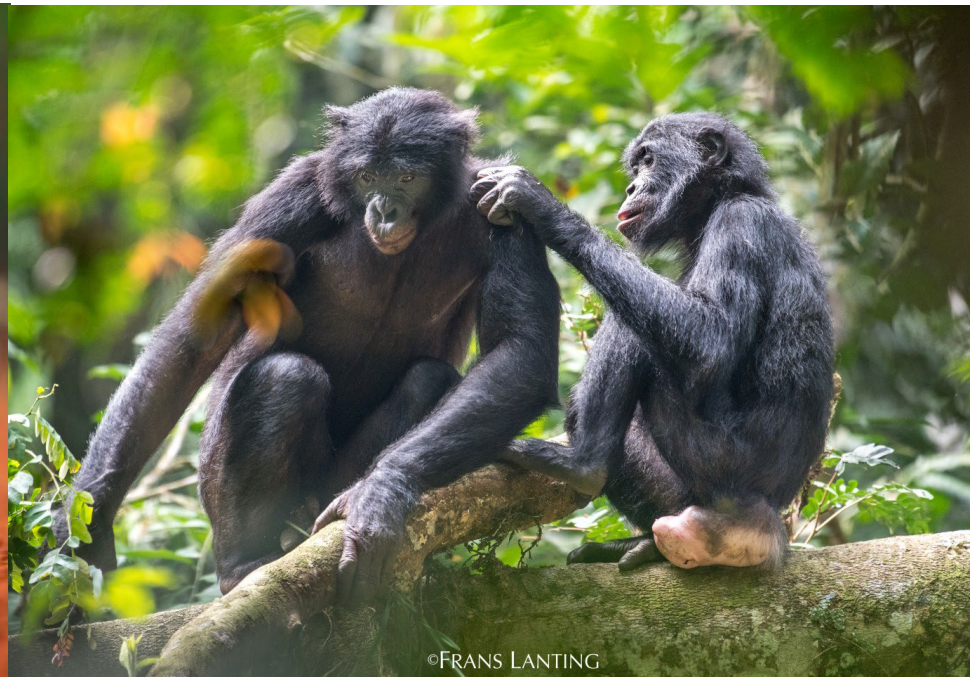


HEB 1330: Primate Social Behavior

September 29th 2020
Intersexual relationships



Overview

- 1) Male-female friendships
- 2) Dominance relationships
- 3) Female choice



Male-female friendships in primates



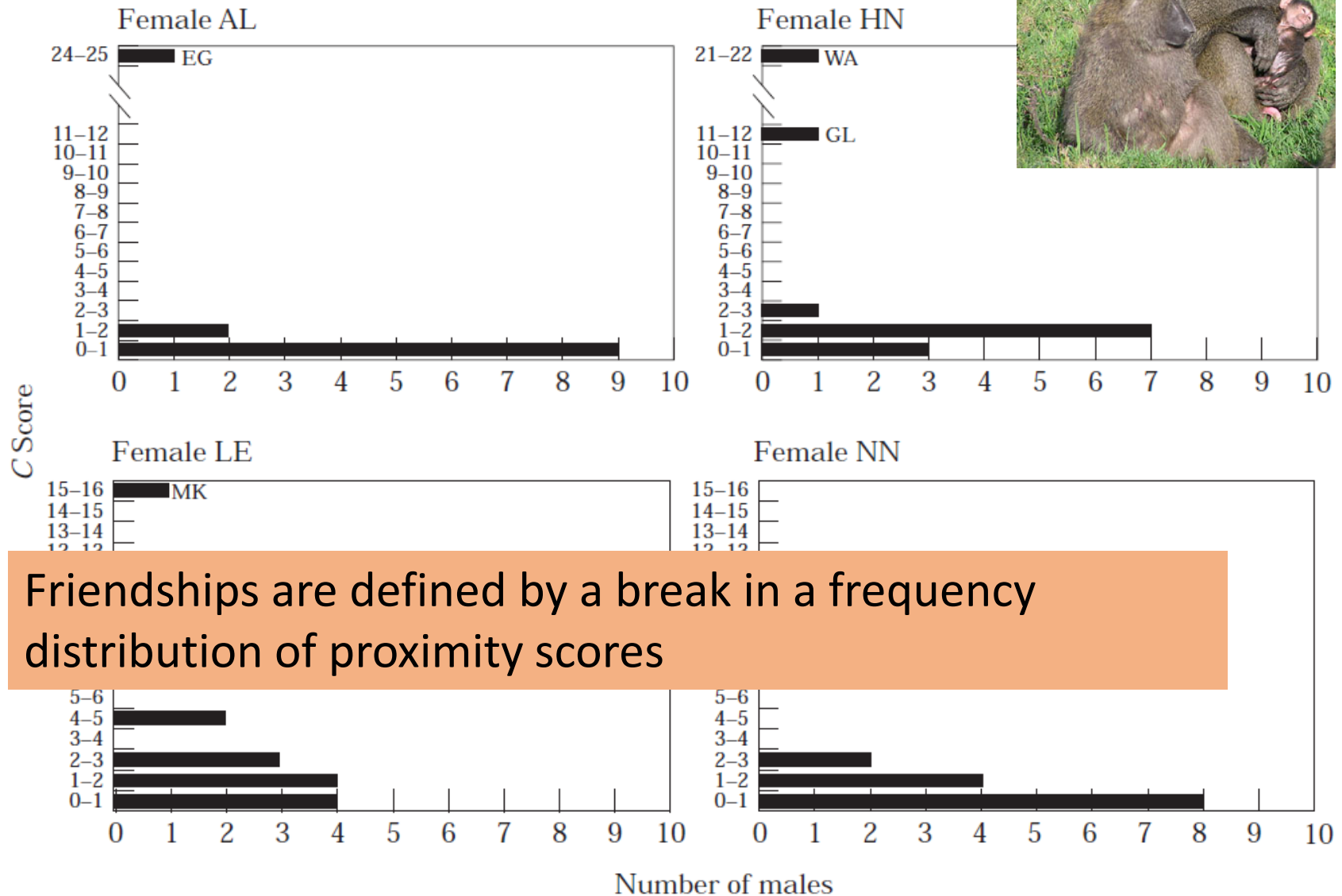
Chacma Baboon (*Papio hamadryas ursinus*)

Differentiated Relationships in baboons

- Friendships are a type of M-F relationship
 - 12-15% of male-female dyads are friends
 - Over 90% of females have at least one friend
 - Male rank and motherhood affect friendships



Defining Friendships



Differentiated Relationships in baboons

- Friendships are a type of M-F relationship
 - 12-15% of male-female dyads are friends
 - Over 90% of females have at least one friend
 - Male rank and motherhood affect friendships



What is factor leading to male-female bonds in chacma baboons ? How can we find out?

Male-Female friendships in baboons

- 2 Hypotheses

1) Male-female bonds in chacma baboons form because they increase a male's opportunity for future mating

2) Male-female bonds in chacma baboons form because males serve a protector against infanticide

→ Group discussion about study design

Male-Female friendships in baboons

- 2 Hypotheses

1) Male-female bonds in chacma baboons form because they increase a male's opportunity for future mating

2) Male-female bonds in chacma baboons form because males serve a protector against infanticide

→ Distance between male-female around birth and infant dead

Changes in associations upon birth/death

H1 Male-female bonds in chacma baboons form because they increase a male's opportunity for future mating

P1 Distance between male-female is smaller before than after birth

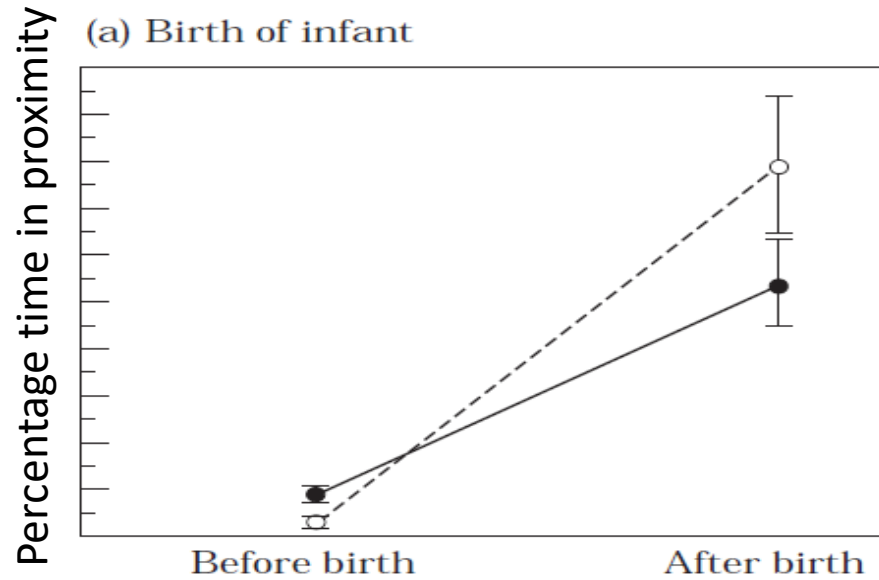
P2 Distance between male-females is smaller after infant dies

H2 Male-female bonds in chacma baboons form because males serve a protector against infanticide

P1 Distance between male-female is smaller after than before birth

P2 Distance between male-females is larger after infant dies

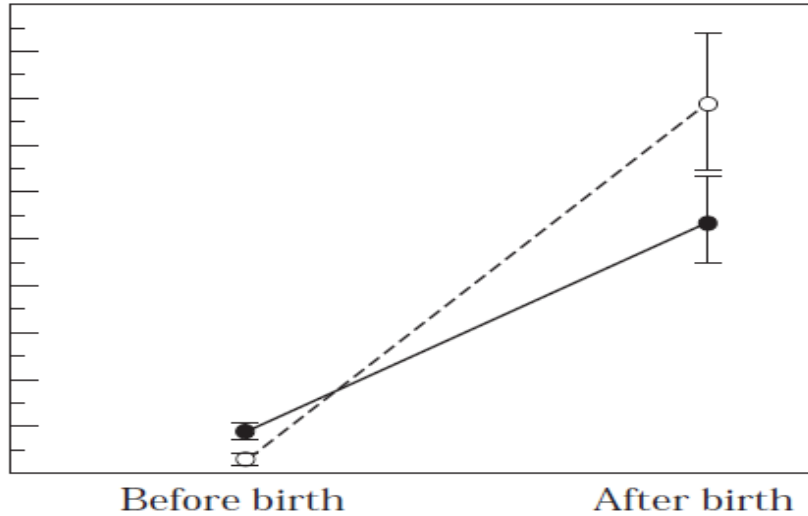
Changes in associations upon birth/death



