

This View of Life

Completing the Darwinian Revolution and Evolving the Future

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Culture and Negotiation

Kellogg-Northwestern

April 14 2018



The Study of Evolution in Relation To...

Biology

Human Affairs

2020

2000

1980

1960

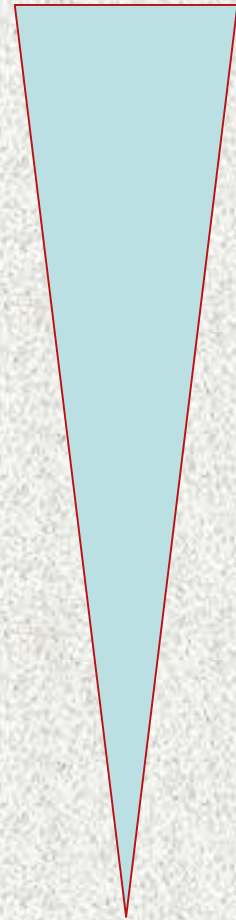
1940

1920

1900

1880

1860



1973

**“Nothing in
biology makes
sense except in
the light of
evolution.”**

*Theodosius
Dobzhansky*

thelogicofscience.com



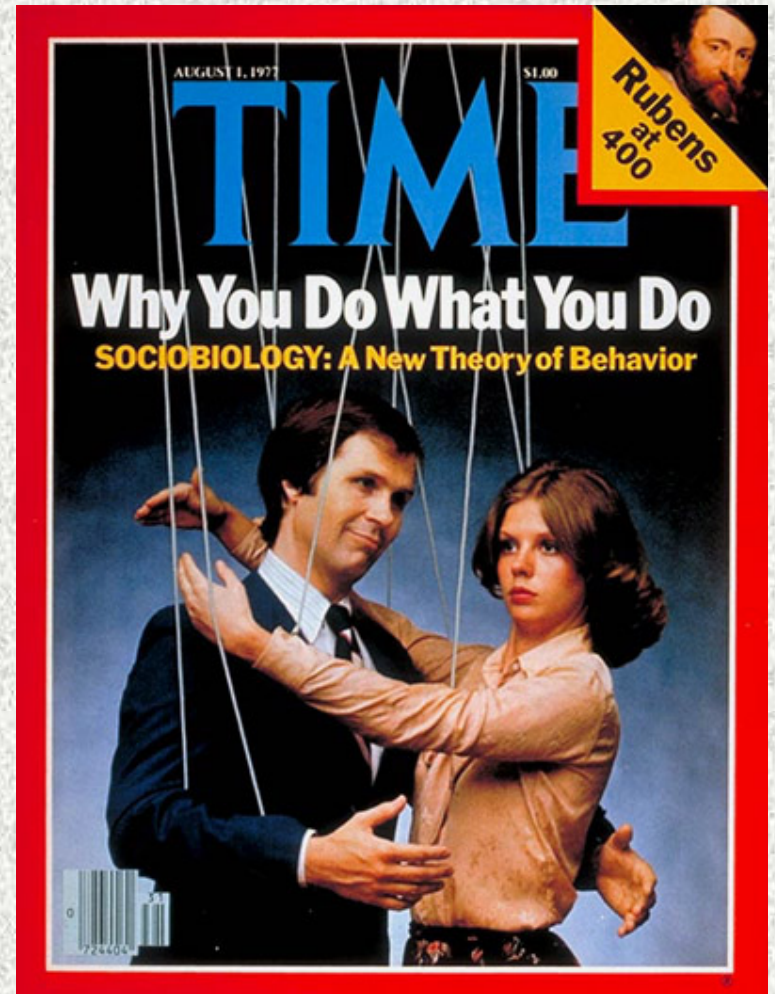
1975

Sociobiology

THE ABRIDGED EDITION

Edward O. Wilson

Drawings by Sarah Landry



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Marshall Sahlins

the use and abuse of BIOLOGY

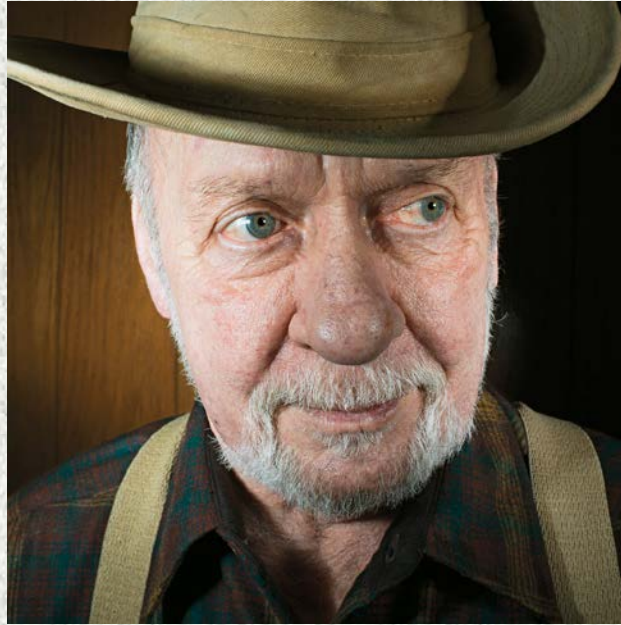
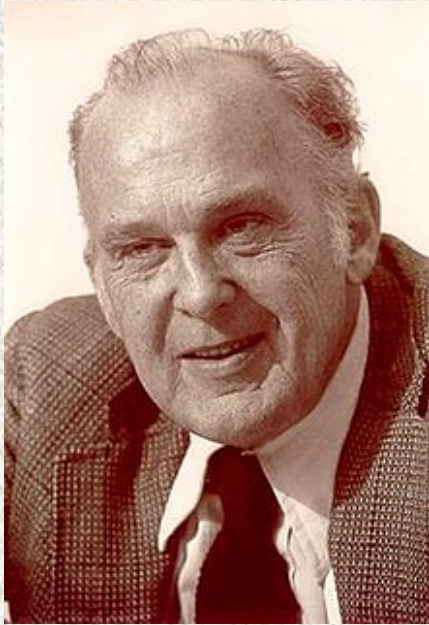
An
Anthropological
Critique
of
Sociobiology

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The Ann Arbor
Science for the People
Editorial Collective

