

Anthropology in and around Cognitive Science

Douglas Medin

Northwestern University

BIG issues for cognitive science

1. What is the relation between the brain and the mind?
2. What is the relation between social/cultural/ecological contexts and the mind?

Progress on Brain and Mind?

Saturation and success.

With fMRI and other powerful tools we have cognitive neuroscience, social neuroscience, and neuro-economics, just to name a few.

Social/Cultural/Ecological context and Mind?

1. Cognitive Science journal in 1980's, 1990's and in the 21st century = 1,2,5 and a few cross-linguistic studies.
2. Sofia, Bulgaria International Summer School in Cognitive Science and the dog named Polly.....

Why it might or might not matter

Roy D'Andrade (around the time the CS Society was formed) suggested that there is a congenial division of labor: (Cognitive) Psychology studies how people think and (Cognitive) Anthropology studies what people think.

It does matter....

The content/process distinction is difficult to maintain.....

Ed Hutchins- the social and material world participate in the *organization* of cognitive processes

An example: East (Japan) versus West (USA) and perception

Masuda and Nisbett change detection task

USA versus Japanese participants and foreground versus background changes

And ecological context matters....

Some other examples

Development of autobiographical memory
(work of Qi Wang and others)

Mental models of nature, ecological
orientation and anthropocentrism
(example to follow).

Mental models: triangulation

Urban (mostly) European-American

Rural European-American

Rural Native-American (Menominee)

Children's biological reasoning

5-year-old Urban children show a human-centered biology, unlike rural children

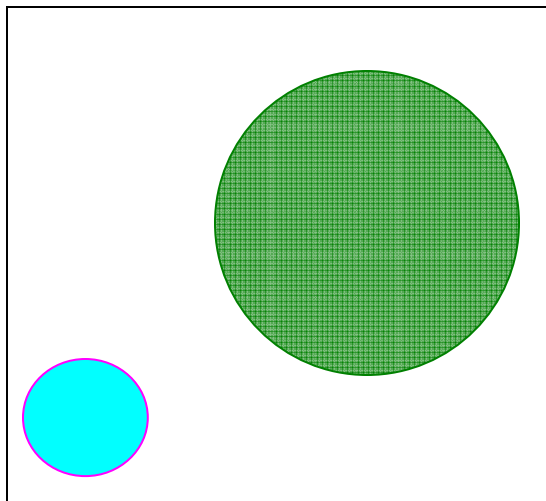
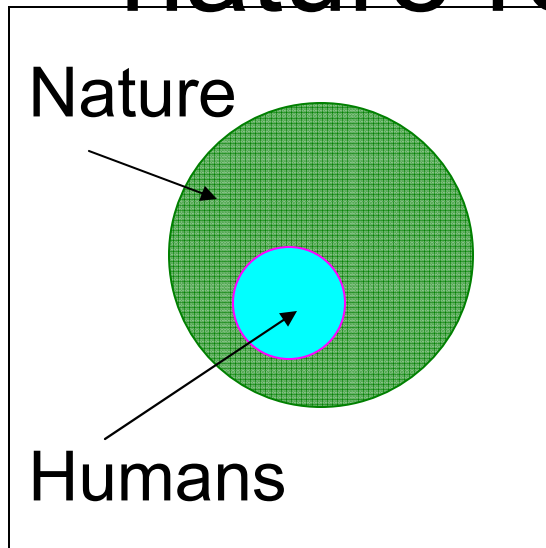
Rural Menominee children versus rural European-American and ecological reasoning.....