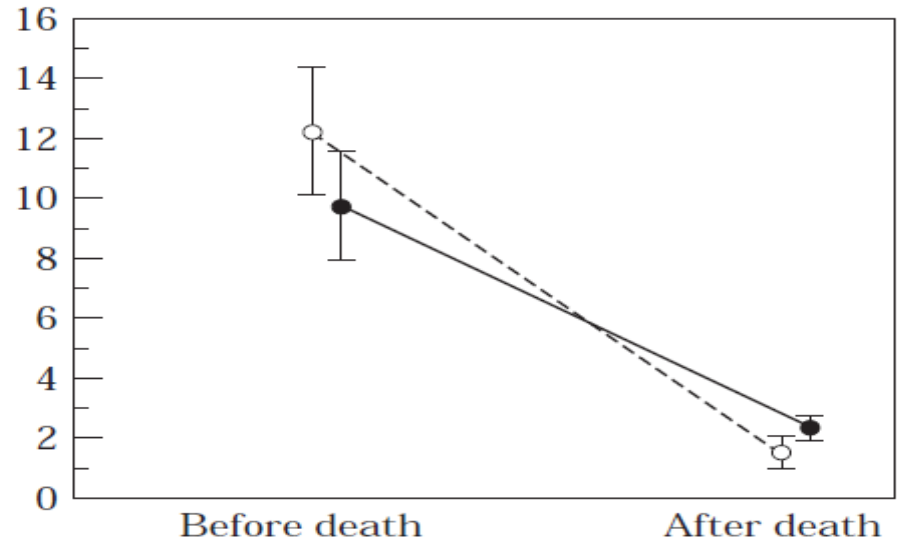
Changes in associations upon birth/death

Percentage time in proximity

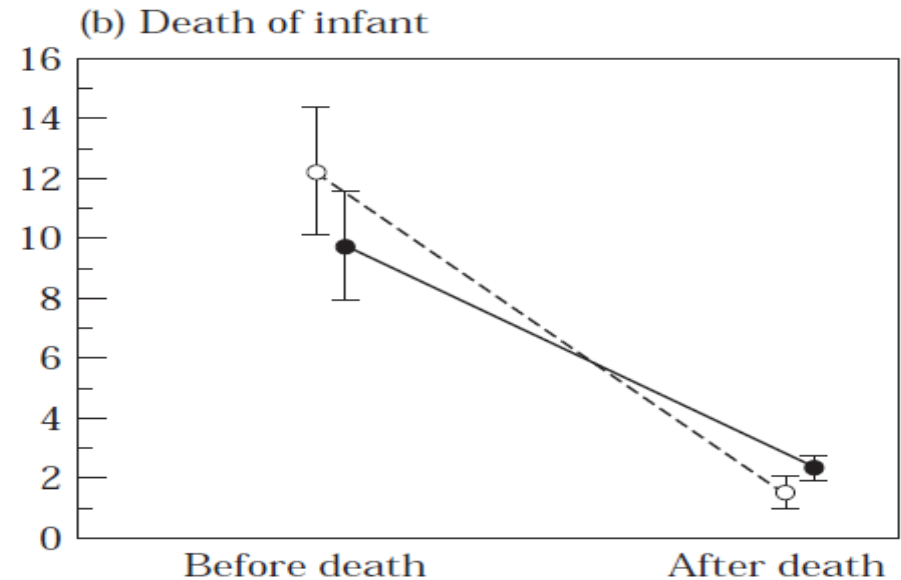
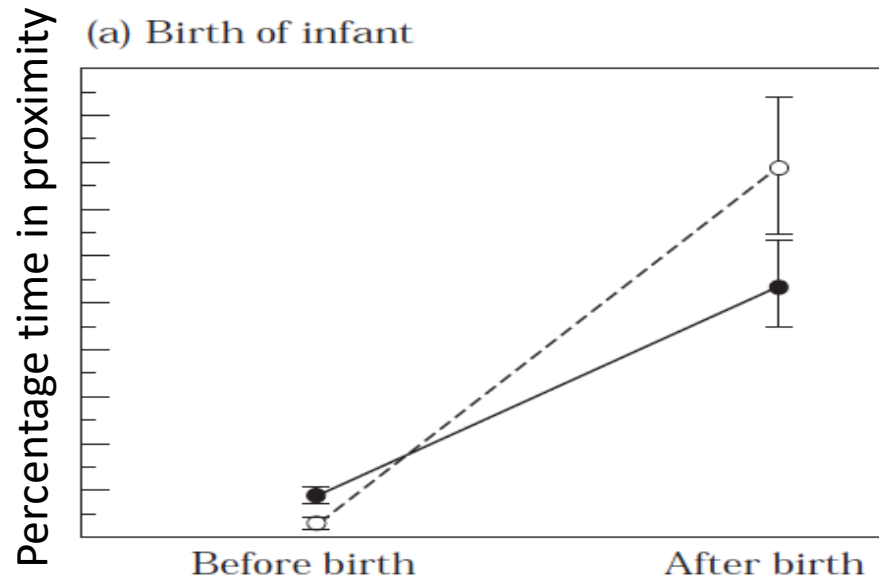
(a) Birth of infant



(b) Death of infant

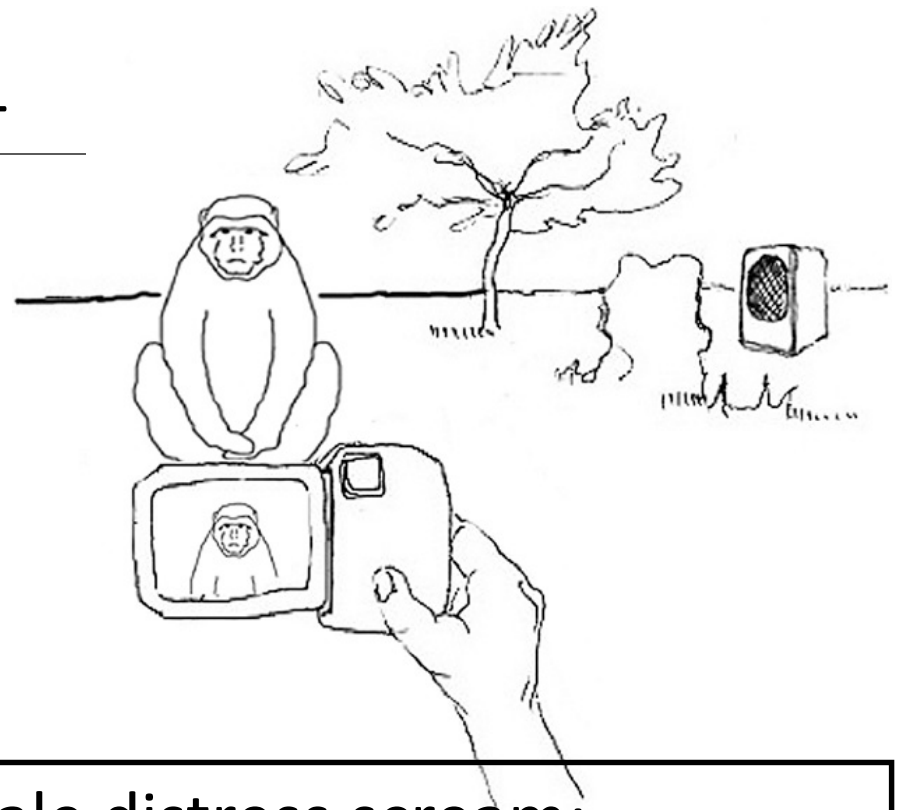


Changes in associations upon birth/death



H2 Male-female bonds in chacma baboons form because males serve a protector against infanticide

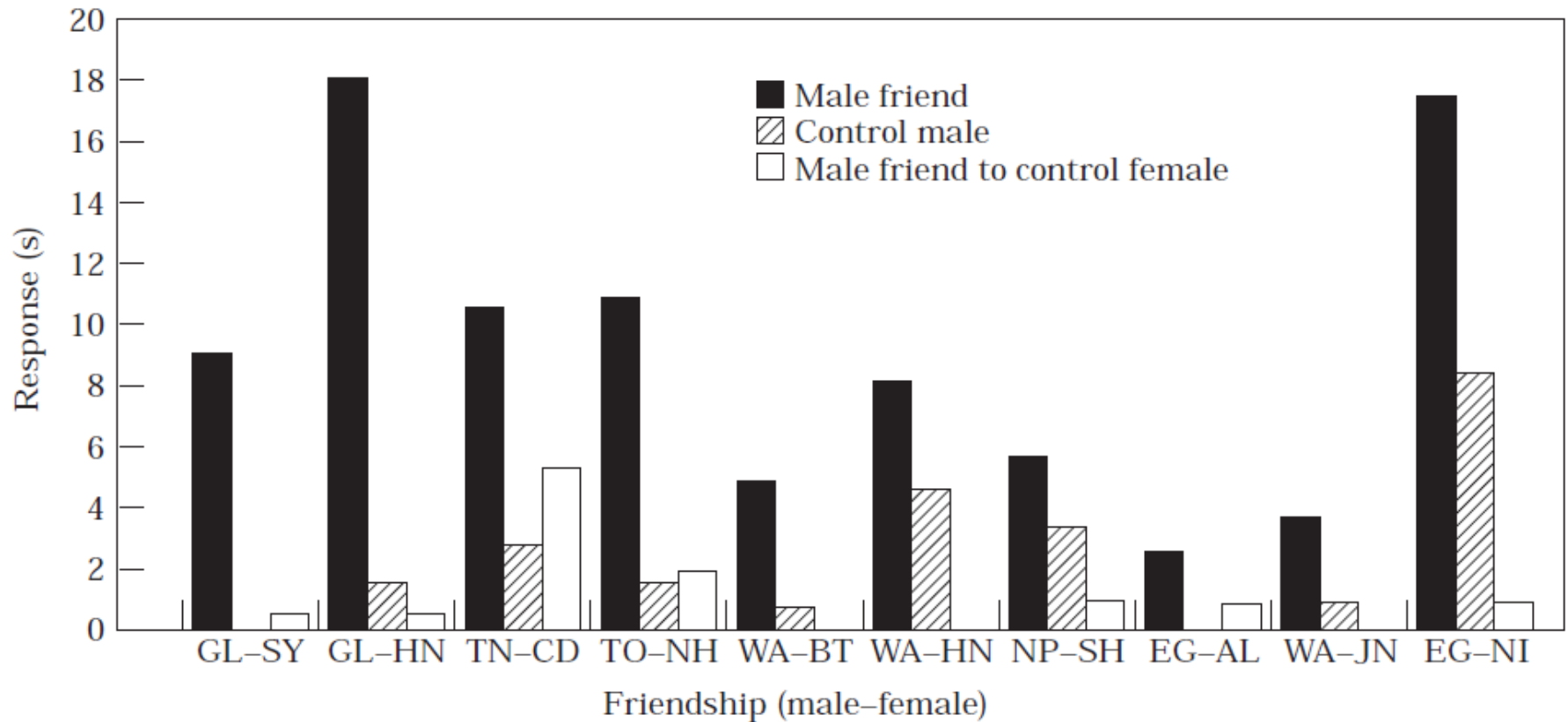
Playback experiment 1



- Playback experiment to female distress scream:

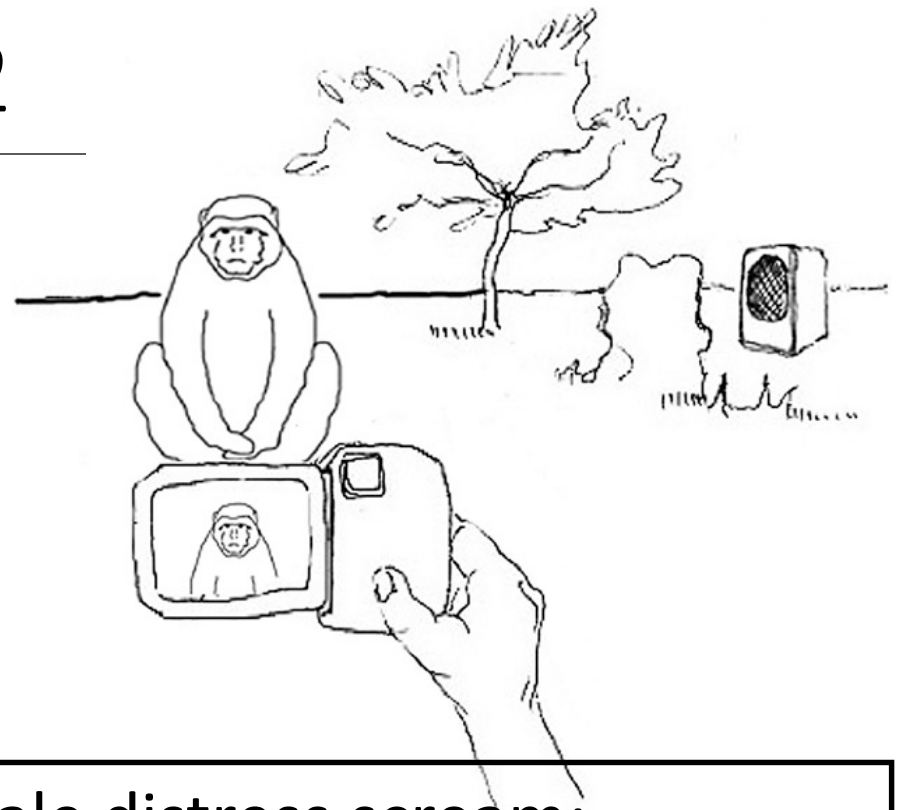
Does the response of a male to a female **distress call**
vary by friendship status in Chacma baboons?

