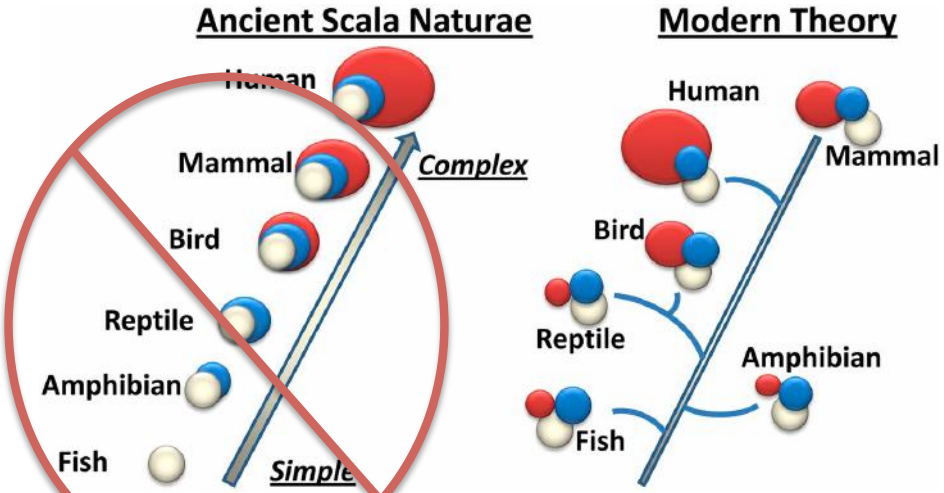
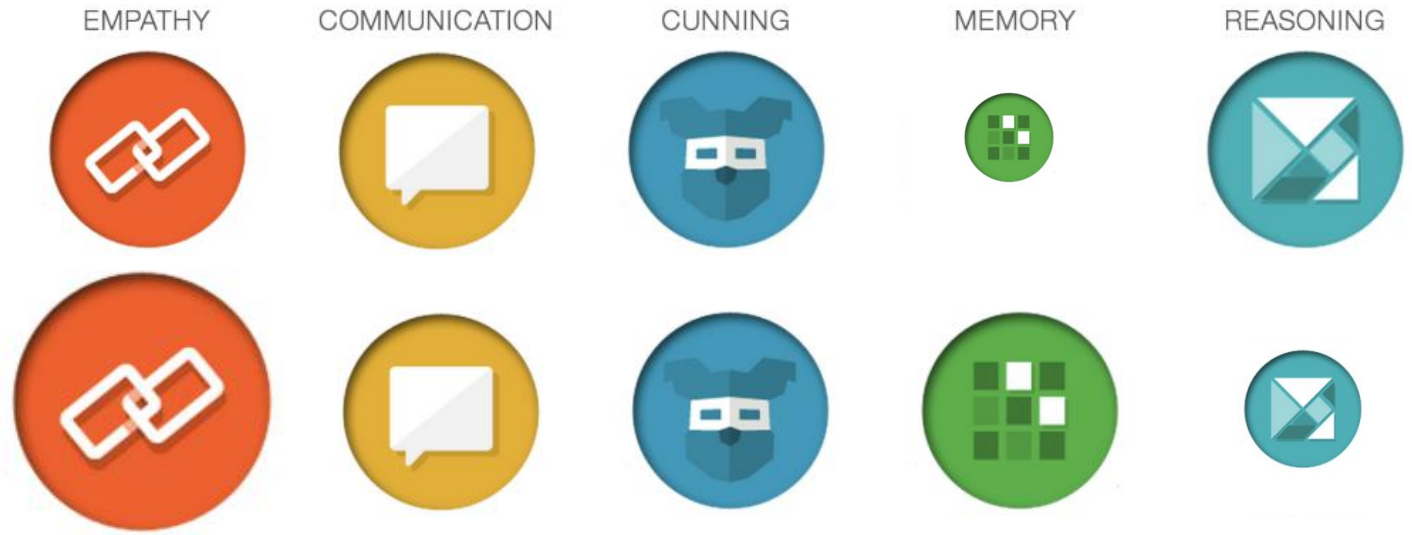
Hanus & Call, 2010