Data with Adults

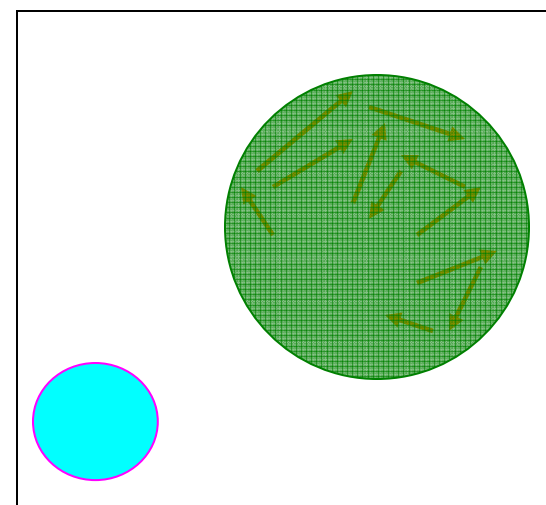
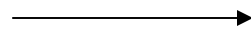
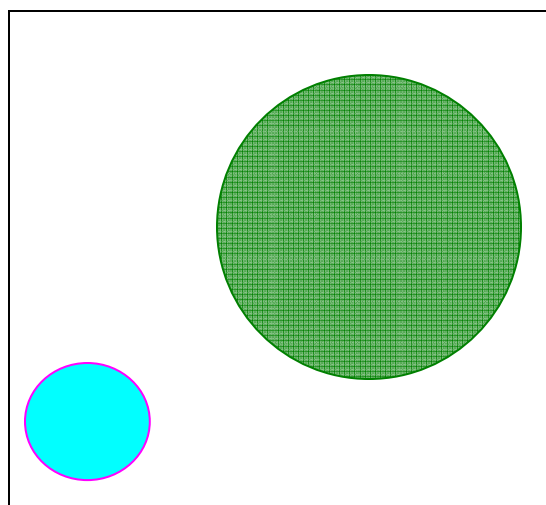
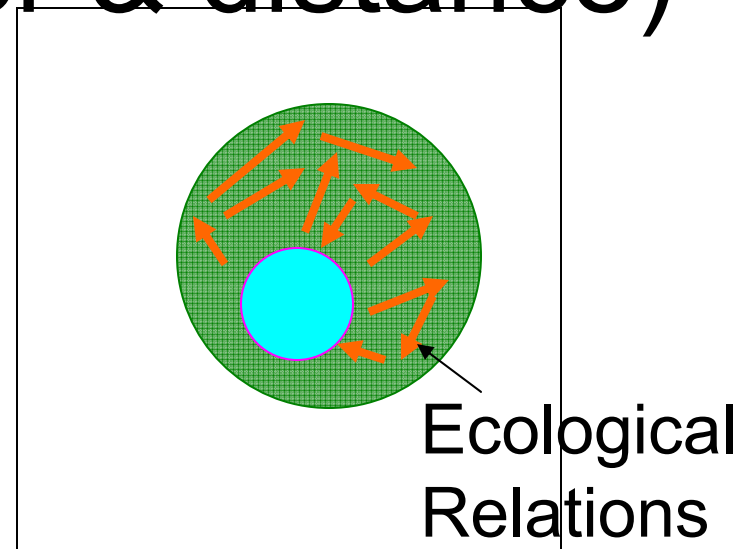
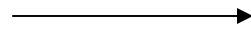
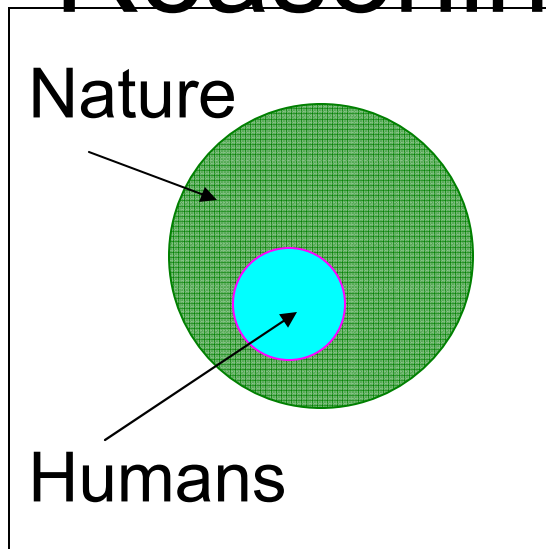
In comparisons of rural Menominee and rural European-American fishermen we find parallel differences in ecological orientation.

How do these differences
arise and how are they
supported?