Playback experiment 1



Males respond more to the screams of their friend

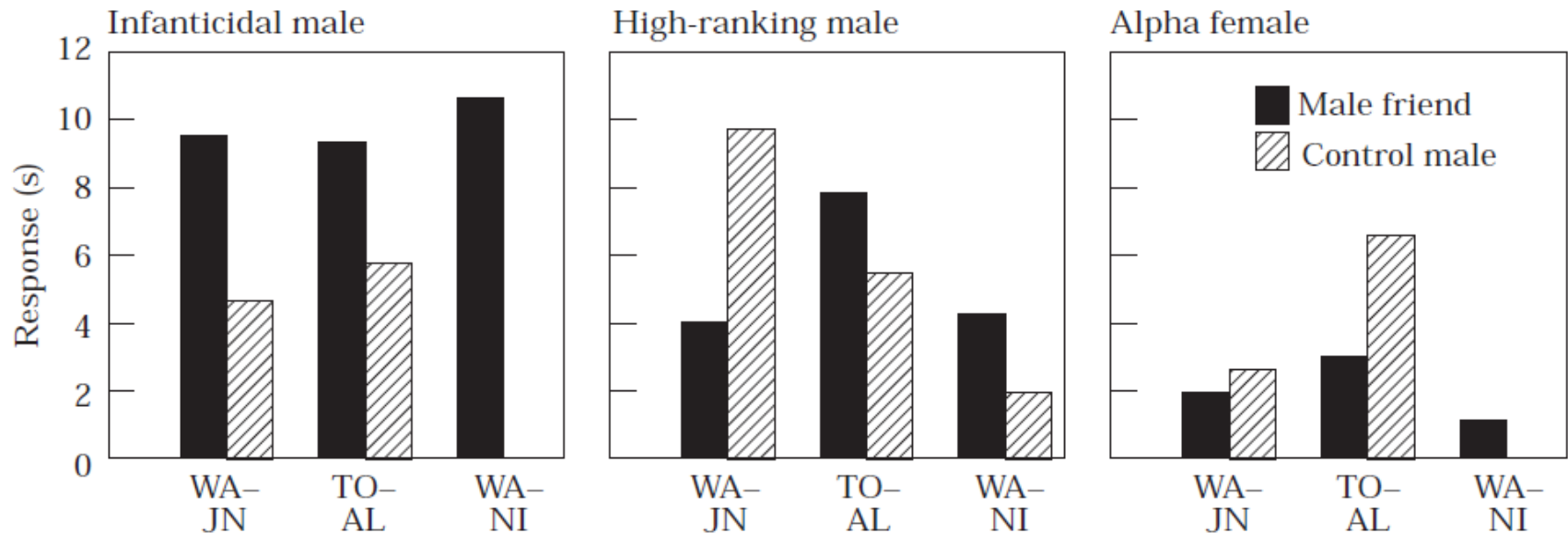
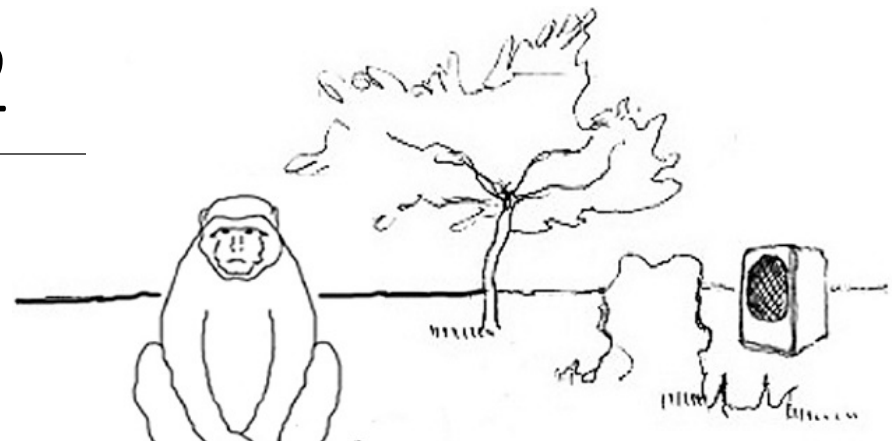
Playback experiment 2



- Playback experiment to female distress scream:

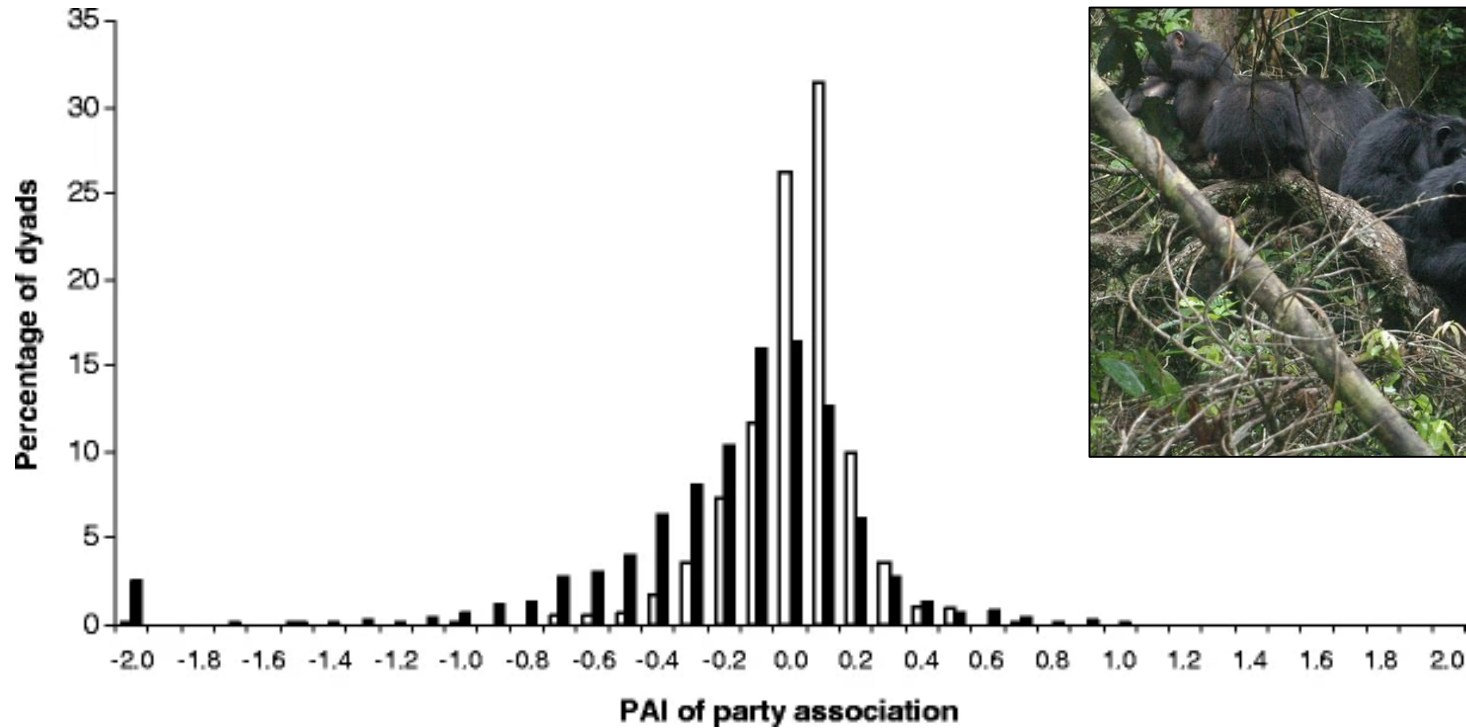
Does the response of a friend to a female **distress call** **vary by other call played with it?**

Playback experiment 2



Male friends respond more to the scream of a friend when paired with the threat call of the alpha (infanticidal male)

Friendships in chimpanzees?



→ effect on reproduction is as strong as that of male dominance rank

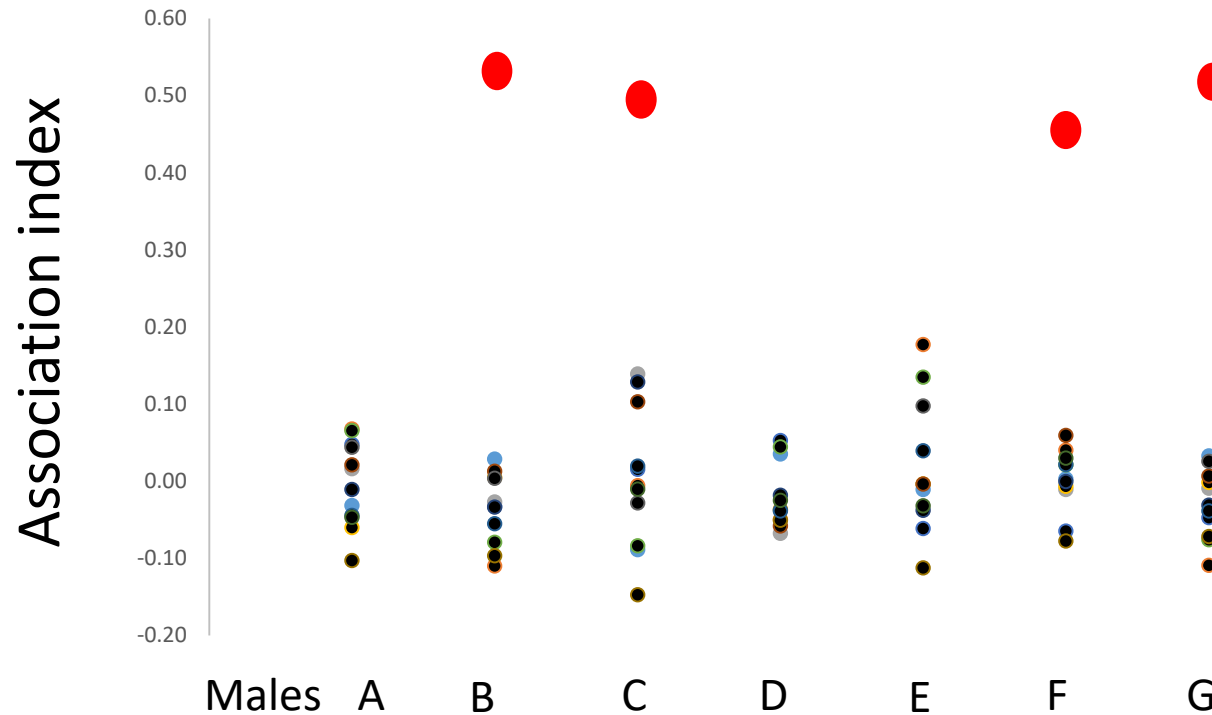
Male-female friendships in primates

- Benefits to Males:
 - Increased opportunities for future mating
 - Increased social support
- Benefits to Females:
 - Help with offspring
 - Increased access to resources
 - Protection against predation
 - Protection against aggression and infanticide

Friendships in bonobos?



