

Human Emotion

Psychology 3131
Professor June Gruber



Human Emotion

Emotion in Animals

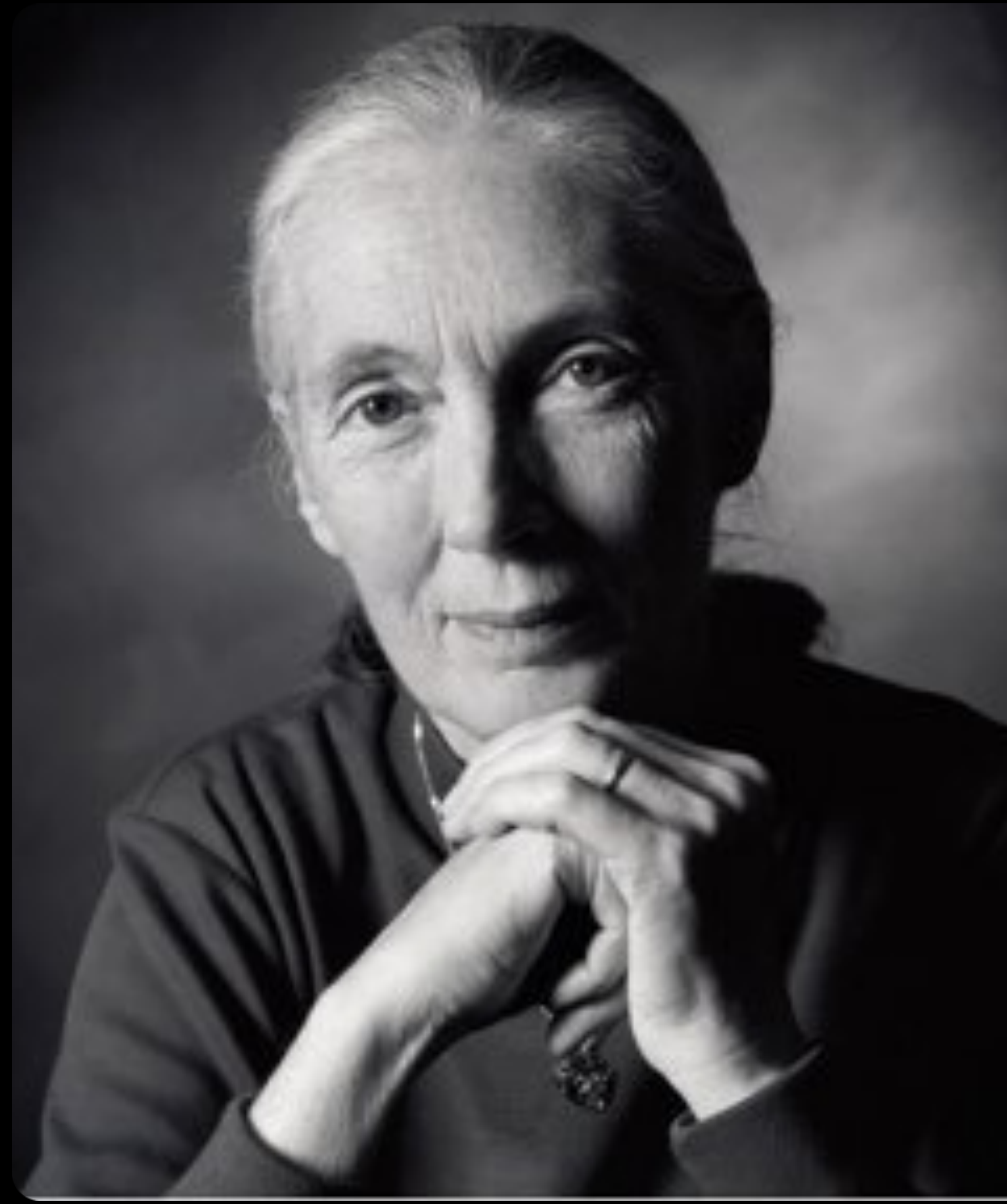
Can animals have feelings like us?