Cultural Differences in human/ nature relations (closeness)



Differences in Ecological Reasoning (power & distance)



Bang et al 2007 PNAS

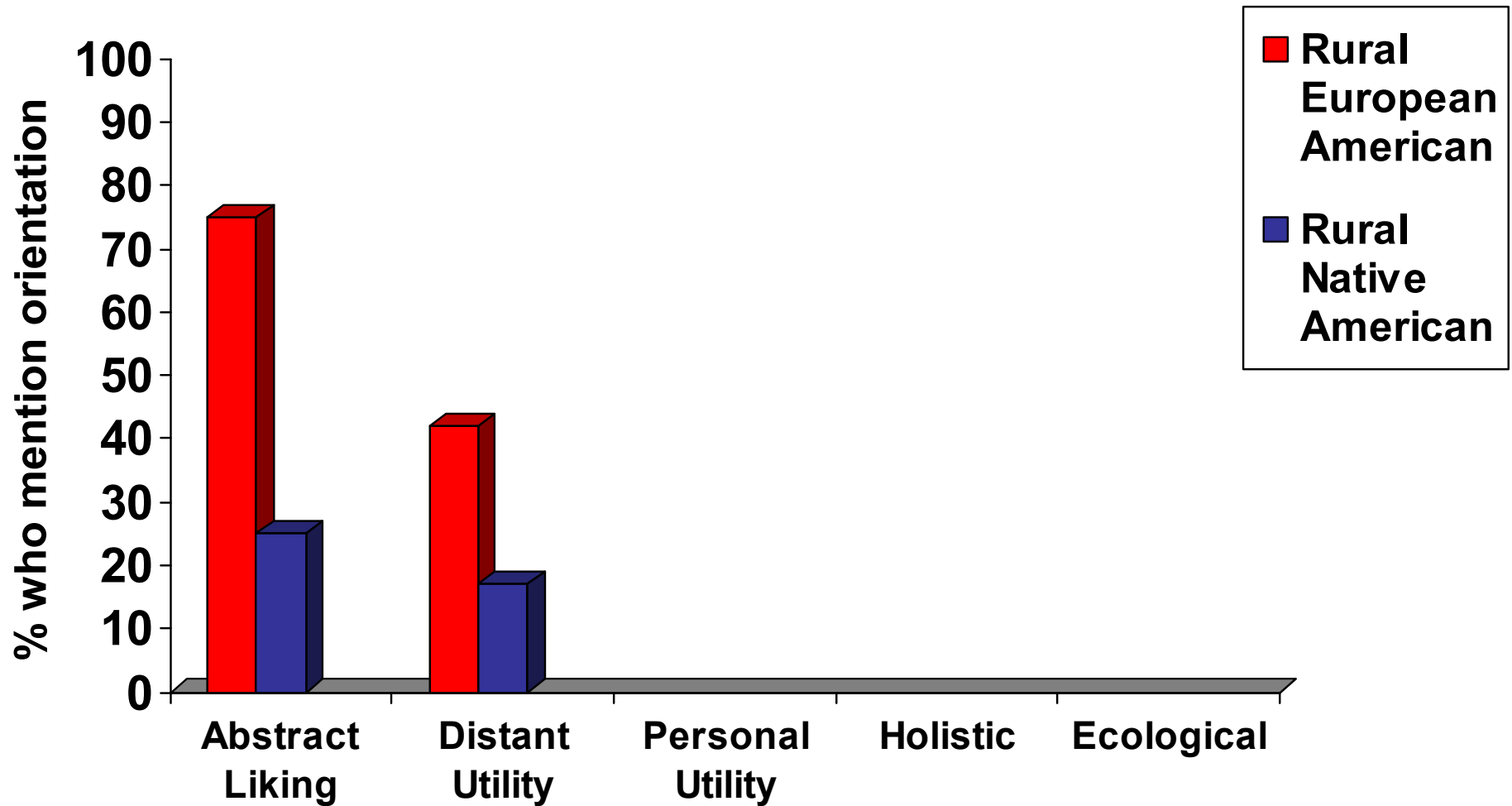
From a long interview about experiences, activities and practices in nature, etc

Key (for present purposes): “What are the five most important things for your child (grandchild) to learn about the biological world?”