BIOLOGY AS A SOCIAL WEAPON

Northwestern Connections



Donald Campbell, Napoleon Chagnon, William Irons

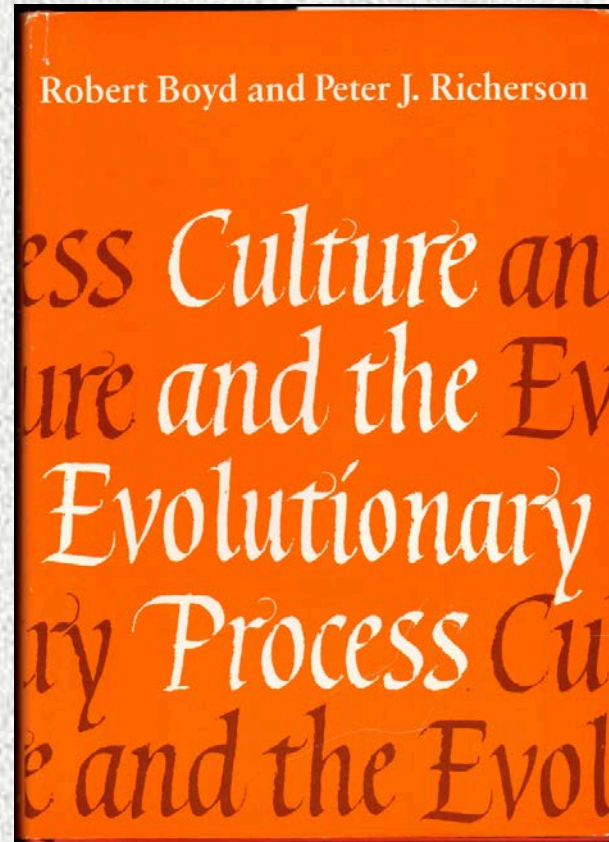
To be a sociobiologist in the 1970's was career threatening.
The stigma associated with the word persists to this day.