The mothers!



Overview

- 1) Male-female friendships
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- 3) Female choice



Male-Female Dominance



Dominance between **sexes**



- **Access to resources**
- Mating strategies
- Life history

Male-Female Dominance



Dominance between individuals



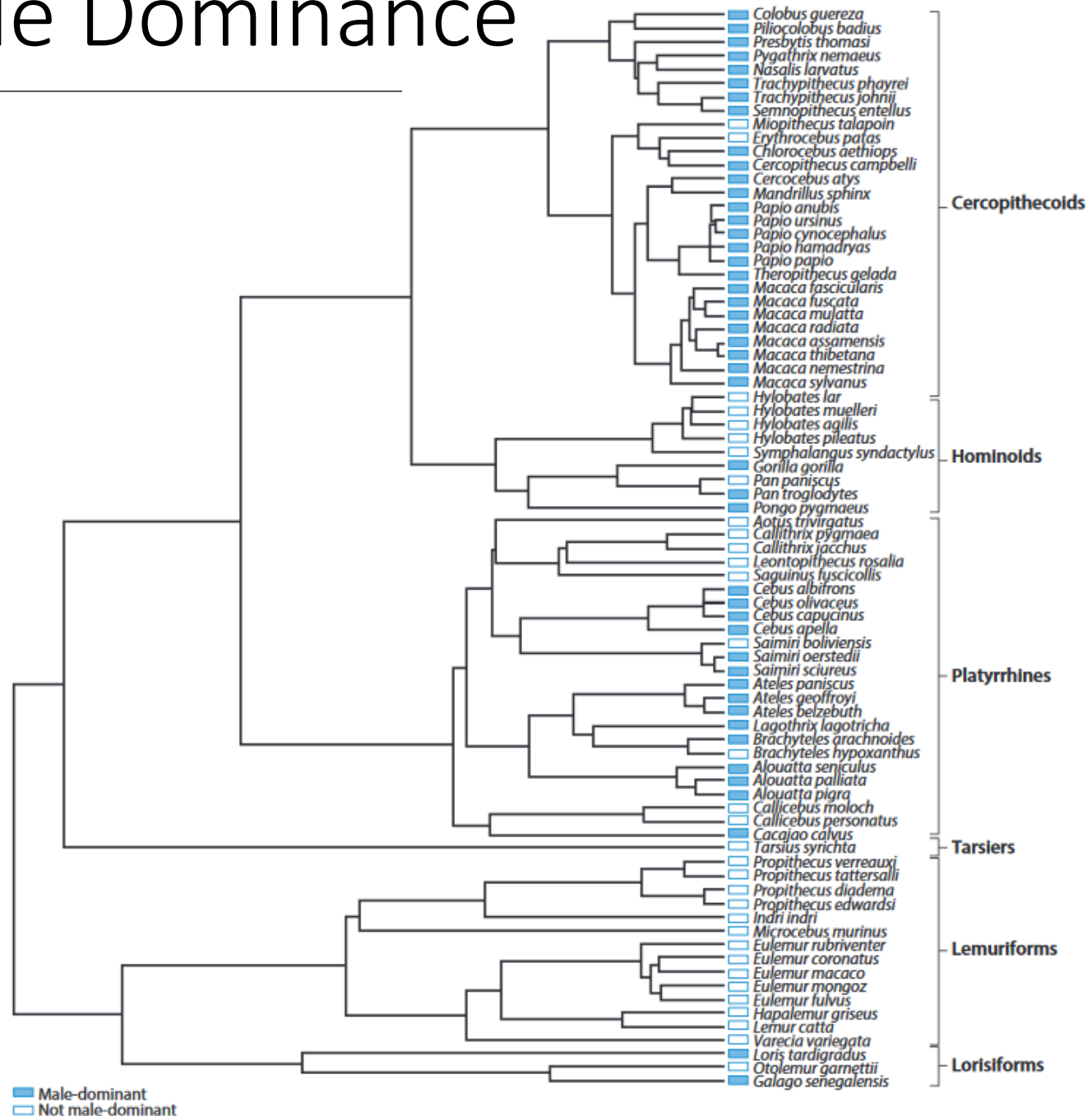
Outcome of conflicts



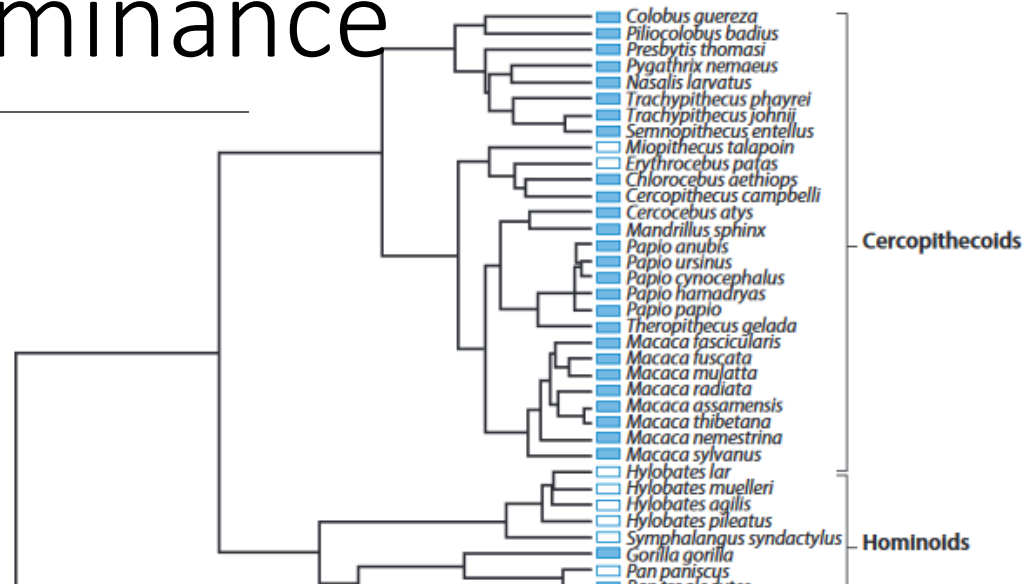
'prior attributes'

(Schjelderup-Ebbe 1922)

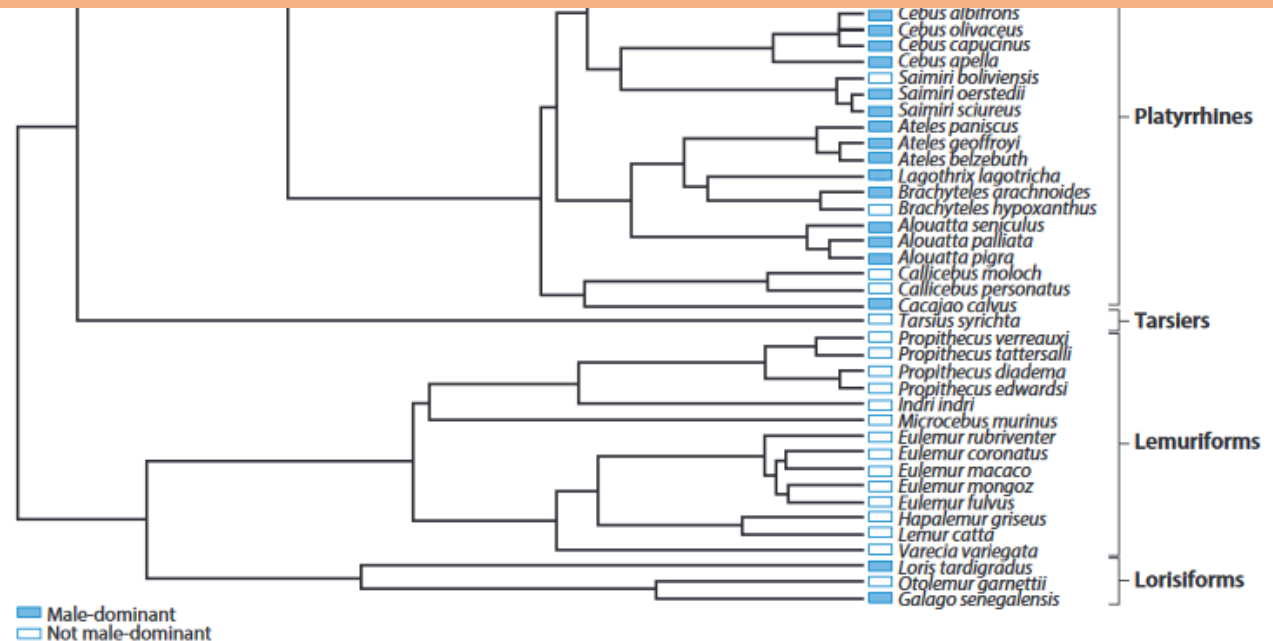
Male-Female Dominance



Male-Female Dominance



Male dominance over females is more common in primates



Male-Female Dominance



Draenei



Taurens



Orcs



Trolls

Male-Female Dominance

Weight classes in freestyle wrestling

Man [kg]

60

70

80

90

100

130

Woman [kg]