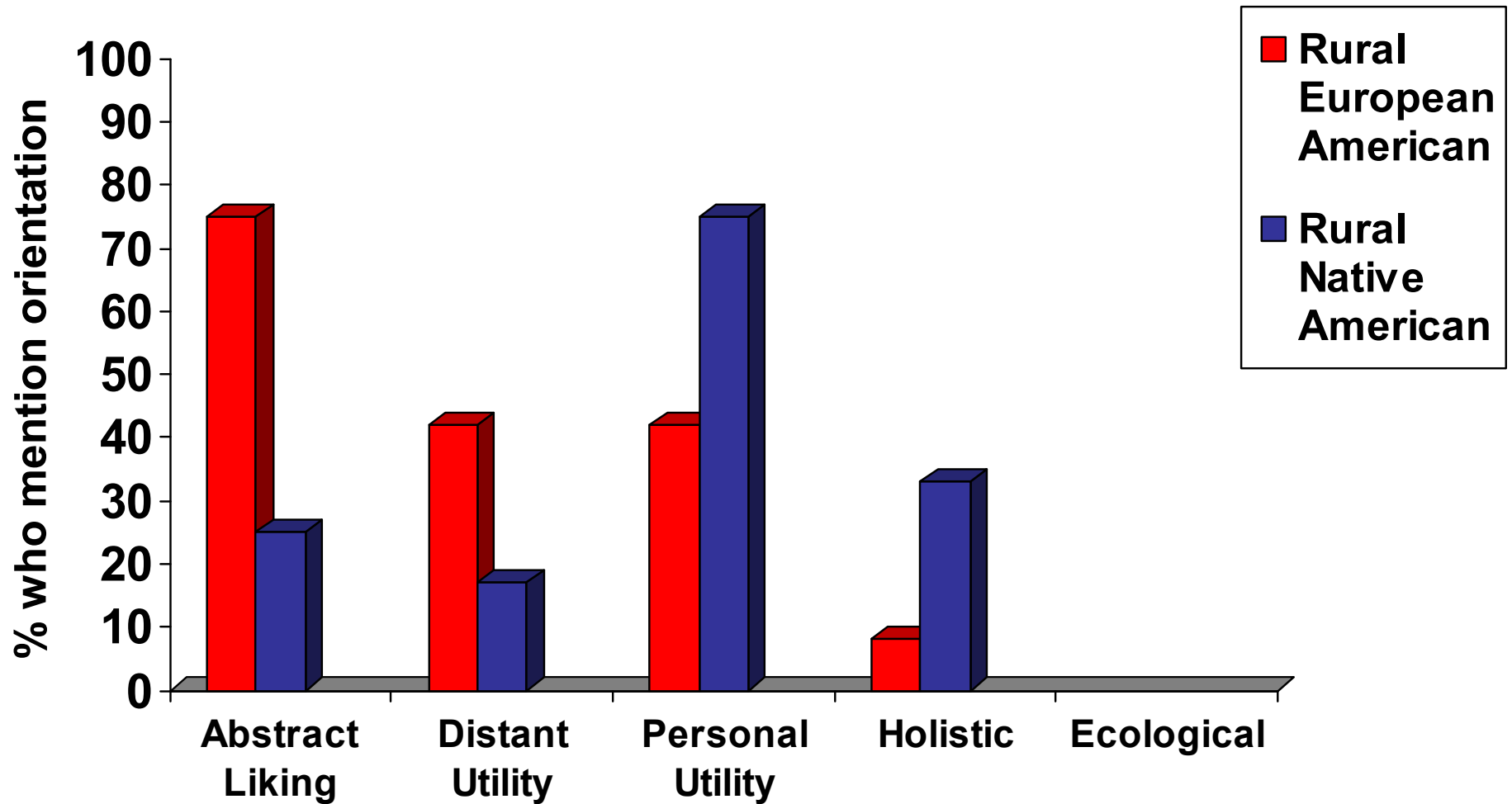
European-American: “I want my children to learn that they have a responsibility to **take care of** nature”

Native-American: “I want my children to understand that they **are a part of** nature.”

European American parents/grandparents express more 'distant' orientations toward nature



Native-American parents/grandparents express more 'proximal' orientations



More implicit practices....