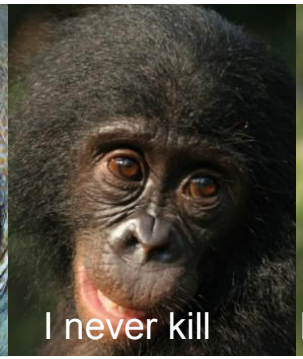


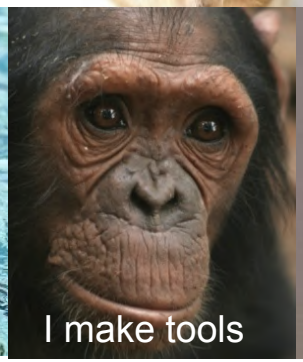
Intelligence
uni-dimensional

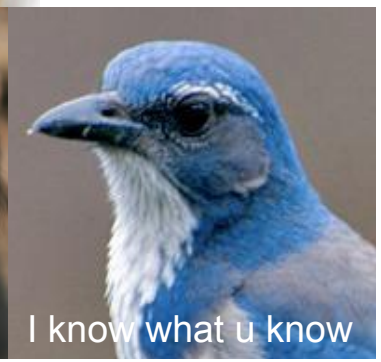
Cognitive Profiles



Which species is smarter?







Which is a better tool?

In our 1997 book, *Primate Cognition* [1], we reviewed all the available evidence and concluded that non-human primates understand much about the behavior of conspecifics but nothing about their psychological states.

Apes Know (in some context):

Metacognition

- When they need to search for more information
- When decisions are risky or uncertain
- When choice involves risk versus ambiguity

Episodic / Autobiographical Memory

- When something was hidden
- How value of what is hidden changes w/ time
- What they experienced a year before

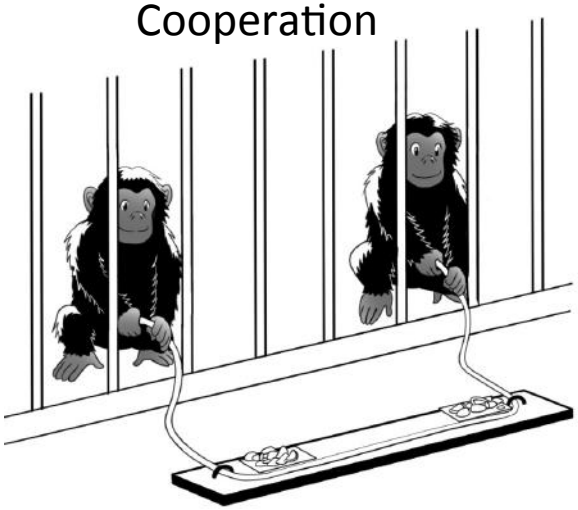
Rosati, 2017, *Trends in Cognitive Sciences*
Call & Carpenter, 2001, *Animal Cognition*
Martin-Ordas, et al 2010, *Animal Cognition*

Chimpanzees Know (in some context):

Theory of Mind

- What others can or cannot see
- What others intend or do not intend
- What others know and do not know

Cooperation



- When help is needed (self and others)
- Who is skilled and unskilled
- Leverage in dyadic relationship

Hare, 2011, *Ann. Rev. Anthropology*

Victoria Wobber[1,2]
Esther Herrmann[3]
Brian Hare[4]
Richard Wrangham[2]
Michael Tomasello[3]