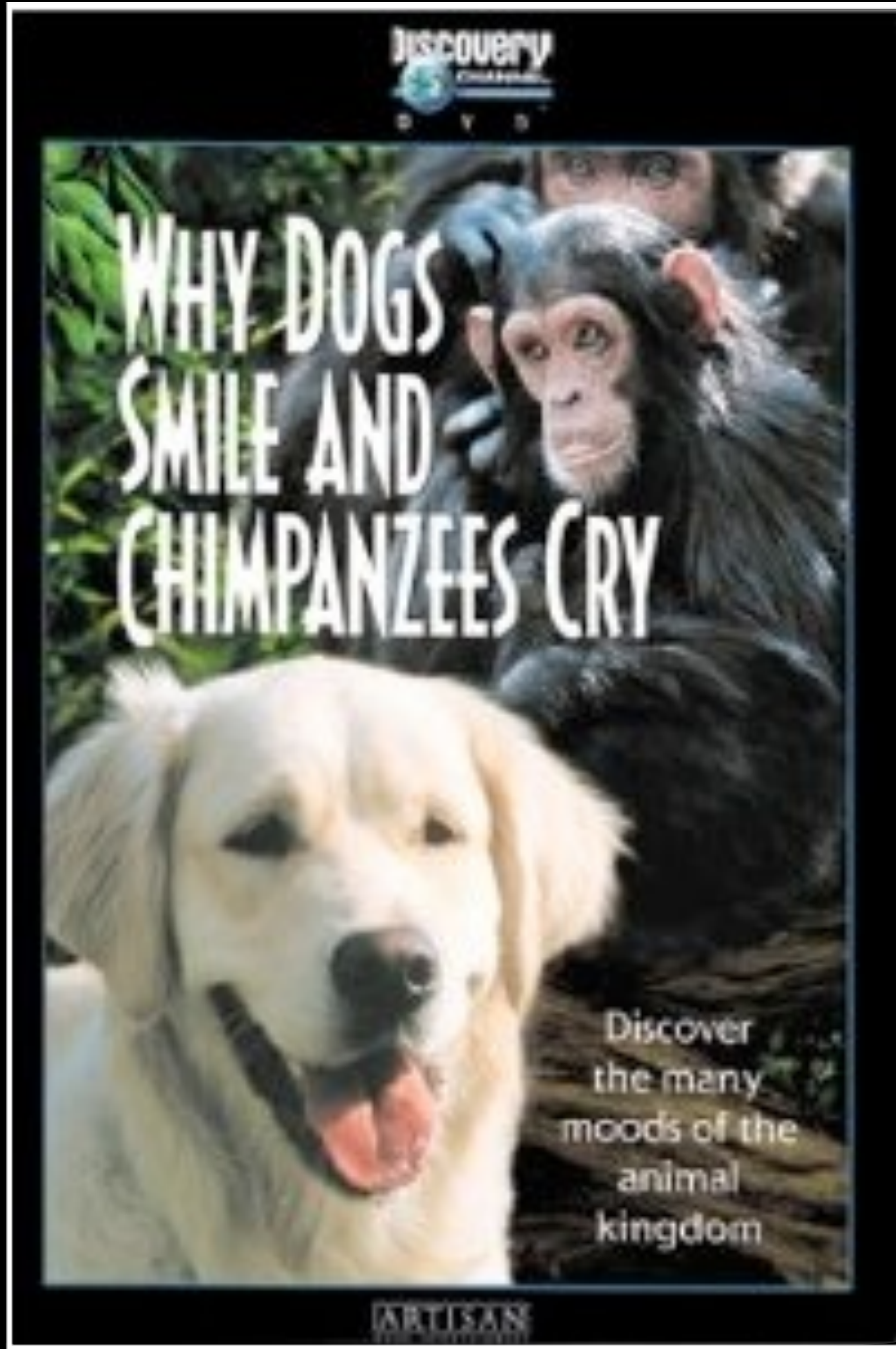


Quote of the Week

“You cannot get through a single day without having an impact on the world around you. What you do makes a difference, and you have to decide what kind of difference you want to make.”

-Jane Goodall





Courtesy: *Why Dogs Smile & Chimpanzees Cry*, Produced by DeVillier Donegan Enterprises and Fleisherfilm Inc. 1999.

Roadmap

Course Logistics

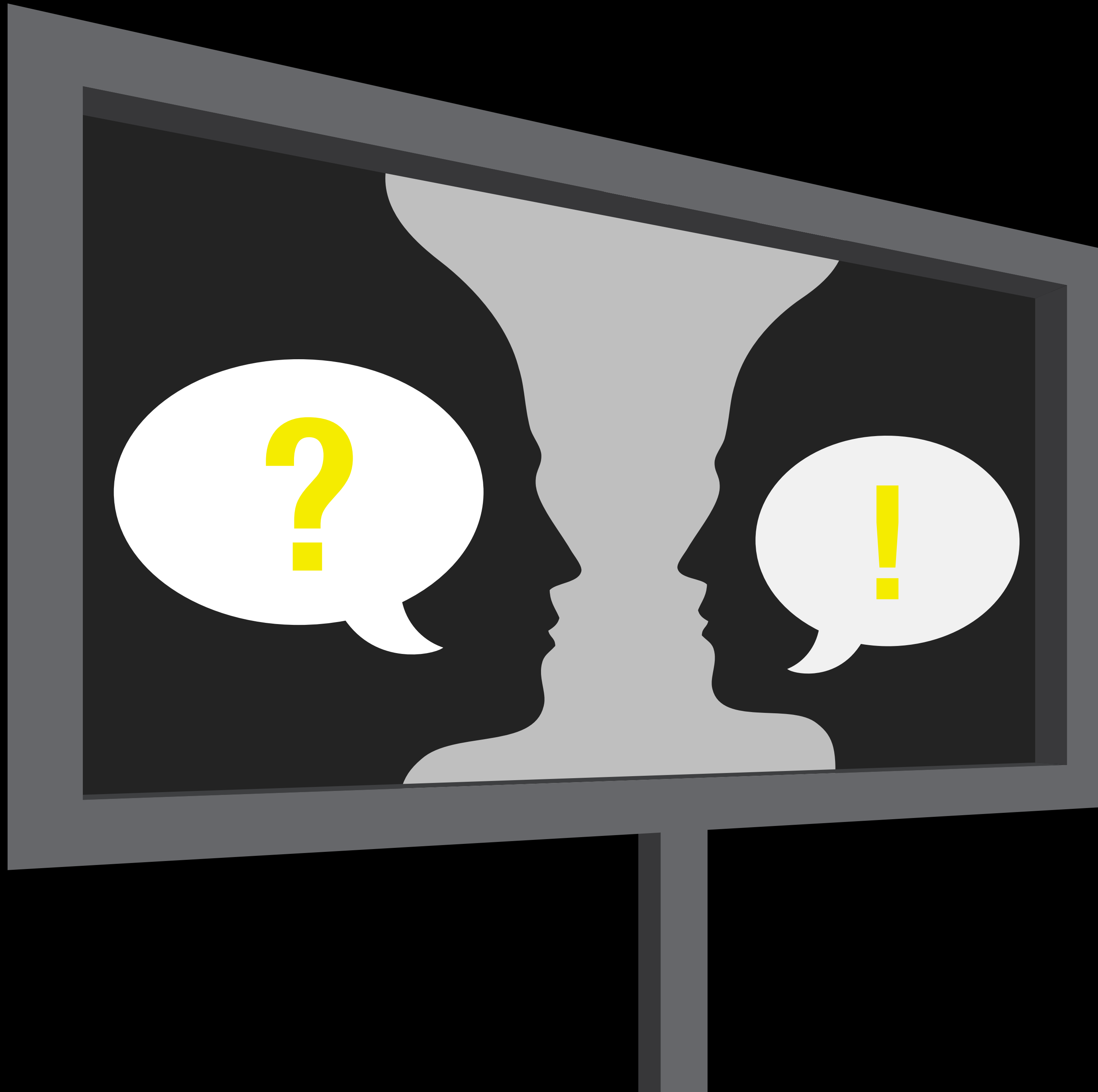
Why Study Animals?