48

55

60

66

72

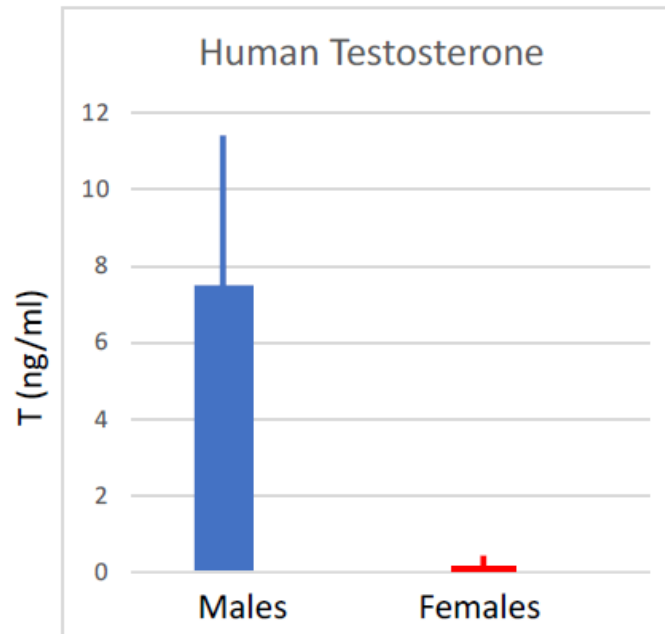
78



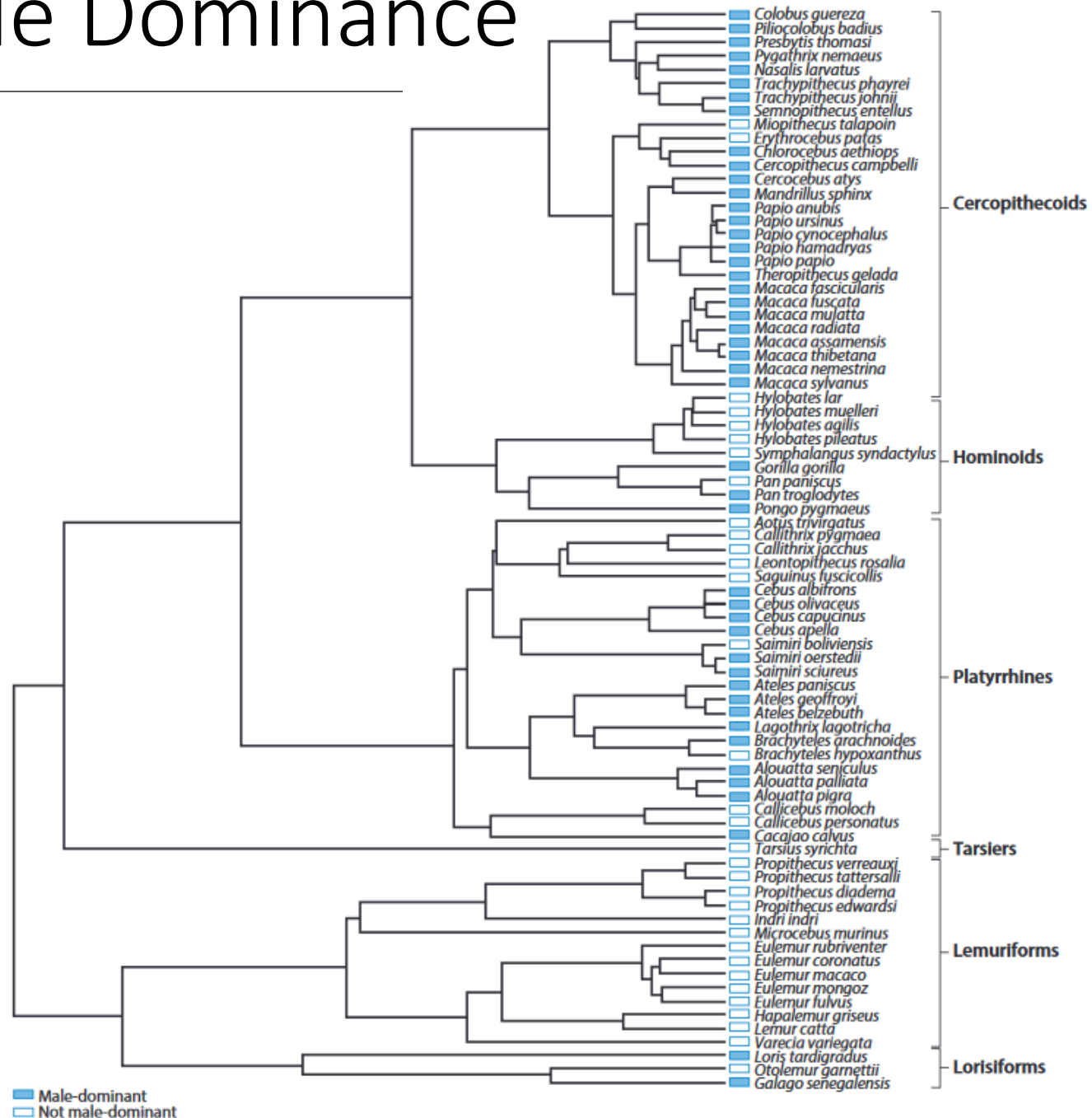
Male-Female Dominance

Why are males often larger than females in primates?

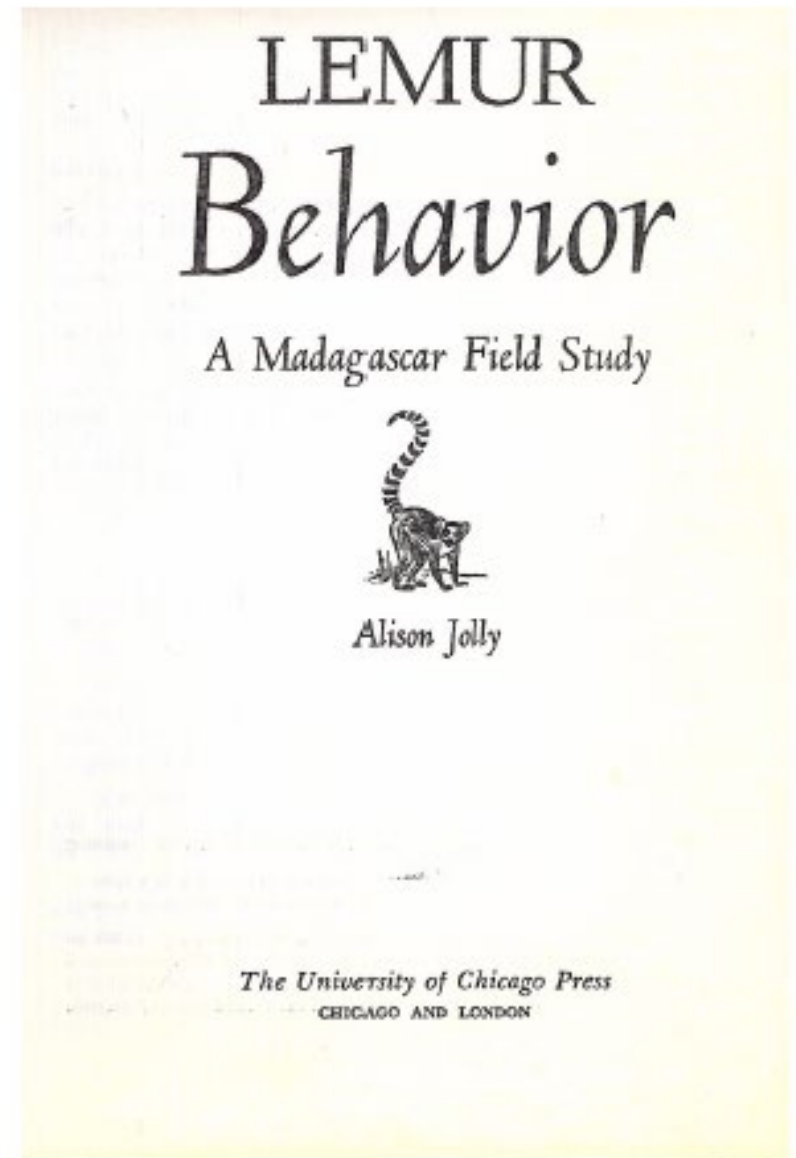
By-product of sexual selection: larger male bodies and more aggressive temperament



Male-Female Dominance



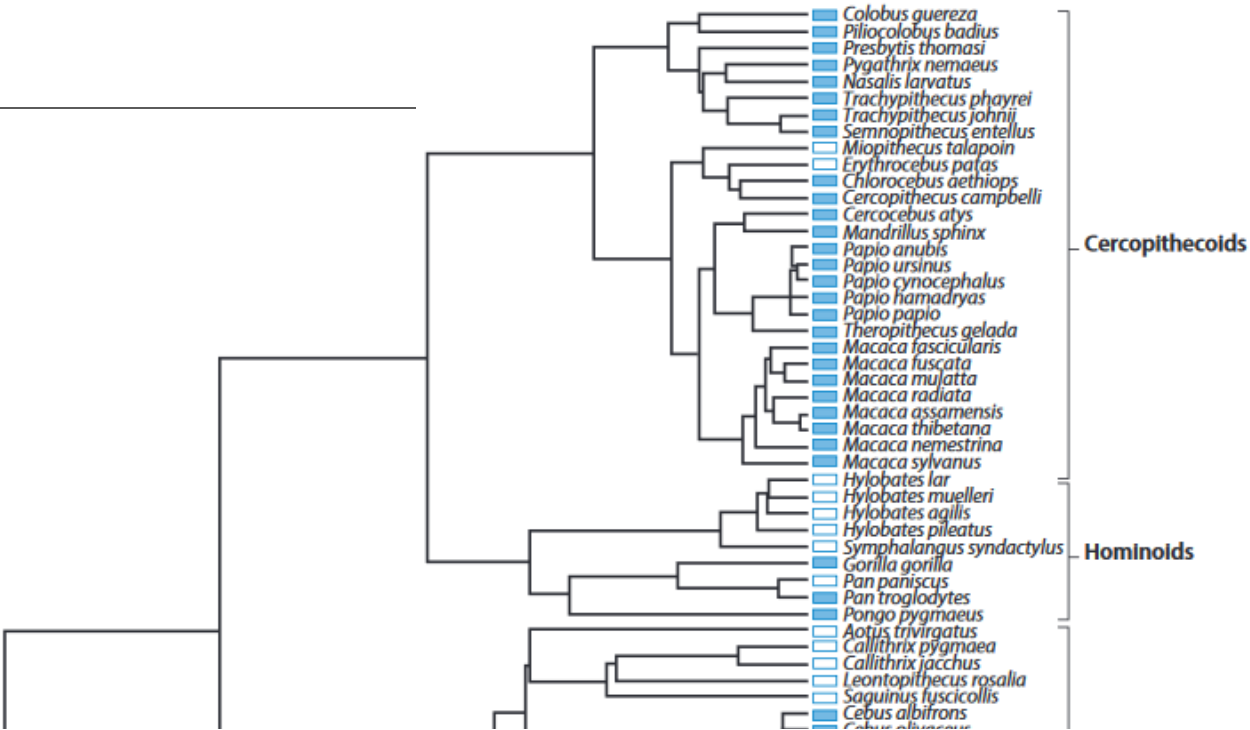
- A dominant *Lemur* male is an imperious and bullying animal
- a dominant female is simply bad-tempered enough to pick fights



(1966)