Differences in the Early Cognitive Development of Children and Great Apes

Developmental Psychobiology 56 (3) 547-573

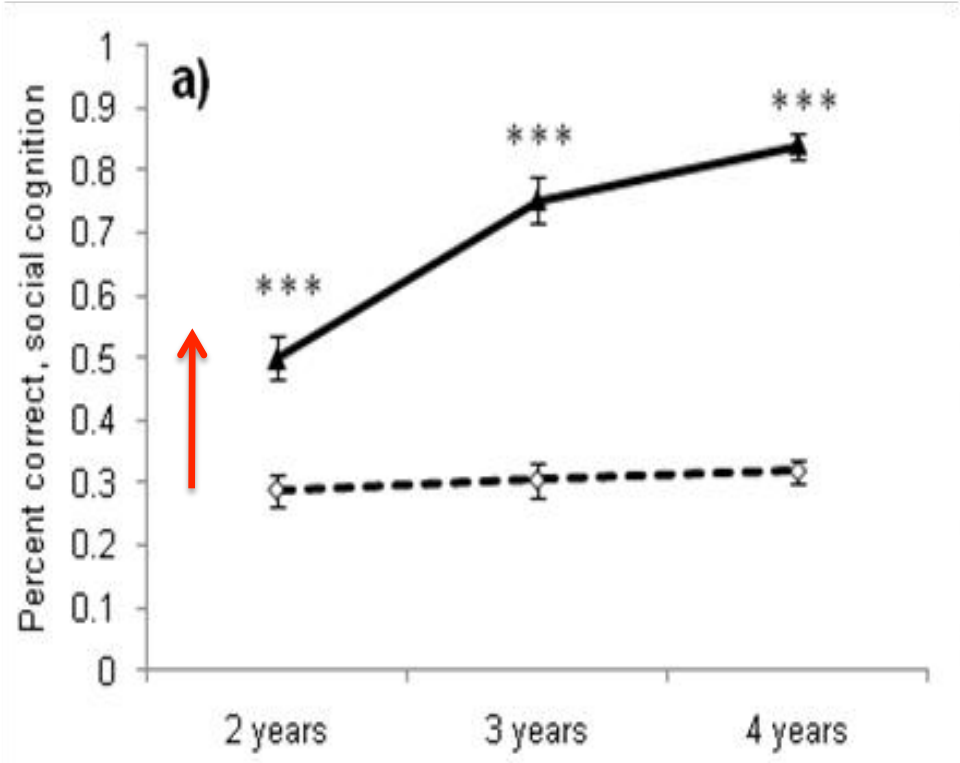
Yearly tests of cohort b/w 2-4 years

N = 42

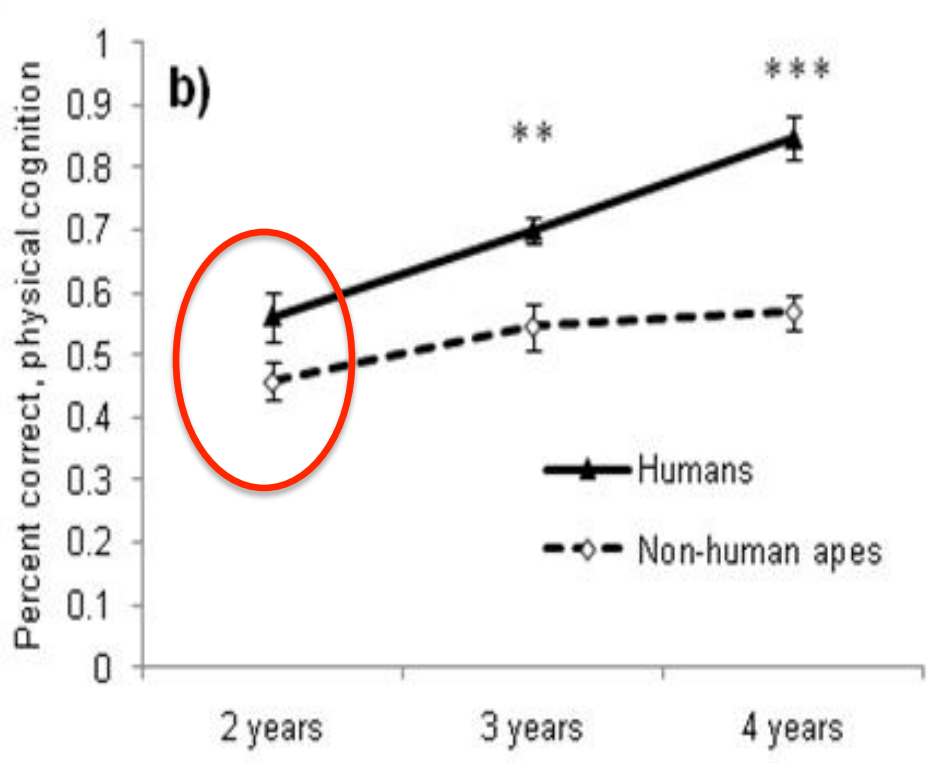
N = 48

Early emerging social cognition in human infants between 12-24 months

SOCIAL TESTS (N=9)



PHYSICAL TESTS (N=5)



