# Biosocial & Evolutionary Approaches in Sociology



#### Introduction

Sebastian Schnettler & Johannes Huinink









## **Biosocial Research in the Media**

Oxytocin – Das Hormon für das Urvertrauen (NZZ, June 5, 2005)

In study, fatherhood leads to drop in testosterone (NYT, Sept. 12, 2011)

Genes play a role in the likelihood of divorce (The Economist, Feb. 1, 2018) **Ein Hormon für Sozialkompetenz** (NZZ, Feb. 17, 2002)

The ,macho' gene that makes men behave aggressively has been found (Daily Mail, March 8, 2012)



## What's the Deal with Sociology?

- Disregard for much of 20<sup>th</sup> century (Degler 1991)
- Much criticism for this from within/outside



Darwinism for Social Scientists EDITED BY JEROME H. BARKOW

(Barkow 2006b)

	(Ellis 1996)
A Discipline in Peril: Sociology's Future Hinges on Curing Its Biopbobia	
LEE ELLIS Several lines of evidence are reviewed regarding sociology's decline as a college major and as a respected academic discipline in recent decades. The present article attributes most of the decline to biopbobia, i.e., the transformation considering biological causes of human below to the transformation of the transformation exclusive for	_





## Two Sciences, One Goal?

- Joining forces seems more efficient
- Striving for scientific unity
- Avoiding contradictions
- Controlling for biases (e.g. Diewald et al. 2015)
- Interactions otherwise out of view:
  - GxE
  - Epigenetics
  - Gene-culture coevolution
  - Social stratification & health
  - Facultative evolutionary mechanisms
  - Soc situation -> hormones -> behavior -> soc situation
  - (Limited) brain plasticity

# Rapprochement (in the US)?

- In 1970s/80s engagement w/sociobiology
- Signposts for an increasing openness since 1990s/early 2000s (in US)
- In 2000s, in top-tier journals (e.g. Bearman 2008; Freese & Shostak 2009; Guo 2006; Guo et al. 2008; Morning 2014)
- Emerging subfields (e.g. neurosoc, sociogenomics, evo soc) (Braudt 2018; von Scheve 2011)
- Scattered contributions in other areas (e.g. Freese/Powell 1999/2001; Hopcroft 2005; Taylor 2012, 2014)
- ASA section "Evo, Bio, & Soc" still small (Blute 2015)
- Few entries @ ASA 2019, mostly critical



Sociobiology

Edward O. Wilson

"[...] I have come to the reluctant conclusion that sociologists have gone too far in privileging the social over the biological." (Massey 2000/2002, inaugural speech as incoming ASA president)

#### "nascent evolutionary sociology" (Machalek/Martin 2004)

"Are genes good to think with?"

(Bearman 2008, editorial intro to special AJS issue on genetics)





"Genetics, Identity, and Other Controversies"

"Biological Binaries: The Case of Gender and Sex...

## Motivation for Special Issue & Conference

- Correct sociologists' caricature of bio/evo approaches:
  - Simplistic
  - Evil
  - Irrelevant
  - Stereotypical/one-sided version of sociobiology
- Go beyond programmatic statements
- Exhibit full variety of different ways sociologists & neighboring disciplines employ bio/evo reasoning in their research

## Heuristic for Special Issue

#### EBS

- Behavioral ecology, evolutionary psychology, cultural evolution
- "Different names have come and gone" (Mysterud 2004: 107)
- Application of modern evolutionary science on human behavior
- Much potential for integration (e.g. Laland/Brown 2002; Brown et al. 2011)

Other subdisciplines of biology/medical sciences, e.g.:

- Behavioral (epi-)genetics (genes, epigenome)
- Behavioral endocrinology (hormones)
- Behavioral neuroscience (brain)

## Part 2: Coleman Reconsidered?



Extended multi-level model of human behavior and socio-cultural change

#### Explaining

the socio-cultural impact on human behavior and the emergence and change of socio-cultural structures

- based on the principle of methodological individualism -

requires connecting sociology and the other human sciences

Extended multi-level model of human behavior and socio-cultural change



Extended multi-level model of human behavior and socio-cultural change



Extended multi-level model of human behavior and socio-cultural change



The need for interdisciplinarity in human science

#### Contributions by (context sensitive) evolutionary biology and psychology

#### Explaining and empirically approving

- the impact of the sociocultural and natural environment on intraindividual level processes ("bridge assumptions" in sociology)
- the impact of individual behavior and purposeful action on intraindividual levels ("transformation rules" II)
- individual behavior and decision making and providing a "model of man" serving for a feasible basis also of sociological research.

The need for interdisciplinarity in human science

#### **Contributions by sociology**

Explaining and empirically approving the mechanisms in the dynamics of emergence and change of socio-cultural structures ("transformation rules" I: aggregation; social (re-)structuration; cultural change and (re-)institutionalization)

Providing descriptive evidence of regularities in individuals' social behavior differentiated by relevant socio-structural categories – among others also serving as kind of reverse plausibility checks for bridge hypotheses developed on the neighboring disciplines

The need for interdisciplinarity in human science

#### Finally

In the study of human development and behavior as well as socio-cultural change the research in all mentioned disciplines is connected due to the strong interdependence and the non-linearity of the processes under study.

#### **Therefore:**

In human science research the abstraction from some of the dimensions or process levels of the extended model must be justified – not the other way round. This is true for sociology as well as for it's neighboring disciplines.

**Biosocial** & Evolutionary pproaches in Sociology



**Thank you!** 





Jah Fritz Thyssen Stiftung

Hanse-Wissenschaftskolleg Institute for Advanced Study