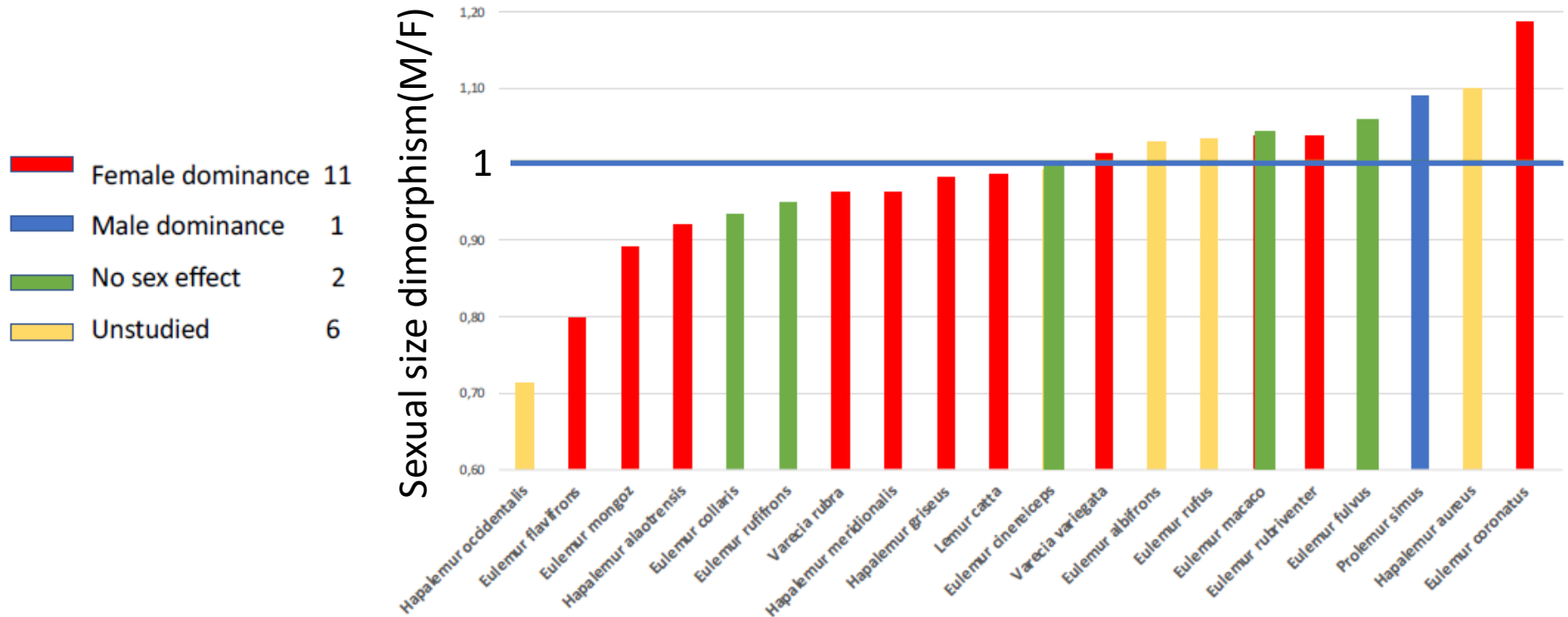
Lemurs



% agonistic interactions won by females



Lemurs



Sexual dimorphism close to 1 and in many species females larger

Male-Female Dominance



Dominance between individuals



Outcome of conflicts



‘prior attributes’

(Schjelderup-Ebbe 1922)

What else can influence the outcome of a conflict?

Concept of power



Dominance between individuals



Outcome of conflicts



Dominance Leverage Motivation

intrinsic derived

Concept of power

(Lewis 2002)

Male-Female Dominance in Pan



Bonobos



Chimpanzees

Luikotale East

Bompusa

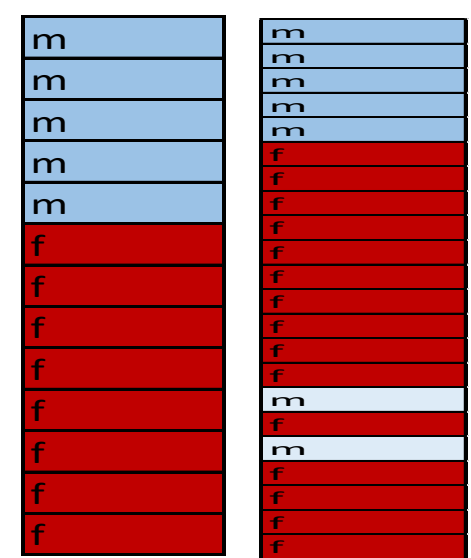
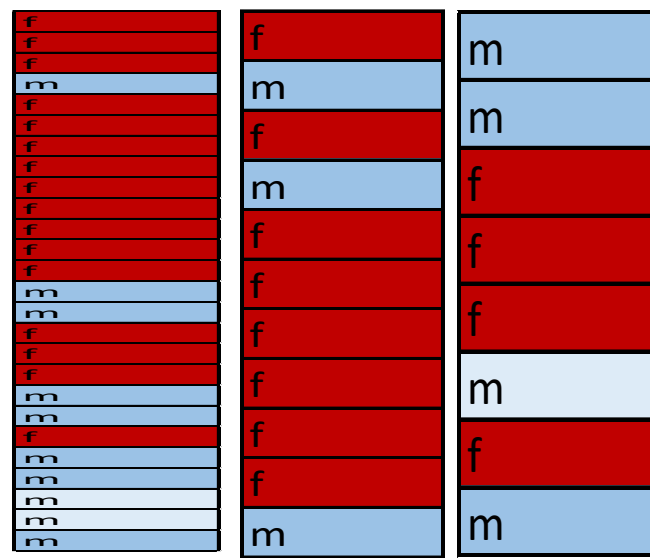
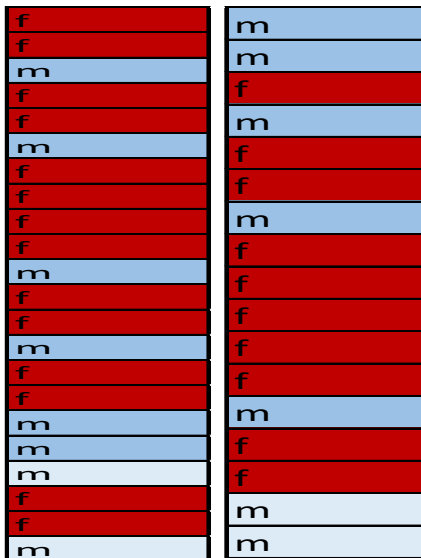
Ekalakala

Kokoalongo

Fekako

Tai East

Tai South



Bonobo
Pan paniscus

Female



Average
74 lbs
4.2 feet tall

Male



Average
100 lbs
4.3 feet tall

Chimpanzee
Pan troglodytes

Male



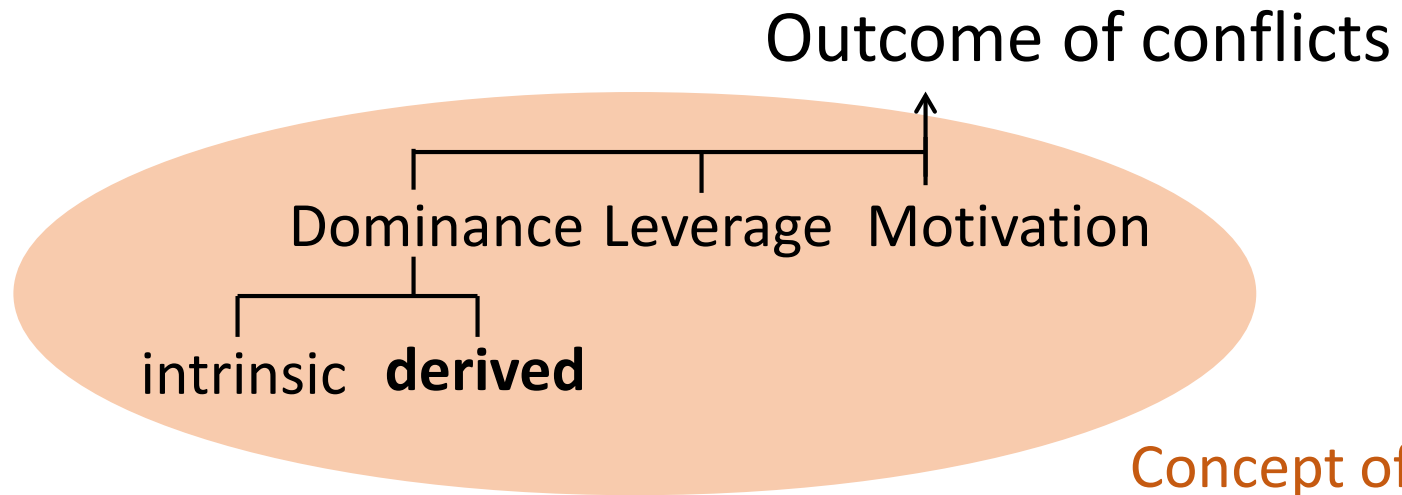
Average
132 lbs
4.4 feet tall

Female



Average
93 lbs
4.1 feet tall

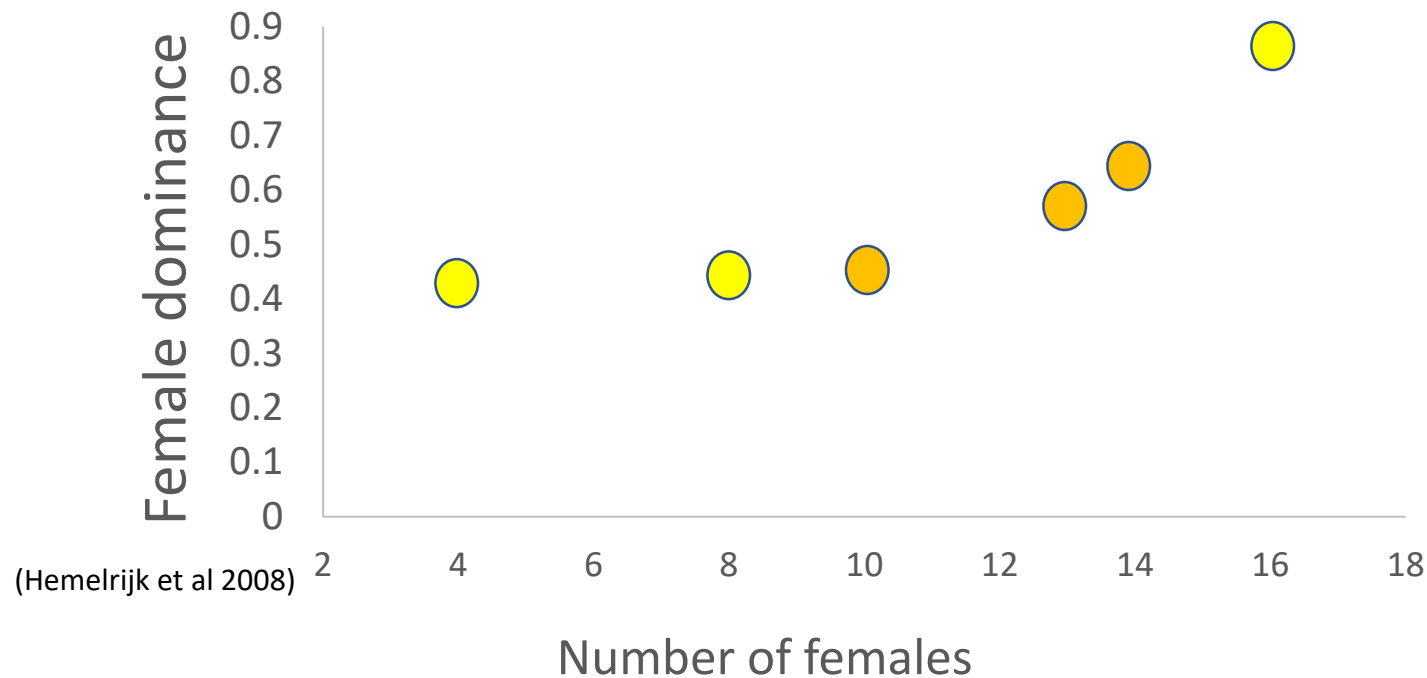
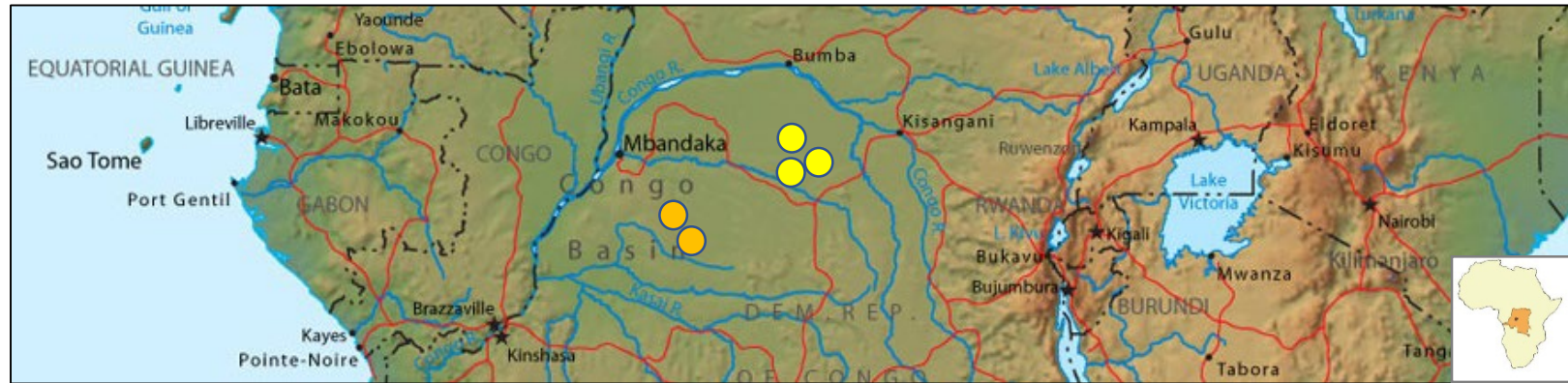
Male-Female Dominance in Bonobo