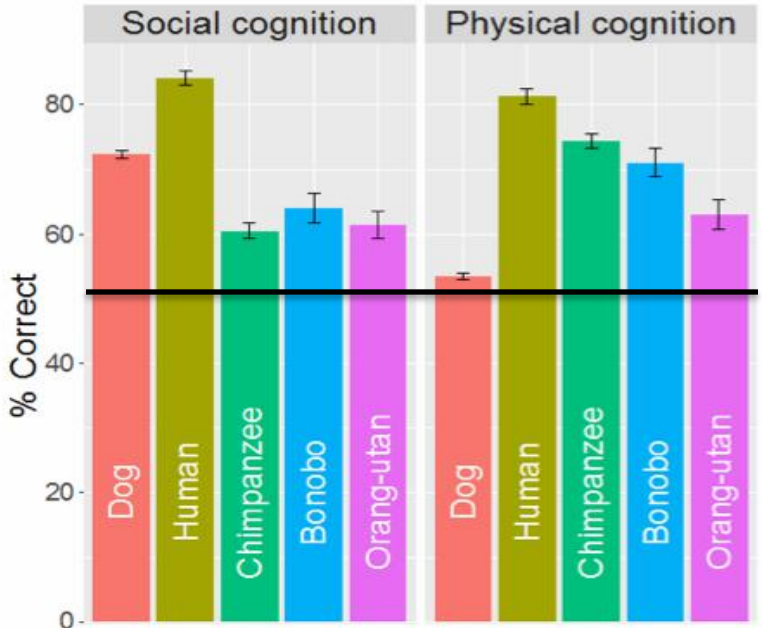
- Tested dogs of wide variety of breeding and rearing history (N>550) on 4 social and 4 physical tasks from Primate Cognitive Test Battery

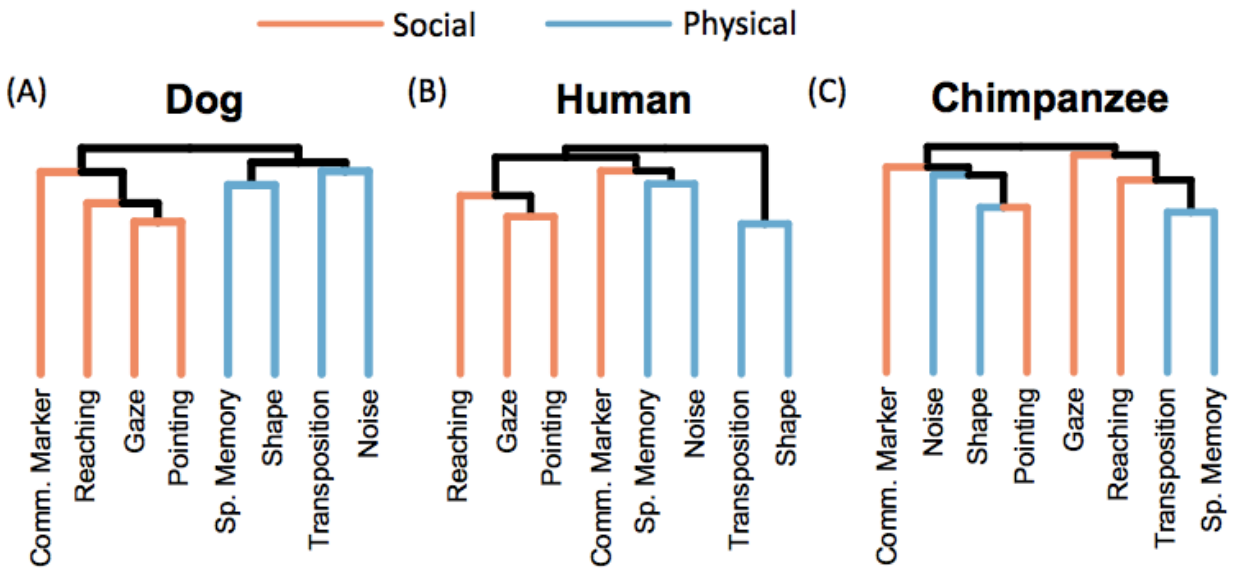
N=115

N=222

N=215

- Examined species and individual differences





MacLean et al, 2017, *Animal Behaviour*

Survival of the Friendliest: *Homo sapiens* Evolved via Selection for Prosociality

Brian Hare

Department of Evolutionary Anthropology and Center for Cognitive Neuroscience, Duke University, Durham, North Carolina 27708; email: b.hare@duke.edu

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Keywords

cognitive evolution, domestication, human evolution, self-domestication, social cognition