Premises & Methods

Monkey See, Monkey Feel?

Canine Compassion & Rodent Rapture?

Take-Away Qs



Experts In Emotion

***EXTRA CREDIT
OPPORTUNITY***

Experts In Emotion Interview

Dr. Lisa Parr

Assistant Professor
Division of Psychiatry and Behavioral Sciences
Yerkes National Primate Research Center
Emory University

**Emotion expression &
recognition in chimpanzees**



Experts In Emotion Interview

Dr. Jaak Panksepp

Baily Endowed Chair of Animal Well-Being Science
College of Veterinary Medicine
Washington State University

Emeritus Professor
Department of Psychology
Bowling State University

Animal models of human brains



Experts In Emotion Interview

Dr. Laurie Santos

Professor of Psychology
Yale University

**Do animals feel
and think like us?**



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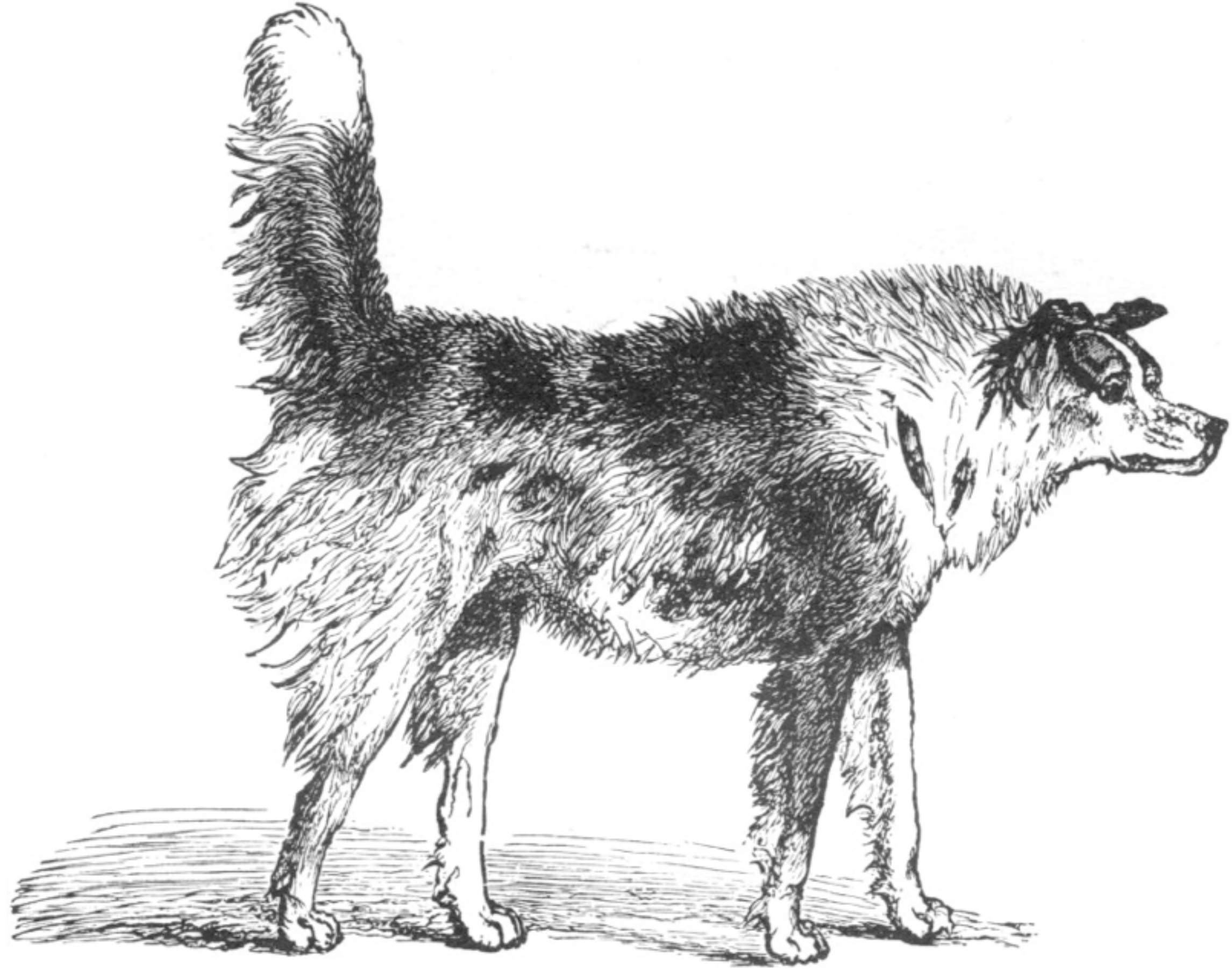
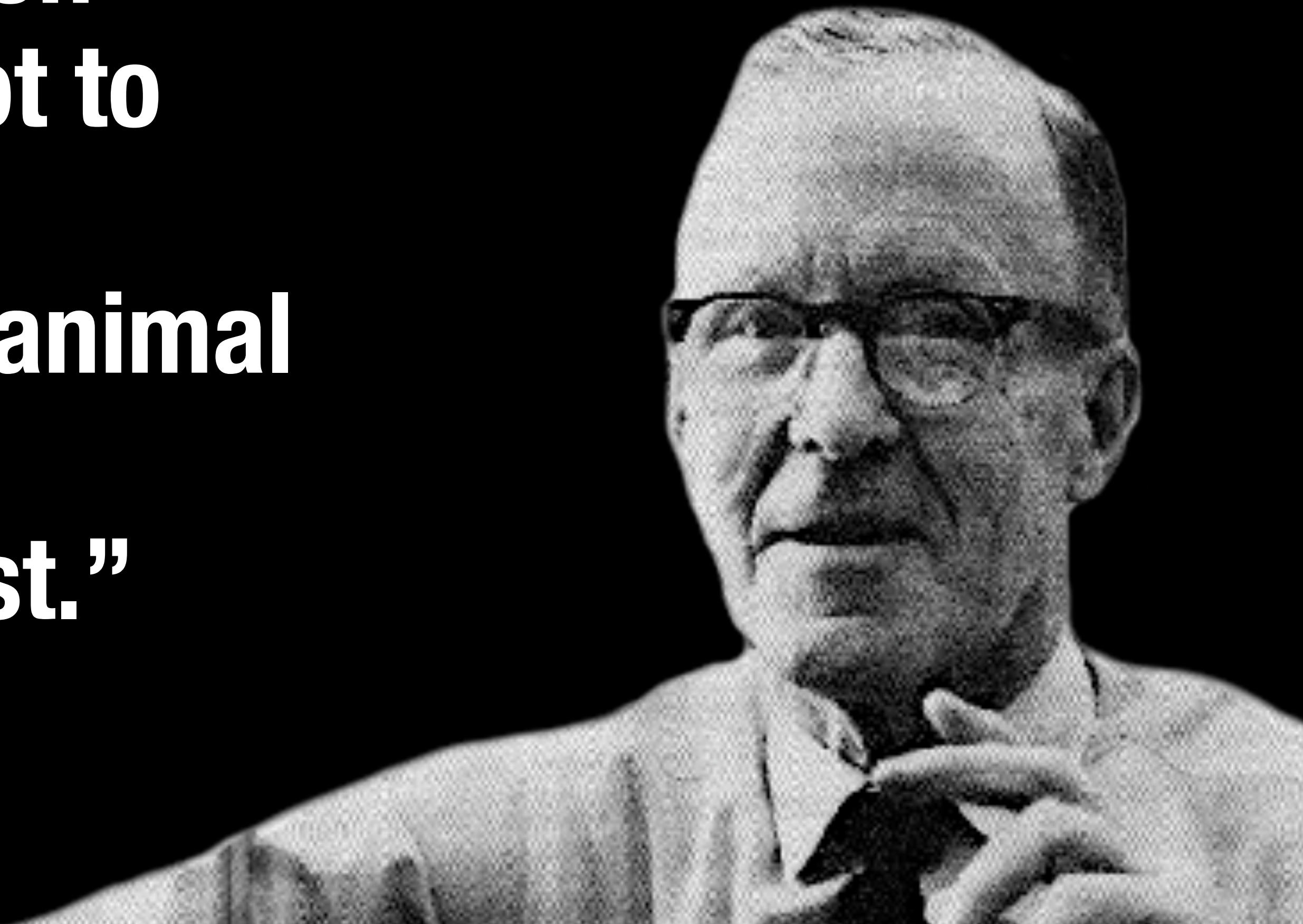


Fig. 15. Cat terrified at a dog. From life, by Mr. Wood.

Donald Hebb

“Obviously, the true objection to anthropomorphism is not to discovering a similarity of mechanism in human and animal behavior, but to inventing similarities that do not exist.”