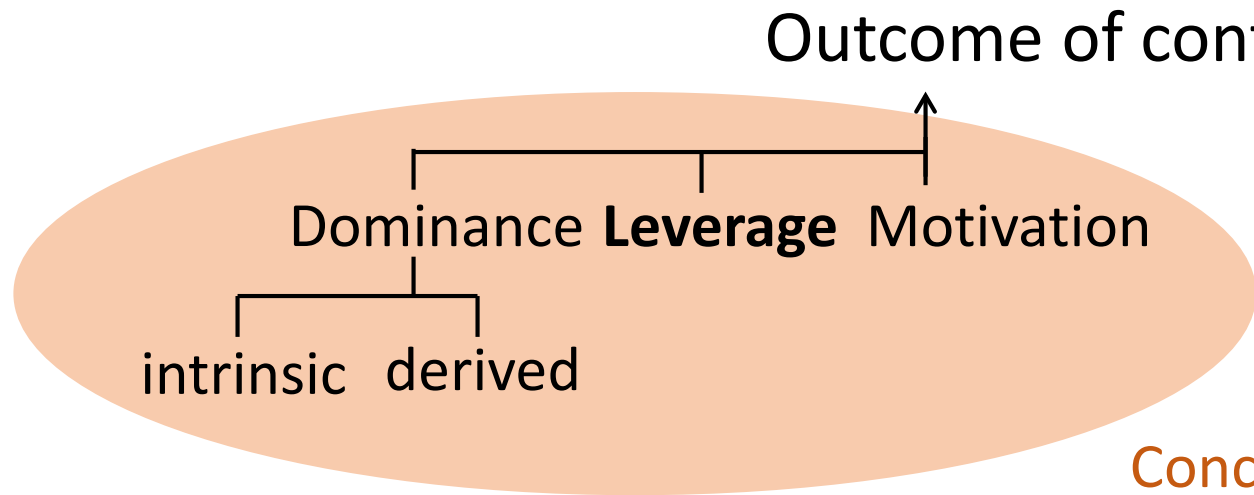
Female coalition formation



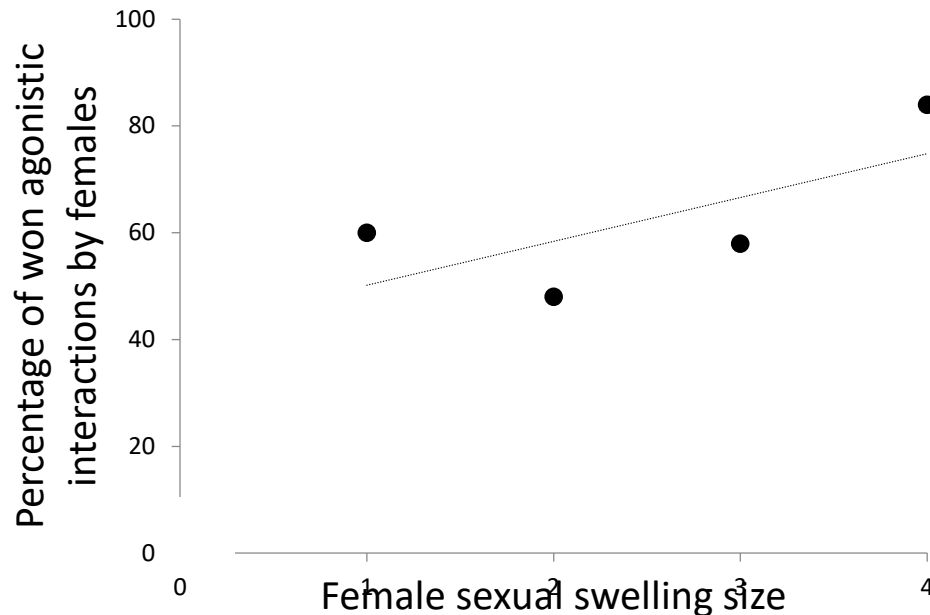
Male-Female Dominance in Bonobo



Male-Female Dominance in Bonobo



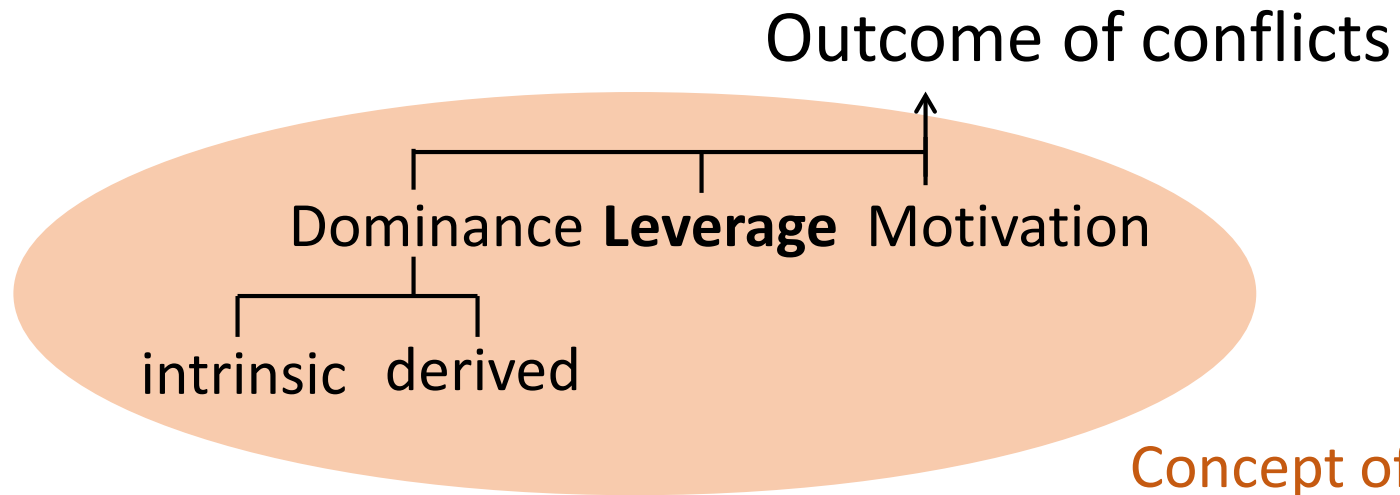
Concept of power



Female sexuality



Male-Female Dominance in Bonobo

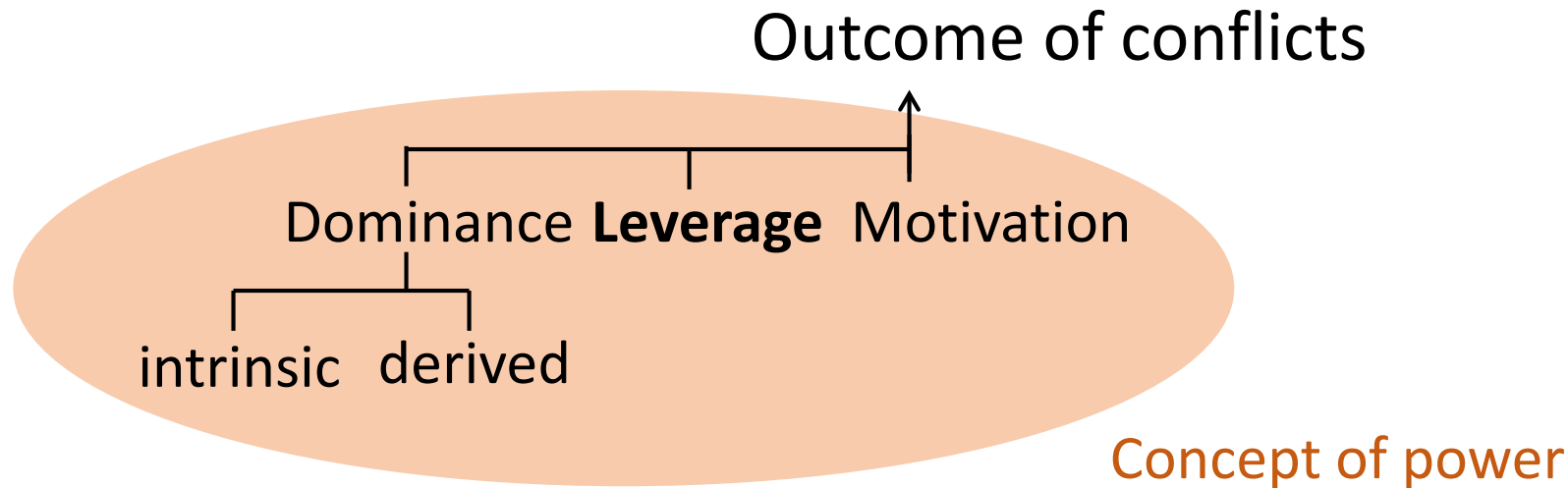


Female sexuality

- Females with higher swelling scores were more likely to win conflicts with males
- Males less aggressive against females with higher swelling scores



Male-Female Dominance in Bonobo



Hypothesis:

Changing power asymmetries between the sexes



Female sexuality (Female mating cannot be monopolized)

Overview

- 1) Male-female friendships
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Female choice



Female rhesus macaques look at the males with the redder faces longer than they look at the males with the pale face.