Abstract

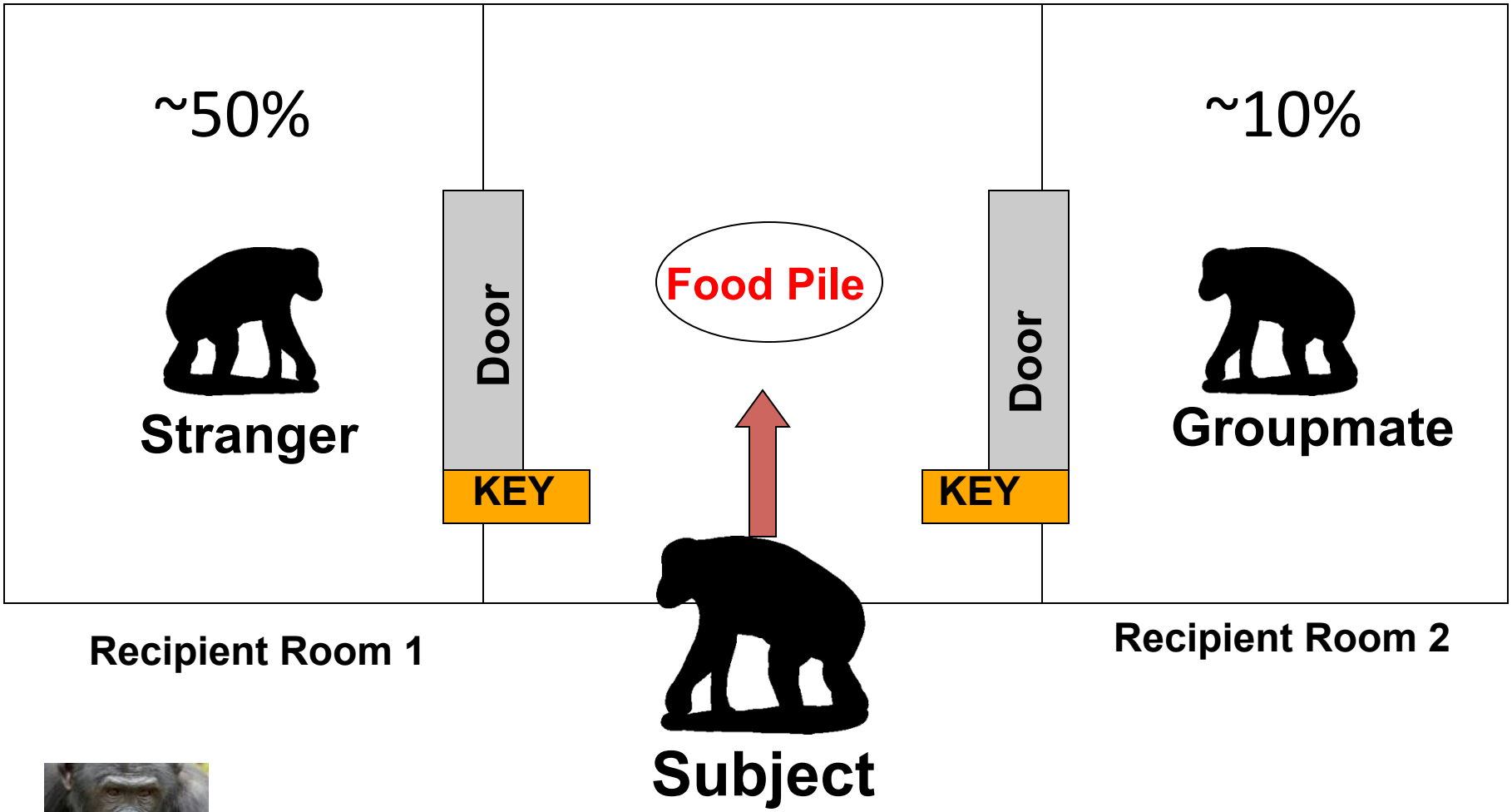
The challenge of studying human cognitive evolution is identifying unique features of our intelligence while explaining the processes by which they arose. Comparisons with nonhuman apes point to our early-emerging cooperative-communicative abilities as crucial to the evolution of all forms of human cultural cognition, including language. The human self-domestication hypothesis proposes that these early-emerging social skills evolved when natural selection favored increased in-group prosociality over aggression in late human evolution. As a by-product of this selection, humans are predicted to show traits of the domestication syndrome observed in other domestic animals. In reviewing comparative, developmental, neurobiological, and paleoanthropological research, compelling evidence emerges for the predicted relationship between unique human mentalizing abilities, tolerance, and the domestication syndrome in humans. This synthesis includes a review of the first a priori test of the self-domestication hypothesis as well as predictions for future tests.