Child and adult outdoor
practices....and fore-grounding
versus back-grounding

Ways of talking about nature and psychological closeness

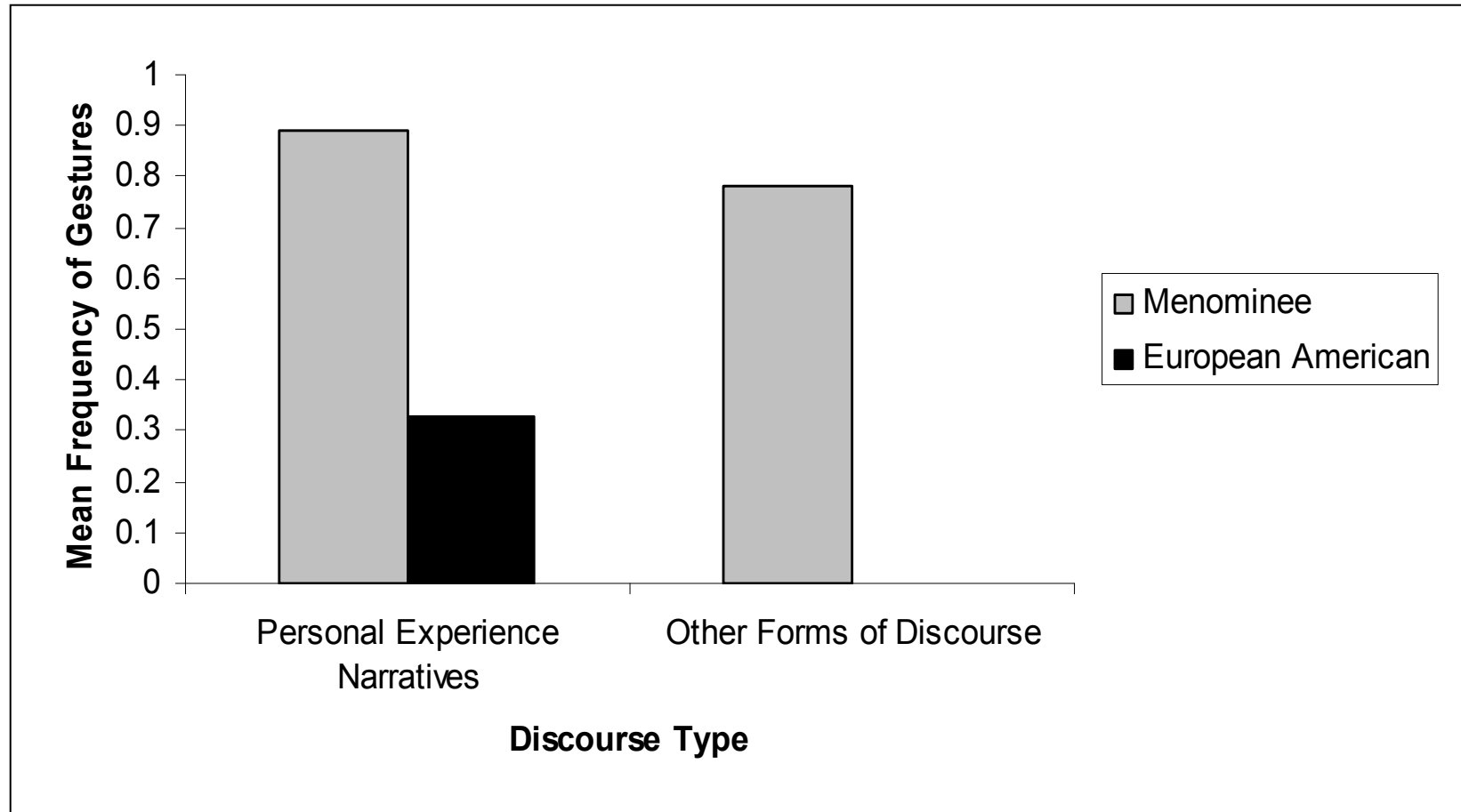
Studies by Sara Unsworth (2008)

Species Relations Task

Why might these two go together?



Gesture: Menominee adults are more likely to take the perspective of non-human animals



Summary

Psychological distance and power relations supported by a wide range of practices—both explicit *and implicit*.

Culture is embodied.....

The what versus how distinction just doesn't hold.....

Projections for Polly.....

- 1. Cultural research doesn't have to be cross-cultural research.**
- 2. Increasing concern with context and action (e.g. work on embodied cognition).**
- 3. Don't expect a revolution. Co-evolution of humans and dogs.....**

Thanks!