(Hebb, 1946, p. 88)



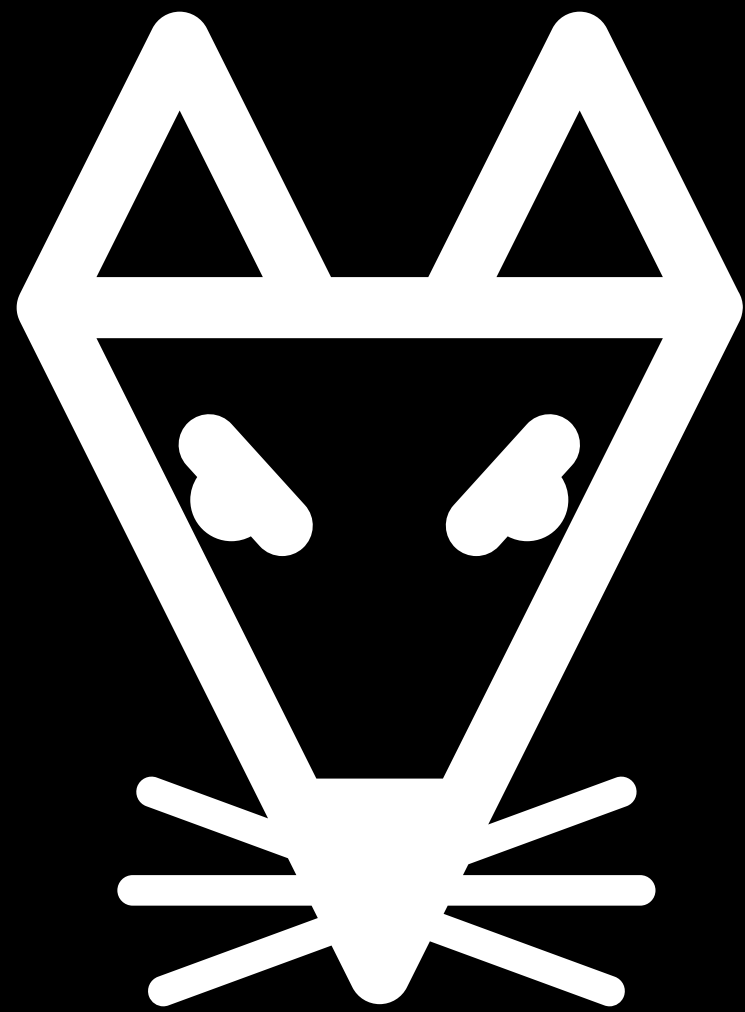
Comparative Study of Emotion

Definition

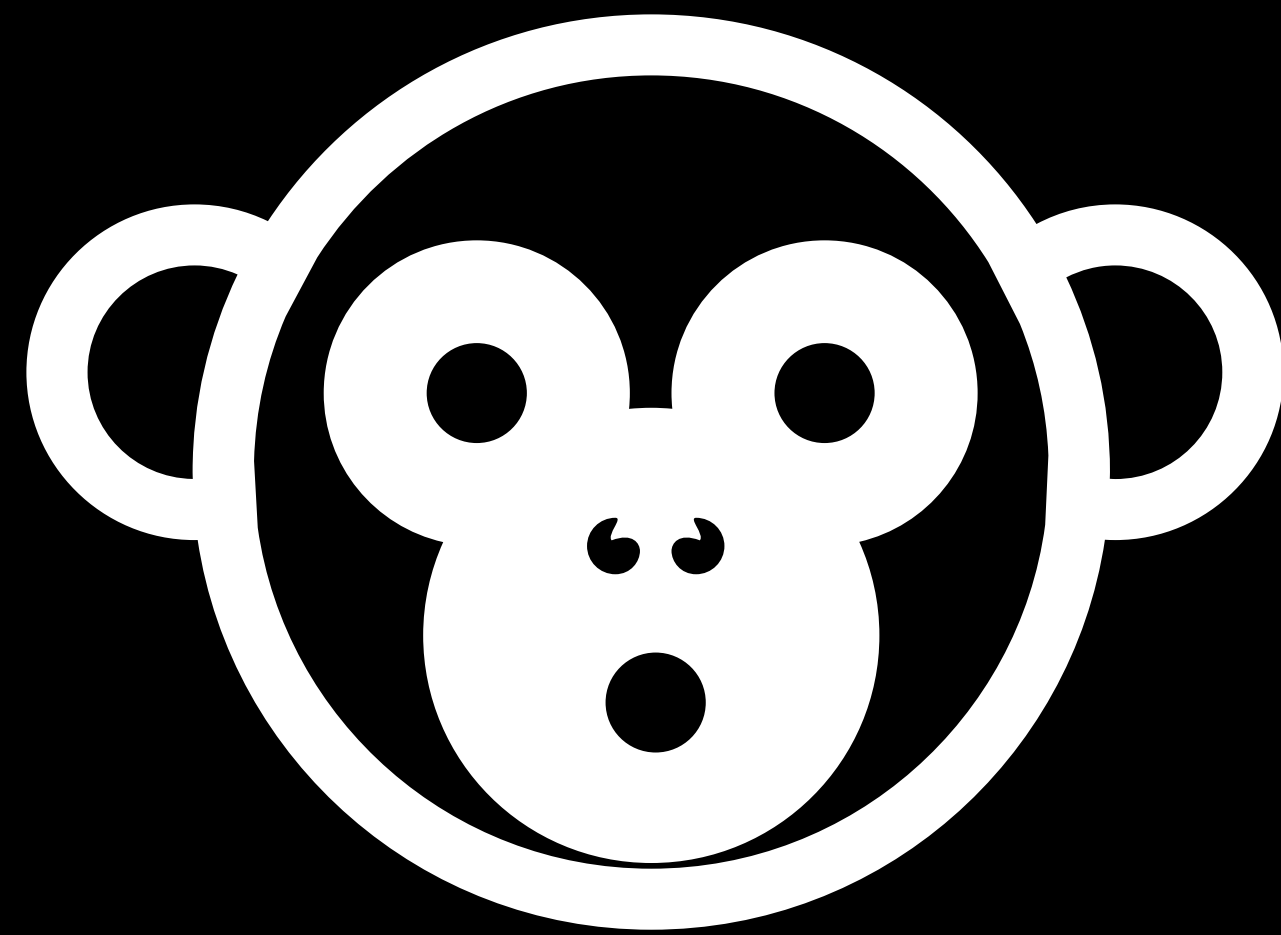
Research methodology that aims to make comparisons across different species, with specific focus on emotions.