Evolutionary Economics



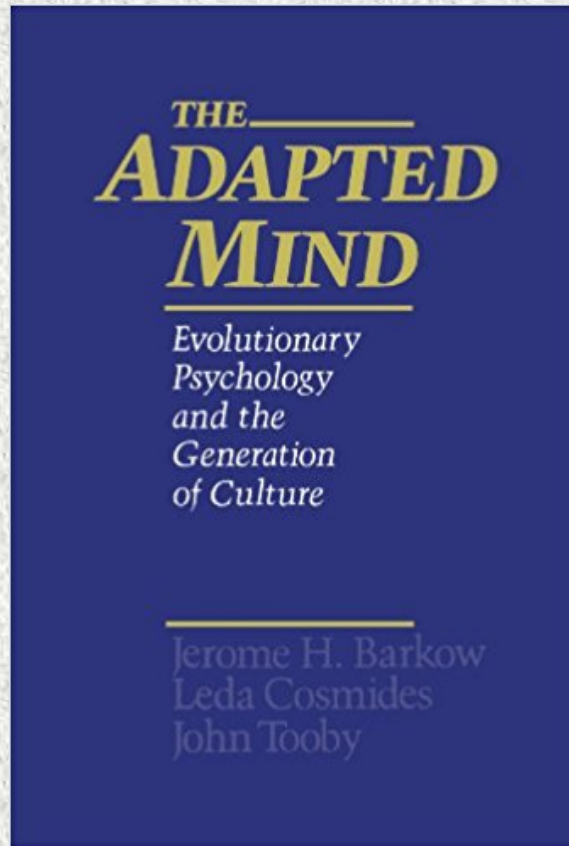
1982

Cultural Evolution



1985

Evolutionary Psychology



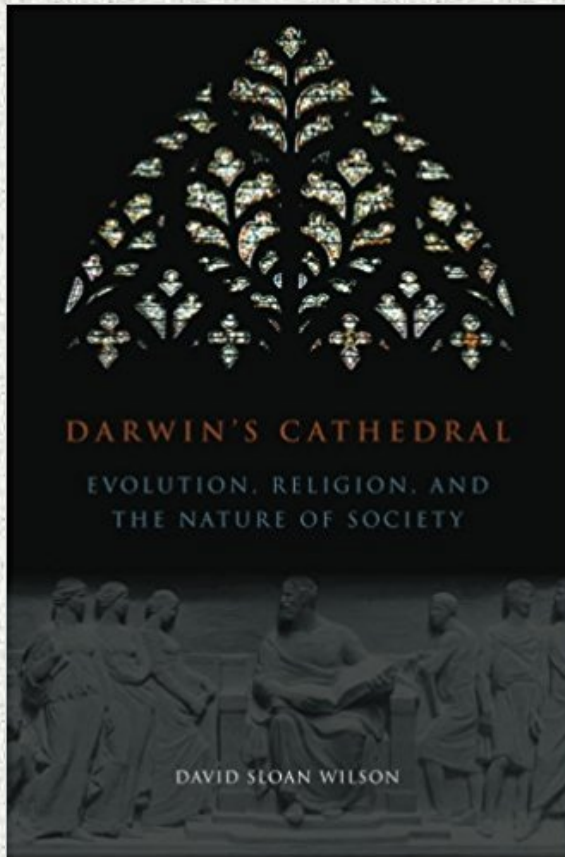
1992

Evolutionary Anthropology



1992

Evolutionary Religious Studies

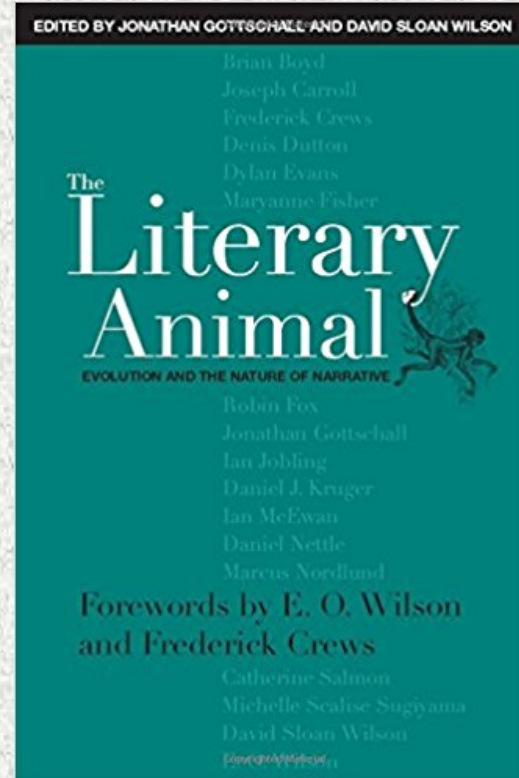


2002

Evolution and the Humanities

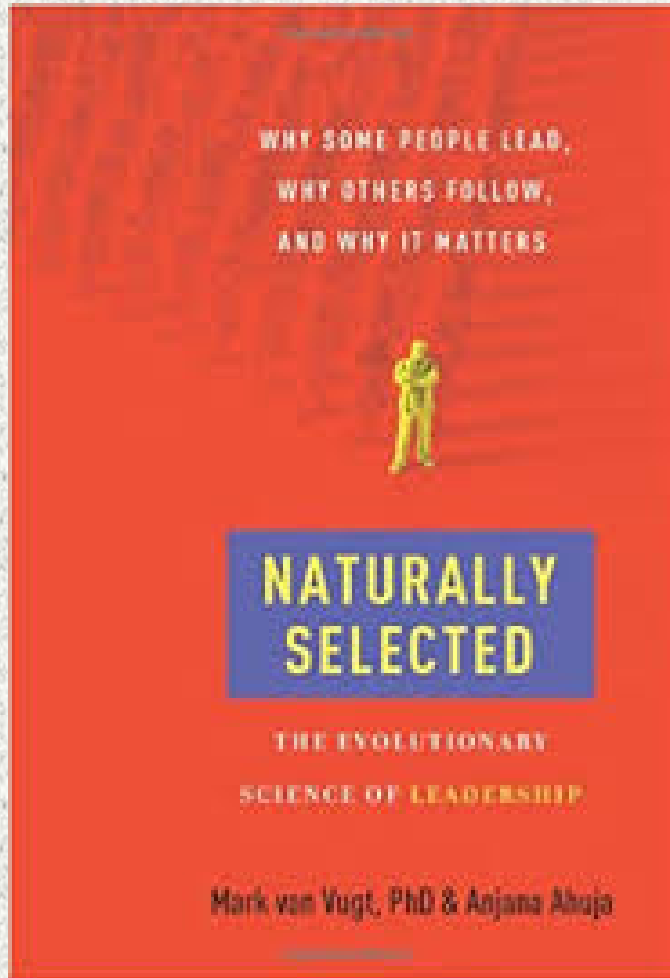


1995

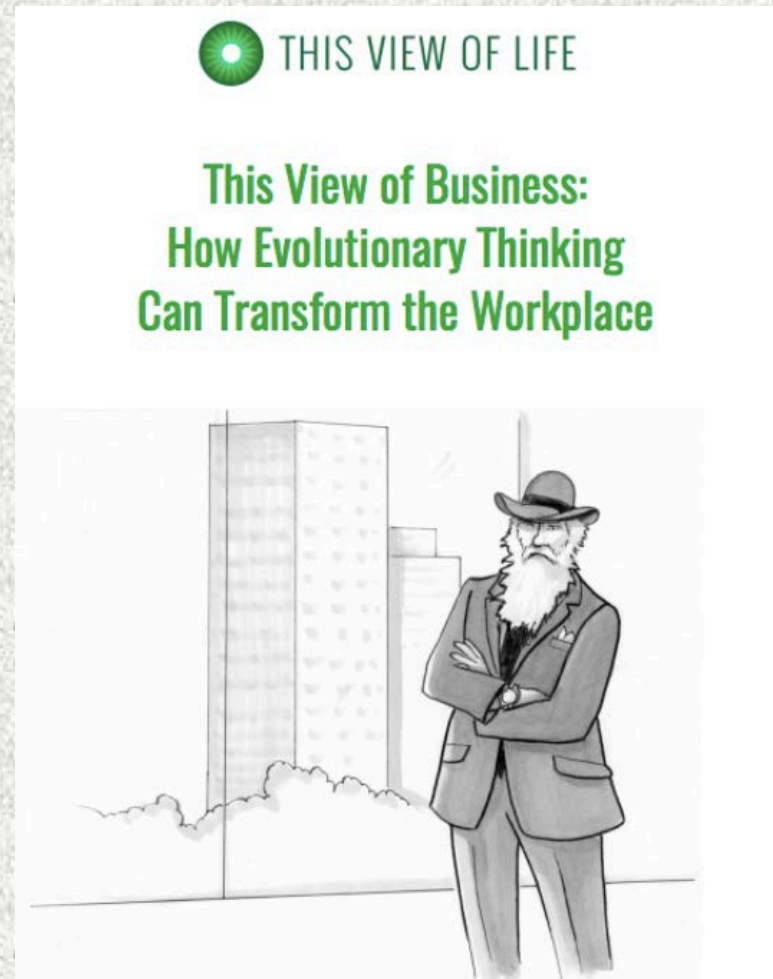


2005

Evolution, Business & Management

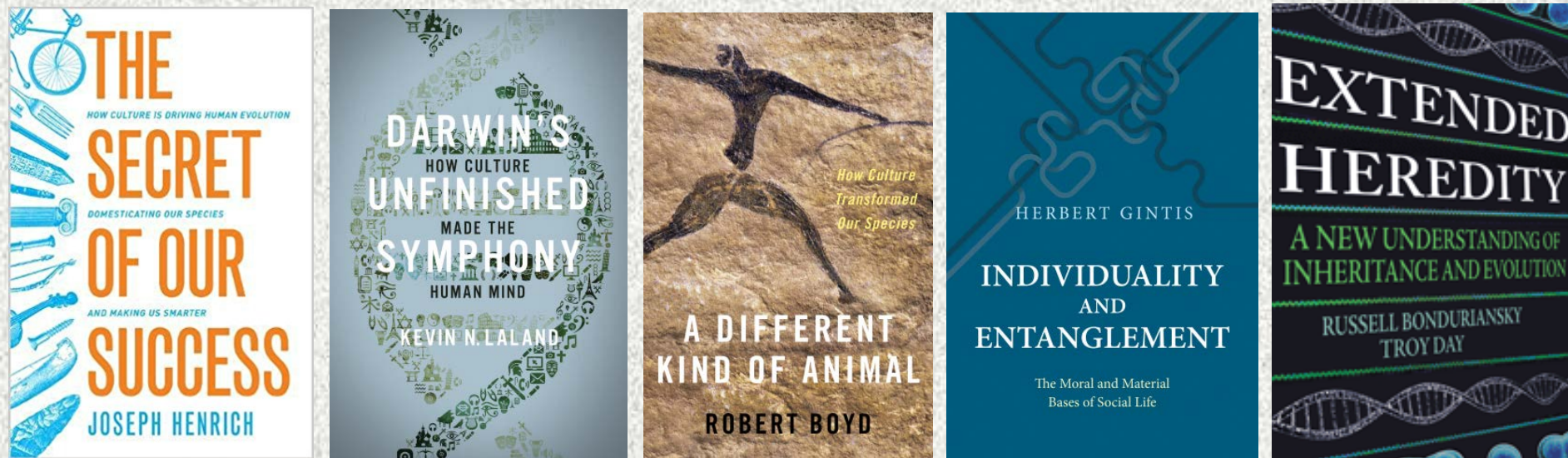


2011



2018

Fast Forwarding to the Present



Recent Princeton U. Press Titles

- Study of evolution in relation to human affairs is back on track.
- Large and growing community.
- Still only a tiny fraction of the worldwide academic community.
- An even tinier fraction of the policy community.

The Study of Evolution in Relation To...

