is it sufficient to explain an institution in terms of its function?
- Can functionalist explanations used in biology be imported into the social sciences?
- Are social norms always functional for solving problems of collective action?
- Do societies ‘evolve’?
- Are there any features of modern societies that could be considered evolutionary ‘adaptations’?
- Can ‘memes’ explain anything?
- How do theories of cultural evolution explain the existence of diverse cultures?

Charles Darwin, *The Descent of Man, and Selection in Relation to Sex* (1871)

A. Lane Fox [Pitt Rivers], 'On the Evolution of Culture', *Notices of the Proceedings ... of the Royal Institution of Great Britain ...* 7, 1875

Andrew J. Dugmore et al., 'Cultural Adaptation, Compounding Vulnerabilities and Conjunctions in Norse Greenland', *Proceedings of the National Academy of Sciences*, 109 (2012)

William H. Durham, *Coevolution: Genes, Culture, and Human Diversity* (1991)

Rodney Stark, *The Rise of Christianity* (1996)

David Sloan Wilson, *Darwin's Cathedral* (2002)

Russell D. Gray, Quentin D. Atkinson, & Simon J. Greenhill, 'Language evolution and human history: what a difference a date makes', *Proceedings of the Royal Society B: Biological Sciences* (2011)

Peter J. Richerson & Robert Boyd, *Not By Genes Alone: How Culture Transformed Human Evolution* (2005)

Peter Richerson et al., 'Cultural Group Selection Plays an Essential Role in Explaining Human Cooperation: A Sketch of the Evidence', *Behavioural and Brain Sciences* 39 (2016)

David L. Hull, *Science as a Process: An Evolutionary Account of the Social and Conceptual Development of Science* (1988)

David L. Hull, *Science and Selection: Essays on Biological Evolution and the Philosophy of Science* (2001)

Joseph Fracchia & R. C. Lewontin, 'Does Culture Evolve?', *History and Theory* (1999)

Eva Jablonka & Marion J. Lamb, *Evolution in Four Dimensions* (2005)

Richard Dawkins, *The Extended Phenotype: The Long Reach of the Gene* (1982)

Richard Dawkins, 'Viruses of the Mind', Bo Dahlbohm (ed.), *Dennett and His Critics: Demystifying Mind* (1993)

Alex Mesoudi, Andrew Whiten, & Kevin L. Laland, 'Towards a Unified Science of Cultural Evolution', *Behavioral and Brain Sciences* 29 (2006)