Red faces: 2.41 seconds

Pale faces: 1.67 seconds

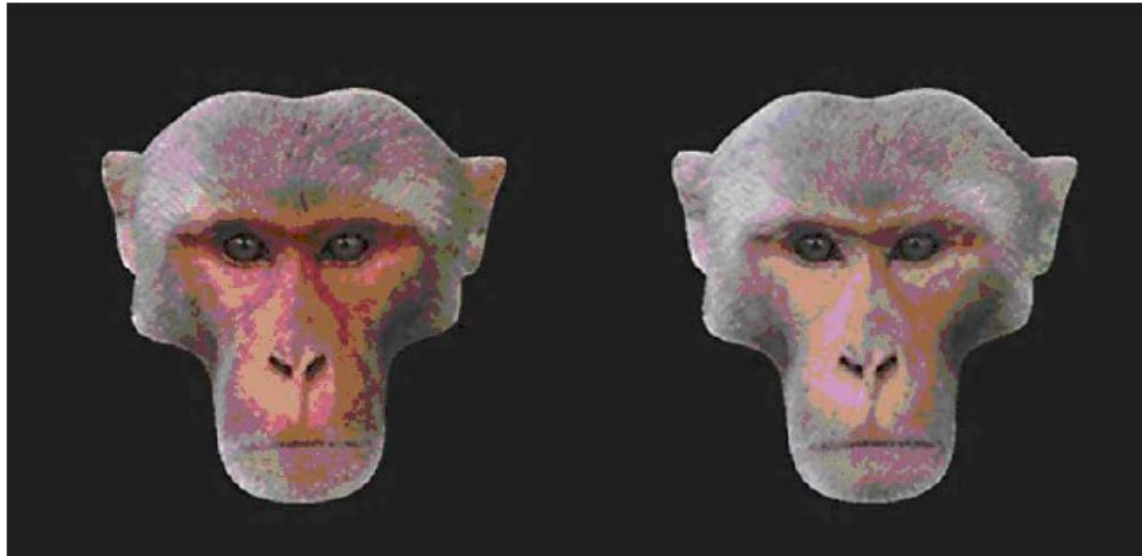
Why do females prefer red faces?

Female choice

Why should females have a preference for red faces?

Good genes
(honest signal)

Sexy sons
(coupling with female preference)



Choice vs. Preference

Female may have a preference for high quality males, but choice is whether or not they get to act on that preference

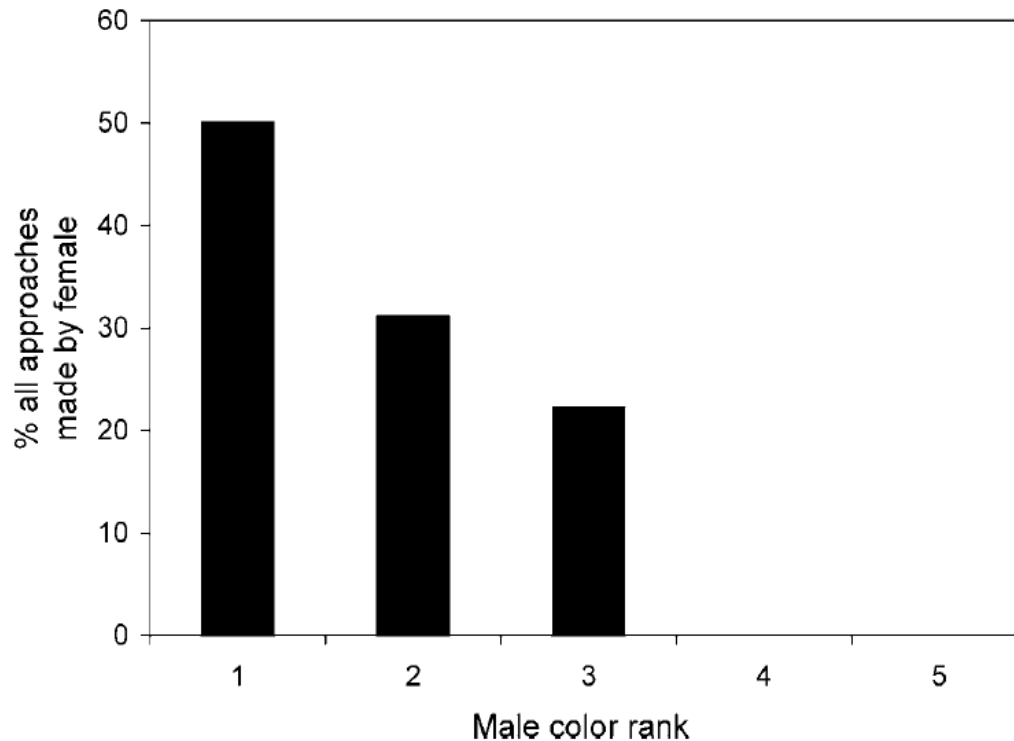
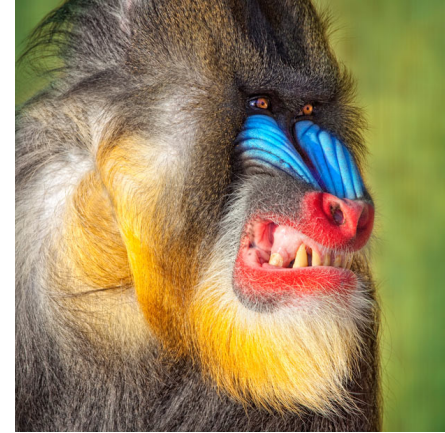


Female choice



Is this the result of female choice?

Female choice



Female Mandrills prefer brightly colored males

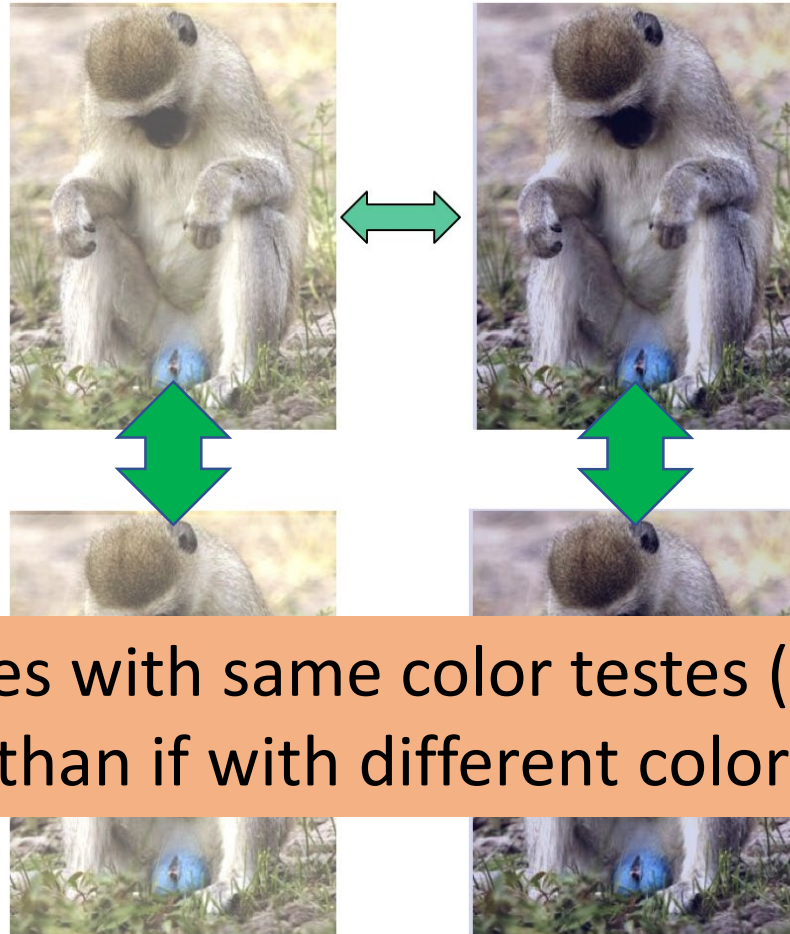
Possible confound that the dominant male is the most brightly colored!

Female choice or mate competition

Setchell and Dixon (2001a, p. 120):

“extravagant sexual adornments may serve to advertise the quality of males to one another, and therefore to reduce the probability of escalated agonistic interactions between males.”

Female choice or mate competition



Same color: 0.63
aggressive events/trial

Vervet males with same color testes (pale or dark)
fight more than if with different colors

Gerald 2001

Different color: 0.26
aggressive events/trial

Manipulate testicle color

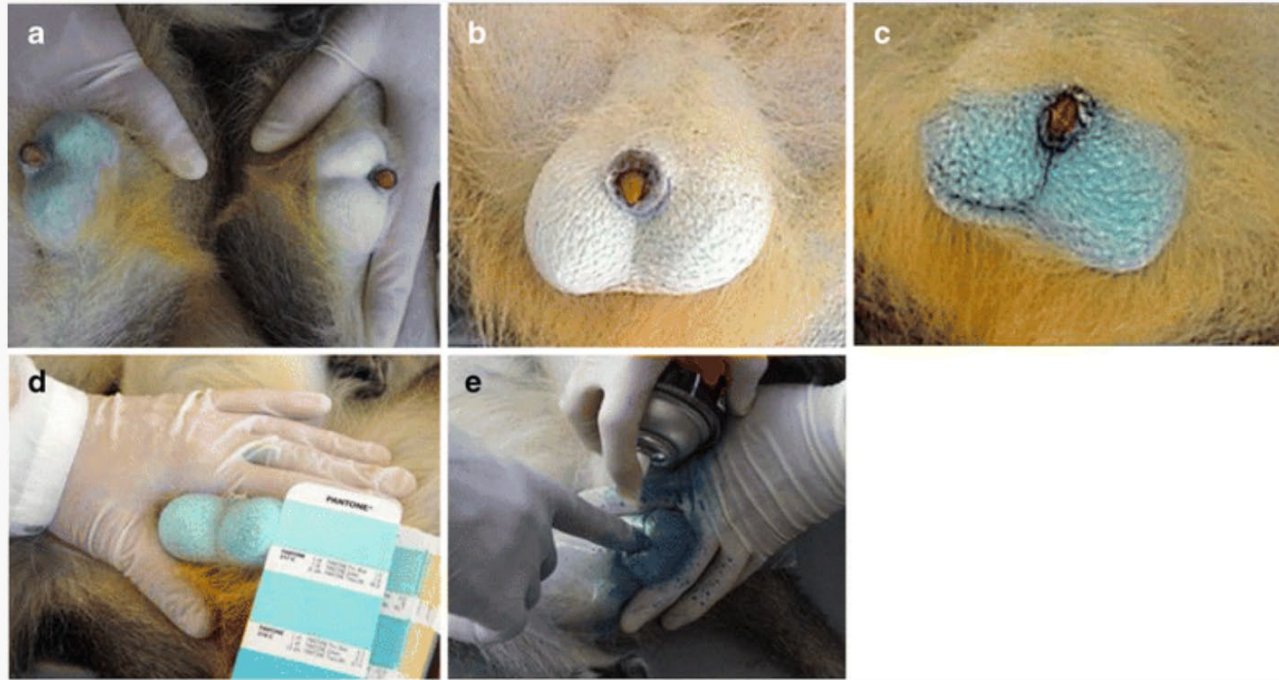


Fig. 1

a “Dark” vs. “pale” scrotum. **b** Pale scrotum. **c** Dark scrotum. **d** Colour matching of scrotum. **e** Painted scrotum

-Male aggression patterns changed
-No consistent change in female sexual or affiliative preference

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