Why Study Animals?

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Why Study Animals?

Reason 1

Trace potential origins of human emotions

- Comparative analysis of human and non-human behavior
- Trace evolutionary origin of uniquely human feelings

Why Study Animals?

Reason 2

Learn the minimum requirements for experiencing an emotion

- complex language?
- socialization of emotion?

Why Study Animals?

Reason 3

Cross-species comparison

- What emotions are unique to humans?
(*cross-species differences*)
- What emotions are shared across species?
(*cross-species similarities*)

Why Study Animals?

Reason 4

Understand social environment and behavior

Humans co-evolved with animal species, such as the dog

Dogs had to develop human-compatible emotional skills

Dog behavior can be used to understand human behaviors

Why Study Animals?

Reason 5

Animal models of emotional disorders

Identify neural circuits related to give rise to emotional difficulties (i.e., rat studies)

Example: violence, anxiety, depression

Roadmap

Course Logistics

Why Study Animals?

Premises & Methods

Monkey See, Monkey Feel?

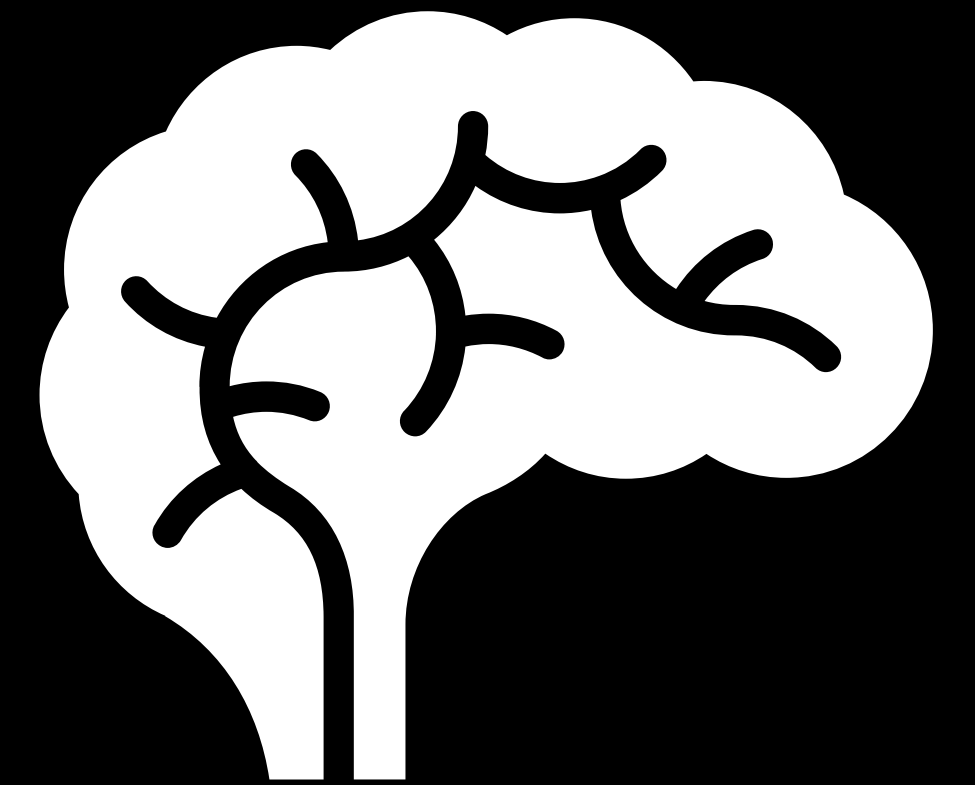
Canine Compassion & Rodent Rapture?

Take-Away Qs

Basic Premises

1. Evolutionarily (aka 'phylogenetically') related species share similar neural bases for emotion.

- e.g., human and chimpanzee brains are organized similarly



Basic Premises

2. Emotional expressions are similar between closely related species.

- Chimpanzee Silent-Bared Teeth Display (SBT) = *human smiling?*
- Chimpanzee relaxed-open-mouth (ROM) = *human laughter?*



