# How genetic evolution can influence culture change?

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# Culture-gene coevolutionary approach (CGC) investigates:

- •<u>The origins and functions of cognitive mechanisms</u> <u>that shape cultural learning and thus allow cultural</u> <u>evolution</u>
- •The cultural evolutionary processes that generate cross-cultural patterns of psychological variations

#### Areas of research

Cultural learning mechanisms

Language acquisition

Reasoning about ethnic groups

### **Cultural learning mechanisms**

Biological program makes major in early childhood:

- •Cues of competence and reliability (age of 12 months)
- •Visual attention (3-4 years old)

#### Languages

- •Language structures selected for better cognitive capacities
- •Natural selection has an influence on changes in morphology and physiology, for example: Laryngeal morphology, Neural circuits for motor control, Greater memory capacities
- •Color lexicon is correlated with gray matter in the visual cortex

## **Reasoning about ethnic groups**

- •Natural selection can favor motivations for ingroup preferences and for marking one's group membership
- •Linguistic cues as bases for categorizing others, even when they cross-cut membership in cooperative units
- •First boundaries were made by morphological features

### **Examples**



-Cognitive capacities

 Cues and visual attention in childhood

-Categorizing others

-Motivation for ingroup preferences Cognitive capacities-

Natural selection has influenced on morphology-

Categorizing others-

First boundaries-