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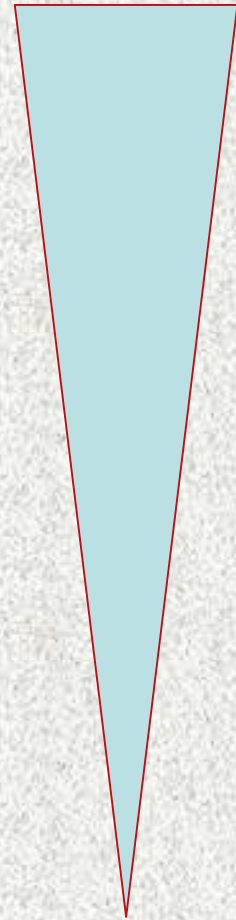
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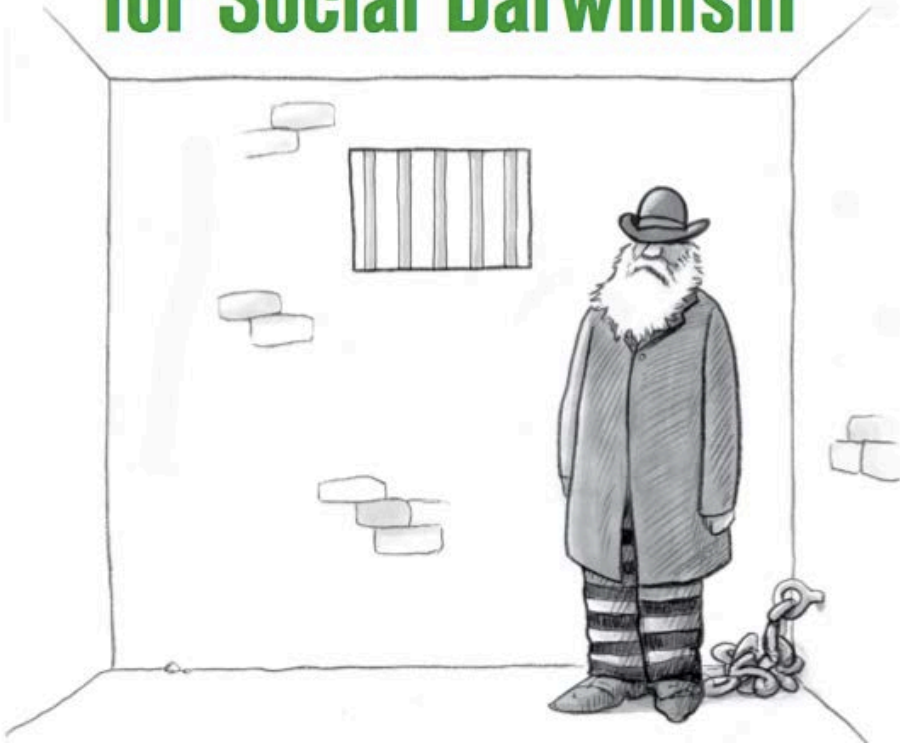
1860



Why the Hiatus?

 This View of Life Special Edition

Truth and Reconciliation for Social Darwinism



Human Affairs



Some highlights...

- Darwin's theory did not lead to an epidemic of toxic social policies.
- From the beginning, the term “Social Darwinism” was used as a pejorative to brand laissez-faire policies no matter what their justification.
- Similar to Obama branding Republicans as “Social Darwinists” for their tax policies.
- Progressive social thinkers such as John Dewey were heavily influenced by Darwin but never called Social Darwinists.
- Evolutionary biology became highly gene-centric, ceding the study of cultural evolution to other disciplines.
- Disciplines such as sociology and cultural anthropology had their own reasons to declare independence from “biology” and even “psychology” to establish their autonomy.

While this was going on....

The many branches of the human social sciences and humanities were growing into sophisticated bodies of knowledge, but not in relation to evolutionary theory or each other.

The Ivory Tower is more aptly described as the Ivory Archipelago. Many islands of thought with little communication among islands.



Taking the Archipelago Metaphor Seriously

Biological diversity is high on archipelagos for two reasons.

- **Genetic isolation, resulting in drift.**
- **Adaptive diversification to different niches.**



Taking the Archipelago Metaphor Seriously

- If academic disciplines are isolated from each other, they will diverge, if only at random or because they become adapted to different ends.
- The cultural analog to speciation is mutual incomprehension.
- Our study of culture & negotiation needs to include academic cultures in addition to national cultures.



Chi-Yue Chiu provided some examples at the end of his talk.

Darwin's Toolkit

- A single set of conceptual tools that can be applied to all topic areas.
- Business as usual for evolutionary biologists.
- Extended to all human-related academic subjects and policy areas.



Beyond Genetic Evolution

- Our capacities to learn as individuals and transmit learned knowledge across generations are both products of genetic evolution and open-ended evolutionary processes in their own right.
- This means that the rapid changes swirling all around us—and even within us--can be understood in (roughly) the same way as genetic evolution.

Tinbergen's Four Questions

- Four questions need to be addressed for all products of evolution, concerning their: 1) Function; 2) History; 3) Mechanism; 4) Development.
- A fully rounded evolutionary approach involves asking all four questions in conjunction with each other.
- Shinobu Kitayama's talk on cultural neuroscience provided an excellent example.

Tinbergen's Four Questions for DRD4

- 1) **Function:** Part of a motivational system governing attentiveness and activity.
 - 2) **History:** When the alleles originated during human evolution and the history of their spread.
 - 3) **Mechanism:** This is where the neuroscience comes in.
 - 4) **Development:** How the system comes into existence during the lifetime of the organism.
- The field of neuroscience often suffers for focusing excessively on the “mechanism” question without addressing the other three questions.



**NEARLY EVERY DECISION YOU MAKE
AS A TEAM PLAYER WILL BE
DIFFERENT THAN PLAYING THE
REGULAR GAME OF MONOPOLY**

Multilevel Selection

”Selfishness beats altruism within groups. Altruistic Groups beat selfish groups. Everything else is commentary”—D.S. Wilson and E.O. Wilson (2007).

- In a multi-tier hierarchy of units, adaptation at any given level requires a process of selection at that level and tends to be undermined by selection at lower levels.

Major Evolutionary Transitions

- The balance between levels of selection is not static but can itself evolve.
- When mechanisms evolve that suppress disruptive within-group selection to a sufficient degree, then between-group selection becomes the dominant evolutionary force.
- The group becomes so cooperative that it qualifies as a higher-level organism in its own right.

Human genetic and cultural evolution as a series of major transitions

- First at the scale of small groups for most of our evolutionary history.
- Then at the scale of larger groups during the last 10,000 years of cultural evolution.
- For the first time, the venerable metaphor of society as an organism can be placed upon a solid scientific foundation.

Adaptations in the evolutionary sense of the word frequently deviate from adaptations in the normative sense of the word

- Me at the expense of you.
- Us at the expense of them.
- Now at the expense of later.
- Unable to traverse from a low adaptive peak to a higher one.
- Left unmanaged, evolution frequently takes us where we don't want to go.
- Policy formulation = becoming wise managers of evolutionary processes.

For the rest of this talk..

- Stress the relevance of two “islands” of the Ivory Archipelago that are under-represented at this conference.
 - 1) Contextual Behavioral Science, including behavioral, cognitive, and mindfulness-based therapies.
 - 2) The work of Nobel laureate Elinor Ostrom on common-pool resource groups.
- Show how they can be combined to manage the cultural evolution of single groups and multi-group cultural ecosystems.

Contextual Behavioral Science

- Derived from the applied behavioral sciences.
- Seeks to understand and influence behavior in the context of everyday life.
- Highly evidence-based.
- Therapy is increasingly being conceptualized as a managed process of personal evolution.



PROSOCIAL

the science of working better together

IN THE WORLD

IN THE HEAD

AWAY

TOWARD



Why this is a managed process of evolution

- We are increasing psychological flexibility (= **variation** in our behavioral repertoire).
- And **selecting** the behaviors that lead us toward our valued goals.