Hare & Kwetuenda, 2010

Tan & Hare, 2013

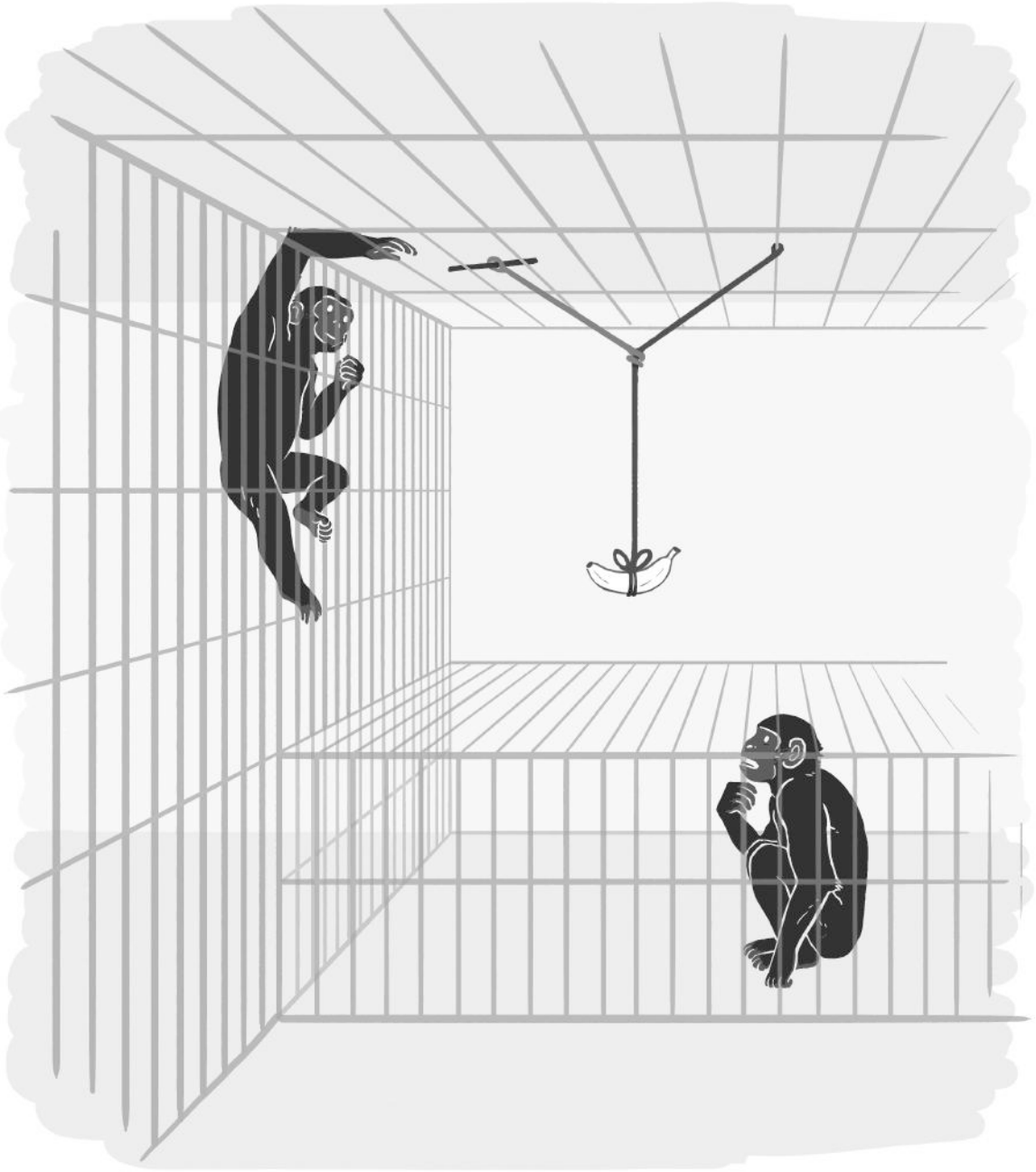
Do bonobos lack xenophobia?: YES

Bonobos *prefer* to share with strangers = xenophilia



N=12