Methods

Early Anecdotal Method

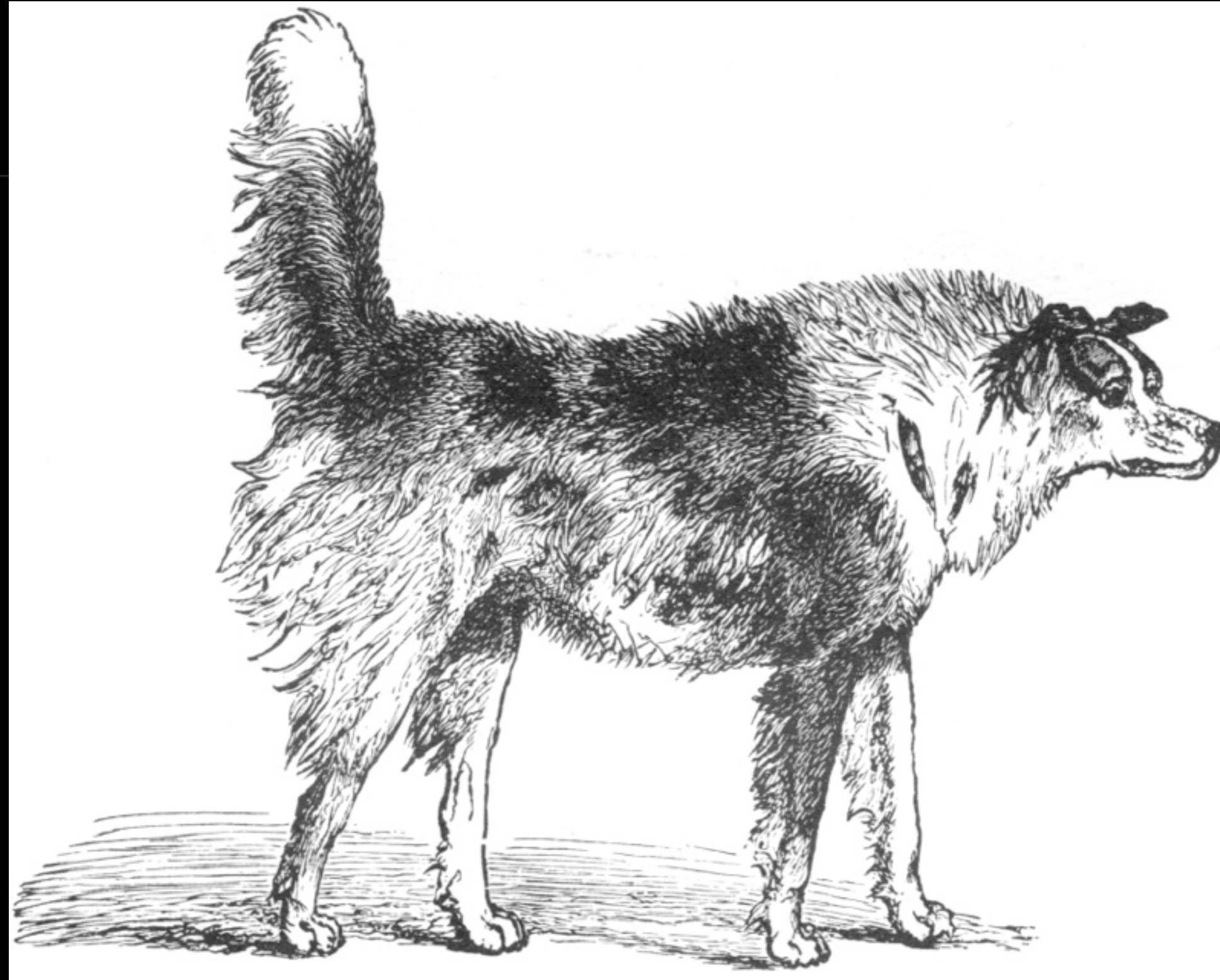
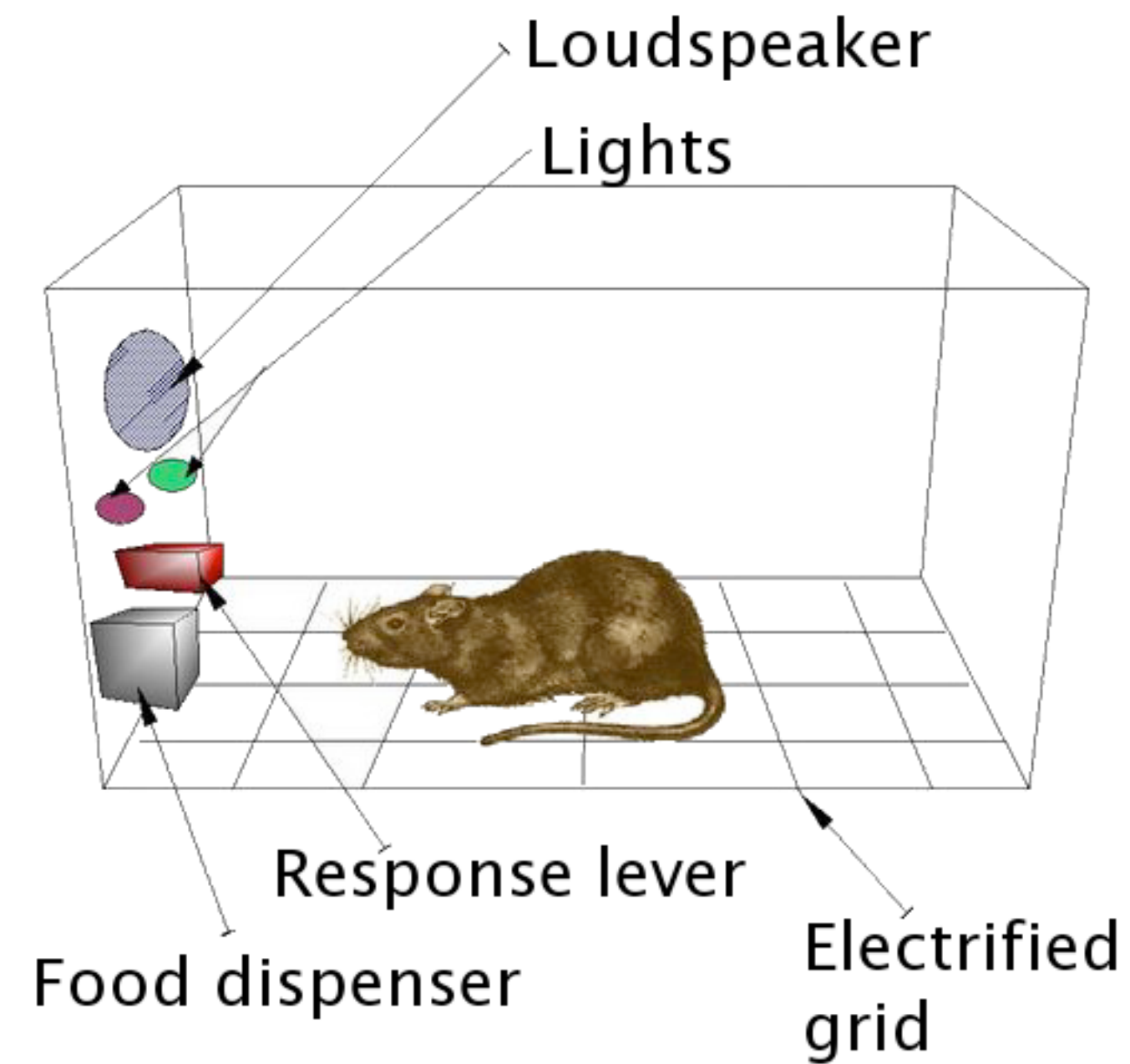