Bibliotherapy

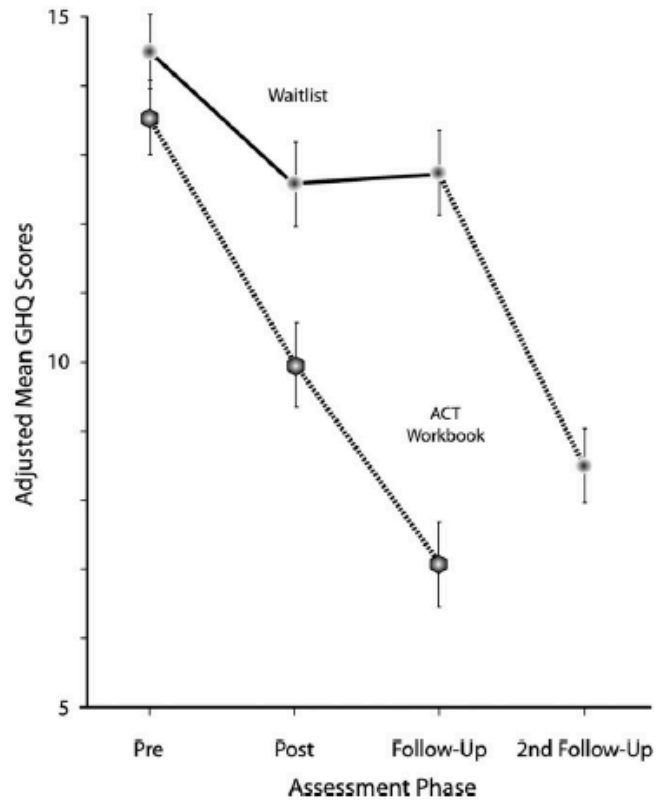
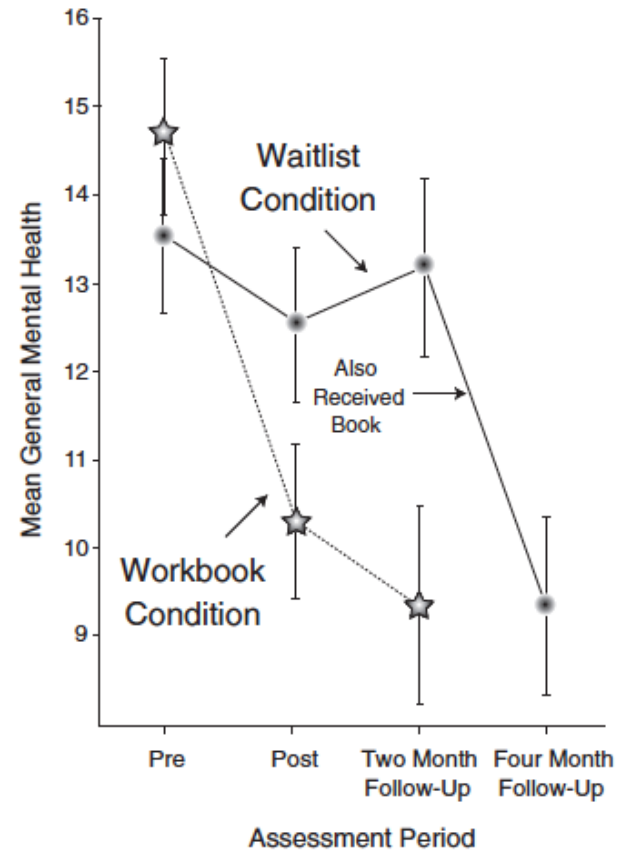


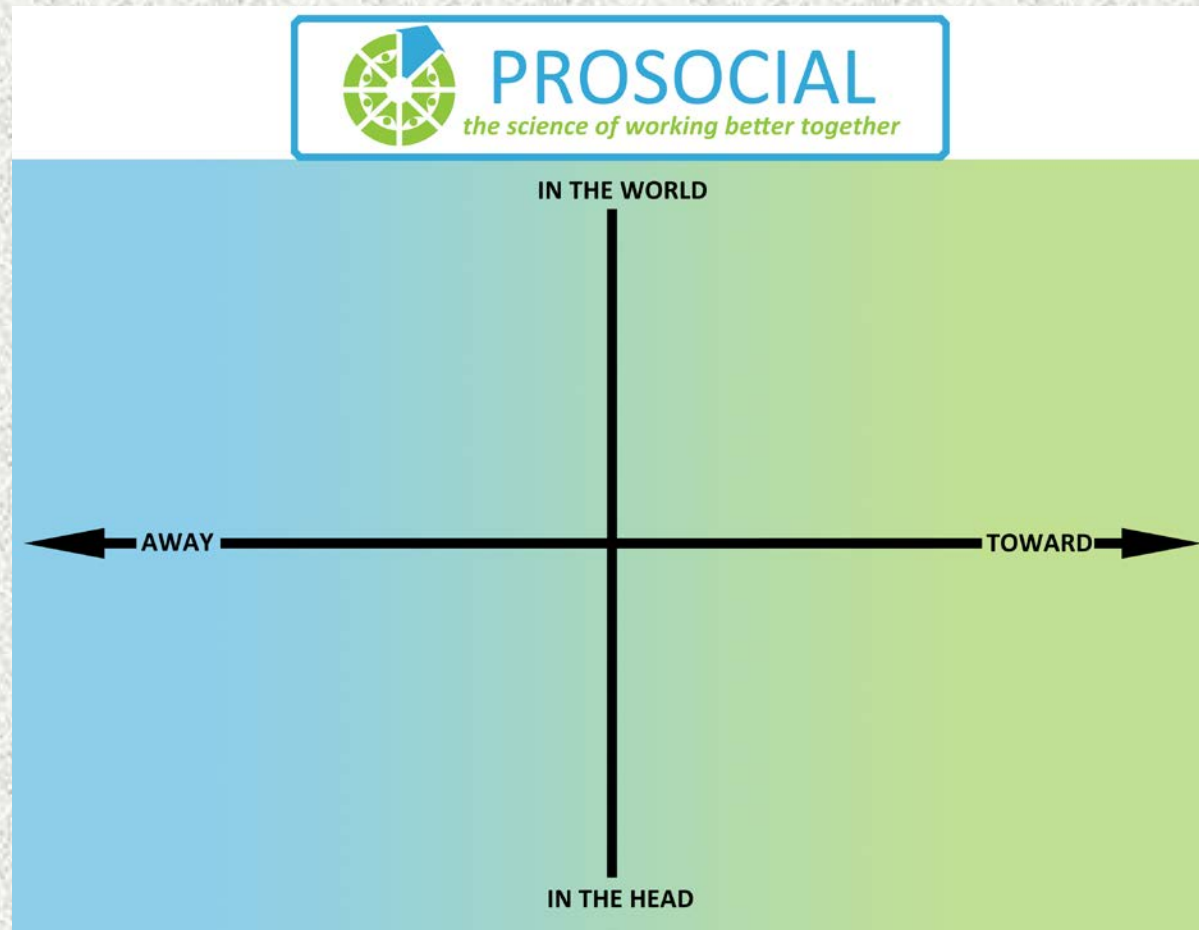
Fig. 2. Adjusted GHQ means for both arms of the study. Dashed lines are after the book was received. Standard error bars are shown for each data point.