Tan & Hare, *2013, PLoS ONE*



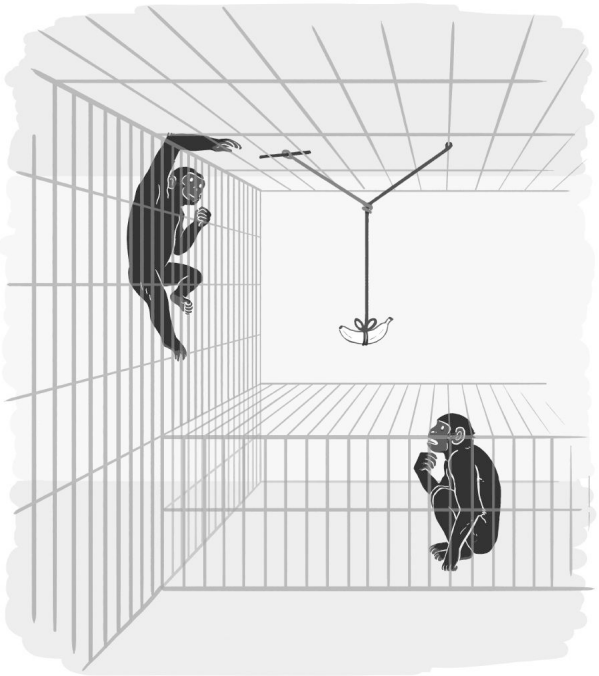
Tan, Ariely & Hare, 2017, *Scientific Reports*

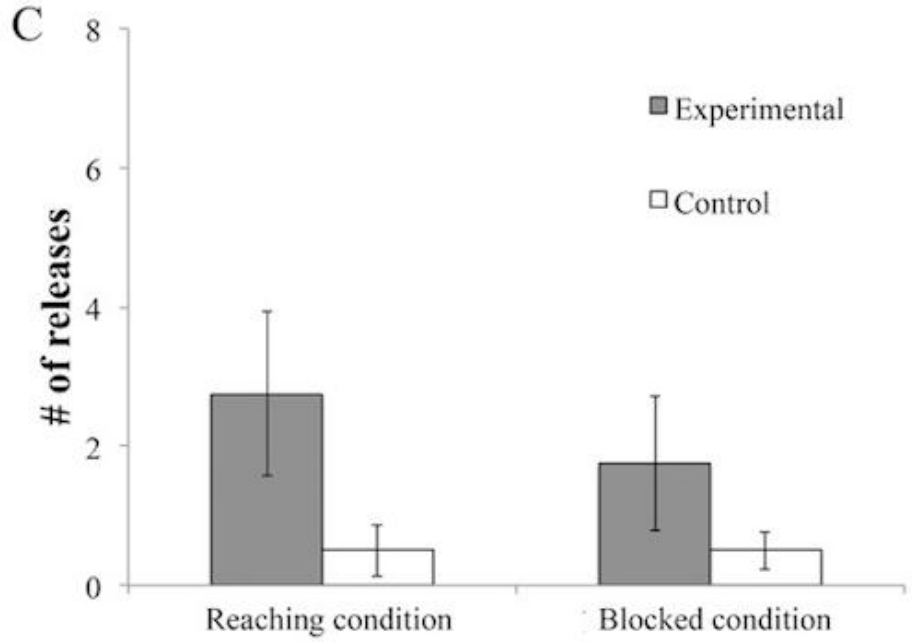
Tan, Ariely & Hare, 2017, *Scientific Reports*

OPEN

Bonobos respond prosocially toward members of other groups

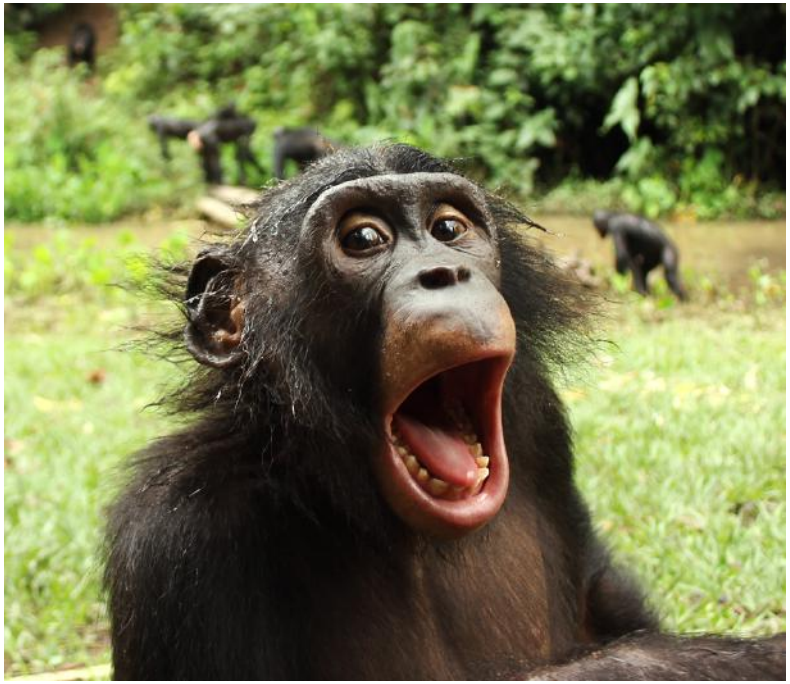
Jingzhi Tan[1], Dan Ariely[1,2] & Brian Hare[1,3]





N=16

Tan, Ariely & Hare, 2017, *Scientific Reports*



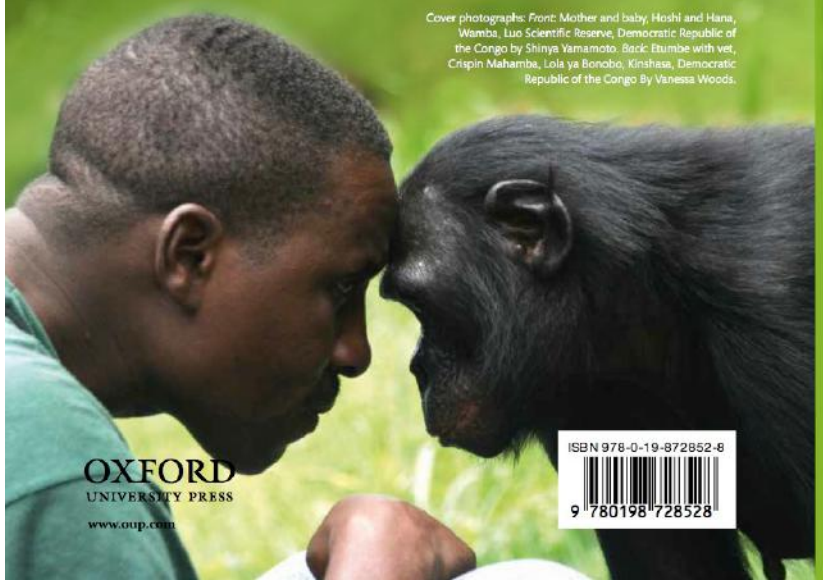
	Groupmate	Stranger
Bonobo	Yes	Yes
Chimpanzee	Yes	No

Tan, Ariely & Hare, 2017, *Scientific Reports*

Along with the chimpanzee, the bonobo is one of our two closest living relatives. Their relatively narrow geographic range (south of the Congo River in the Democratic Republic of Congo) combined with the political instability of that region, has made their scientific study extremely difficult. In contrast, there are dozens of wild and captive sites where research has been conducted for decades with chimpanzees. Because data sets on bonobos have been so hard to obtain and so few high-quality publications have existed, the majority of researchers have treated chimpanzee data as being representative of both species. However, this misconception is now rapidly changing. With the end of the major conflict in the DRC and a growing community of bonobos living in zoos and sanctuaries, there has been an explosion of scientific interest in the bonobo with dozens of high-impact publications focusing on this fascinating species. This research has revealed exactly how unique bonobos are in their brains and behavior, and reminds us why it is so important that we redouble our efforts to protect the few remaining wild populations of this iconic and highly endangered great ape species.

This book is primarily aimed at both students and established researchers in the fields of primate ecology and conservation biology. It will also be a valuable reference for conservation practitioners, land managers and professional primatologists worldwide.

Cover photographs: *Front:* Mother and baby, Hoshi and Hana, Wamba, Luo Scientific Reserve, Democratic Republic of the Congo by Shinya Yamamoto. *Back:* Etumbe with vet, Crispin Mahamba, Lola ya Bonobo, Kinshasa, Democratic Republic of the Congo By Vanessa Woods.



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