Teacher burnout

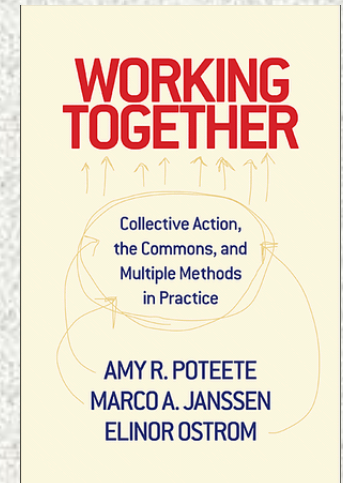
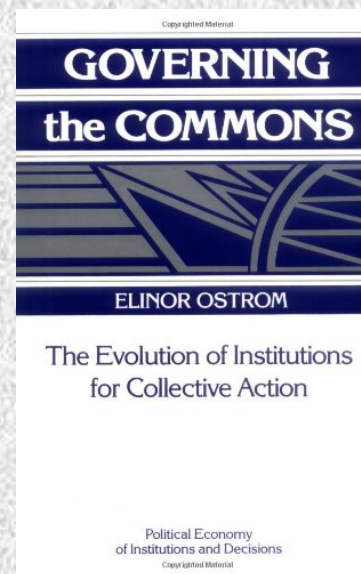
Stressed International Students

As useful for groups as for individuals



Elinor Ostrom

- Received Nobel prize in economics in 2009.
- Studied groups that manage common-pool resources such as forests, fields, fisheries, and irrigation systems.
- She showed that these groups are capable of managing their affairs if they possess **certain core design principles**.



Core Design Principles for the Efficacy of Groups

- 1) Strong group identity and purpose
- 2) Proportional equivalence of costs and benefits
- 3) Inclusive decision making
- 4) Monitoring
- 5) Graduated sanctions
- 6) Fast, fair conflict resolution
- 7) Local autonomy
- 8) Appropriate relations with other groups



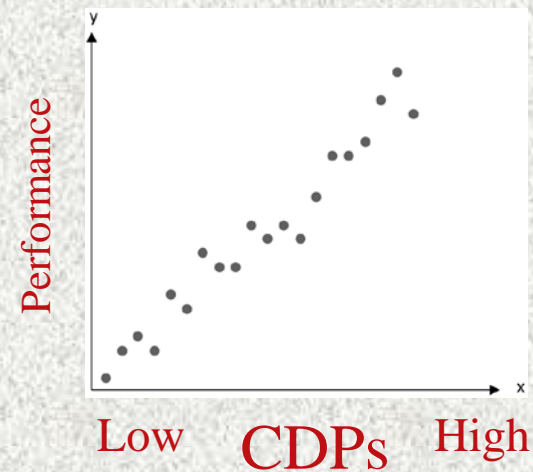
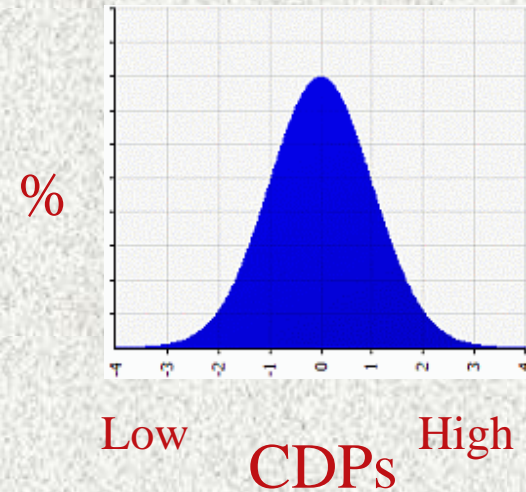
Core Design Principles and Multilevel Selection

- 1) Strong group identity and purpose
- 2) Proportional equivalence of costs and benefits
- 3) Consensus decision making
- 4) Monitoring
- 5) Graduated sanctions
- 6) Fast, fair conflict resolution
- 7) Local autonomy
- 8) Polycentric governance among groups

- The Core Design Principles make perfect sense from a multilevel evolutionary perspective.
- They increase the efficacy of groups by suppressing the potential for disruptive self-serving behaviors within groups.
- **The conditions for modern groups to function well are the same as the conditions for our genetic evolution as a highly cooperative species.**

A Bold Prediction

- What Ostrom showed for common-pool resource groups **should hold for all groups whose members are trying to work together to achieve a common goal.**
- Cooperation is itself a common-pool resource.



Another Bold Prediction

- The Core Design Principles should be **scale-independent**.
- Apply to the welfare of nations and the planet as much as to small groups.



A Practical Change Method



The method

The science

Who we are

Magazine

Contact

The science of working better together

An evidence-based method that improves teamwork for groups of any kind



www.prosocial.world



ACBS
— ASSOCIATION FOR —
CONTEXTUAL BEHAVIORAL SCIENCE

7800 members worldwide



Steven C. Hayes
Founder of ACT



PROSOCIAL

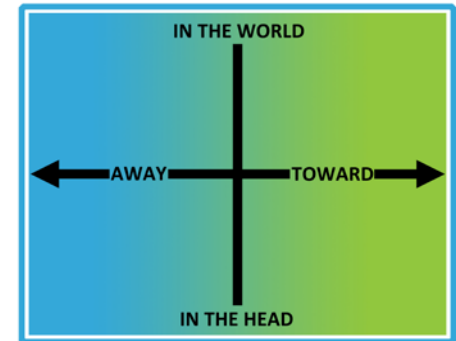
the science of working better together

Increasing the capacity for change.

A functional blueprint for efficacious groups.

Hitting the ground running

STEP ONE – ACT:
Acceptance and Commitment Training



STEP TWO – CDP:
Core Design Principles

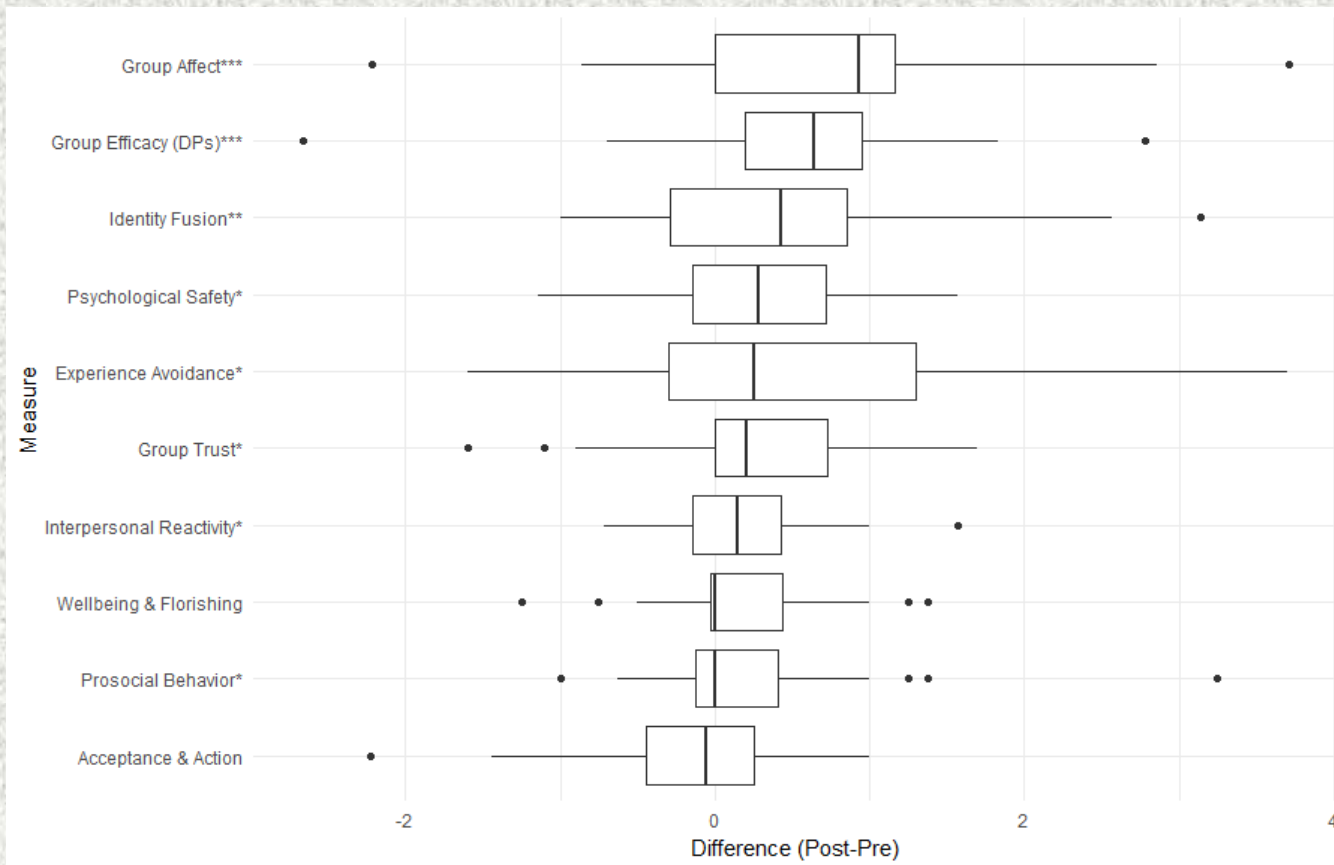
1. Strong group identity and understanding of purpose
2. Fair distribution of costs and benefits
3. Fair and inclusive decision-making
4. Tracking agreed upon behaviors
5. Graduated responses to transgressions
6. Fast and empathetic conflict resolution
7. Authority to self-govern
8. Appropriate relations with other groups

STEP THREE:
Short-Term Actionable Goals



Pre- and Post- Survey

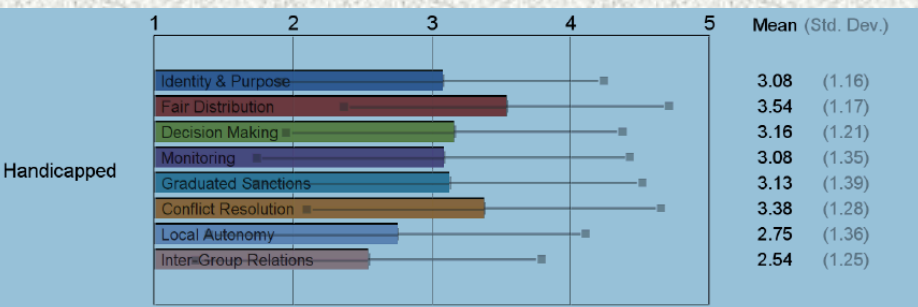
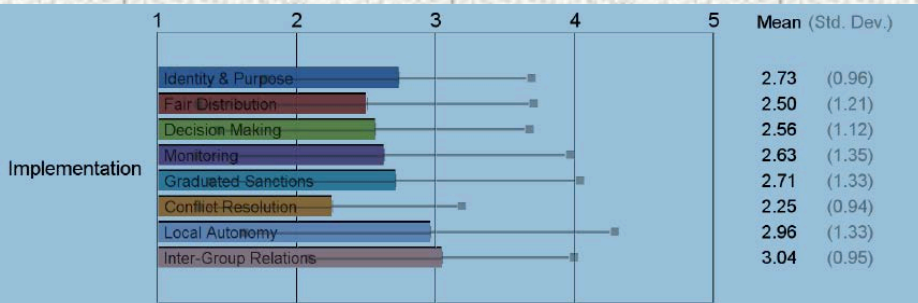
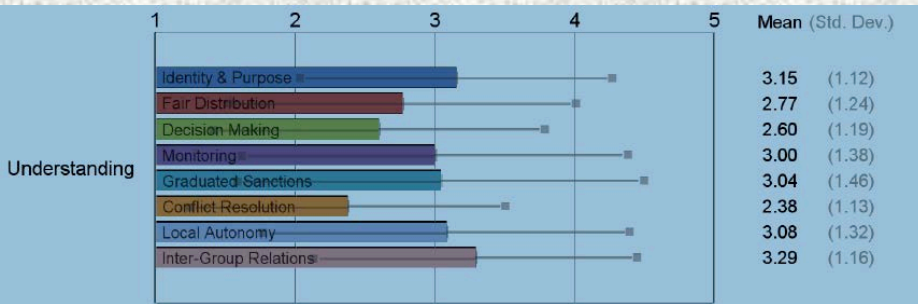
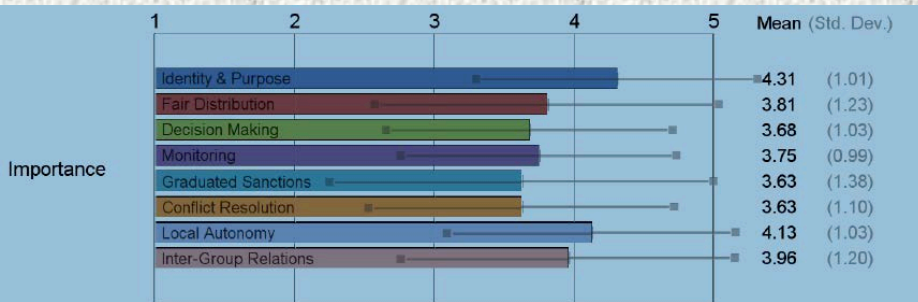
- Well-being and flourishing
- Prosociality
- Work-related acceptance and action
- Interpersonal reactivity
- Core Design Principles
- Identity fusion
- Group affect
- Group trust
- Psychological safety
- Basic psychological needs
- Experiential avoidance



This speaks to Yoshi Kashima's point about co-creating a culture within a specific context.

Data Capture

- Before-and-After survey of individual and group-level variables.
- Quantitative self-report data on the Core Design Principles.
- Naturalistic data.
- Short-term goal performance.
- Growth and longevity.

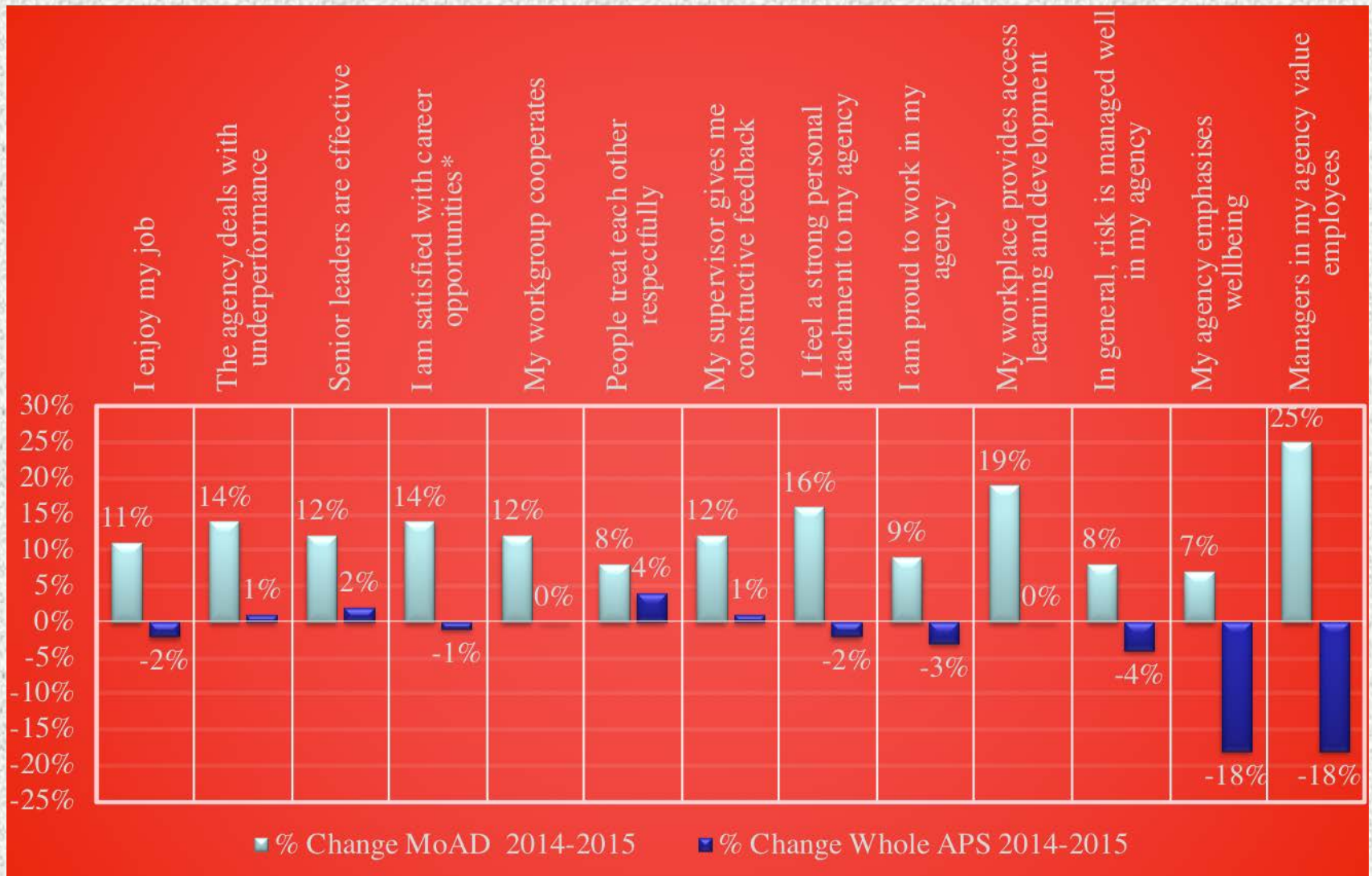


Adapting to the Ebola Epidemic

- Sierra Leone 2014
- Cultural mismatch of cataclysmic proportions.
- PROSOCIAL resulted in a new cultural mutation—using a banana trunk as a symbolic representation of the body.
- PROSOCIAL also helped to rapidly spread the practice to other villages within the district.
- See video on website for more.



Improving a Government Agency in Australia



Project Development

- Grant from Templeton World Charity Foundation.
- Multigroup database.
- Comprehensive website.
- Facilitator training.
- Version specialized for business groups.
- Looking for partners that can provide access to groups of all sorts.

This View of Life

Completing the Darwinian Revolution and Evolving the Future

This View of Life: An evolutionary worldview.

Completing the Darwinian Revolution: Something that is still in progress for the study of humanity.

Evolving the Future: Policy formulation as managing evolutionary processes at all scales, from a single individual to the planet.

How does this relate to **Culture and Negotiation?**

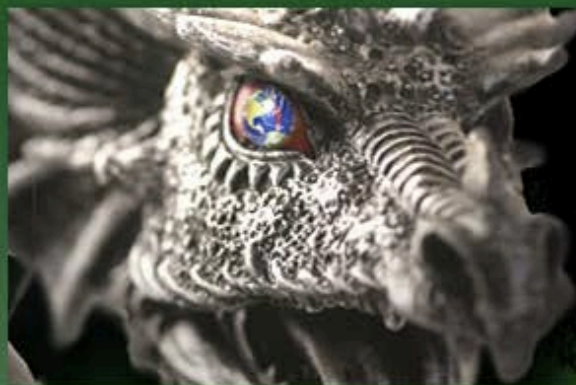
Thinking of Cultural Diversity as Like Biological Diversity

- Differences caused by isolation.
- Differences caused by ecological interactions.
- A cultural meaning system as analogous to a biological species.
- Even a small geographical area is a multi-species cultural ecosystem.
- Example: Tight and loose religious congregations in any American city.

Phenotypic Variation in Modern Christian Belief



- Seems paradoxical and hypocritical from some perspectives.
- Makes perfect sense when we think of a sacred text as a cultural genome capable of adapting religious groups to different environments.



Resisting the Green Dragon

A Biblical Response to One of the Greatest Deceptions of Our Day

Order this one-of-a-kind DVD series, discussion guide, and book presenting a Christian response to radical environmentalism



“For nearly forty years the supporters of the expected utility formulation have exerted a dogmatic and intolerant, powerful and tyrannical domination over the academic world; only in very recent years has a growing reaction begun to appear.

--Maurice Allais (1987)

HARVEY COX



THE
MARKET
AS GOD



Managing the Cultural Evolutionary Process

Negotiation

Managing the Cultural Evolutionary Process

- Define the salient group.
- Provide the appropriate structure (core and auxiliary design principles).
- Determine the target of selection.
- Work toward target of selection.
- This will frequently require an iterative variation and selection process, especially when the evolving system is complex.

[BIOLOGY](#)[ECONOMY](#)

Systems Engineering as Cultural Group Selection: A Conversation with Guru Madhavan

By Guru Madhavan, David Sloan Wilson | No Comments