Fig. 15. Cat terrified at a dog. From life, by Mr. Wood.

Methods

Experimental Laboratory Studies



Methods

Field Studies

- Observational



Methods

Field Studies

- Experimental



Roadmap

Course Logistics

Why Study Animals?

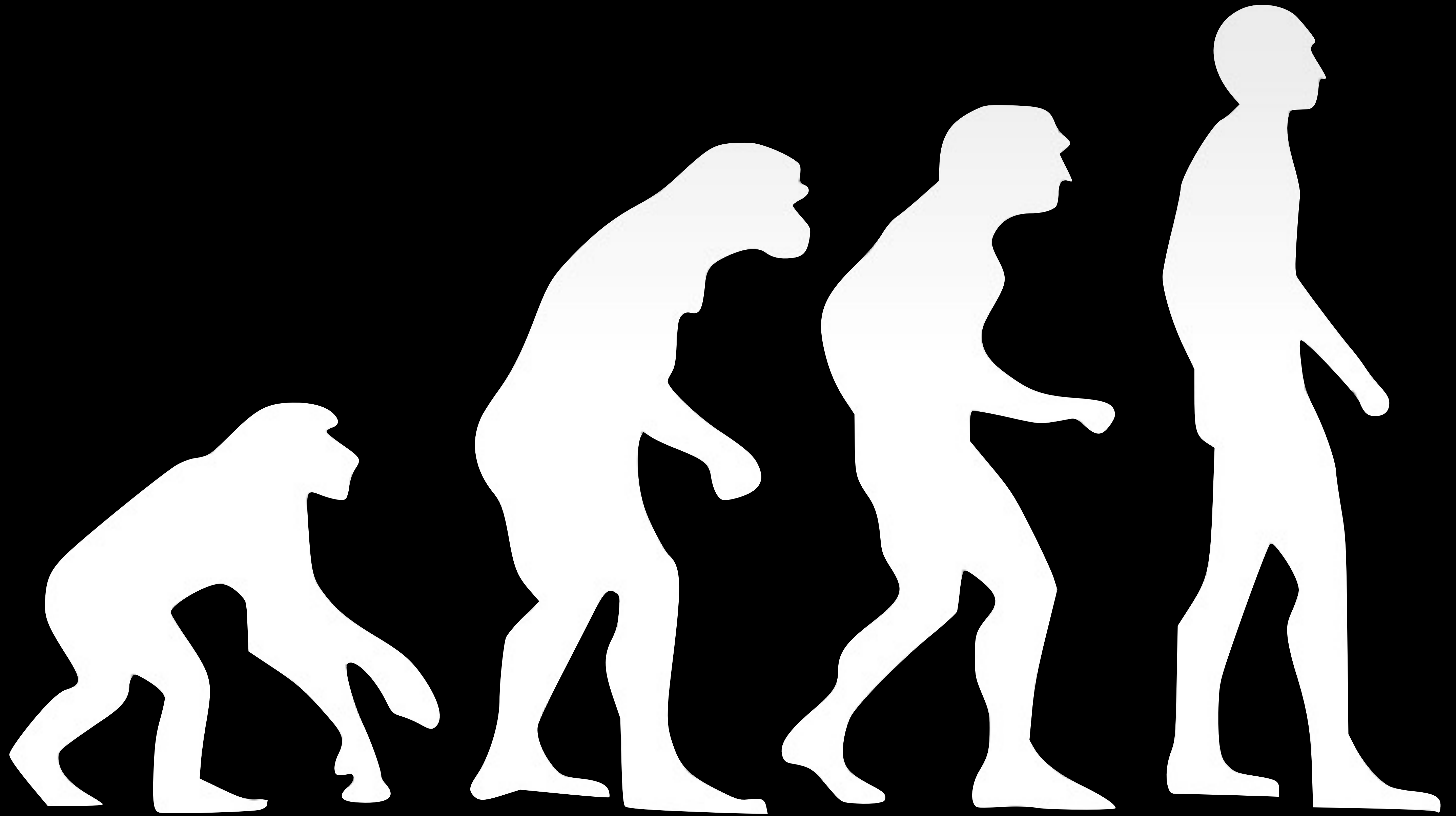
Premises & Methods

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Take-Away Qs

Emotion Expression



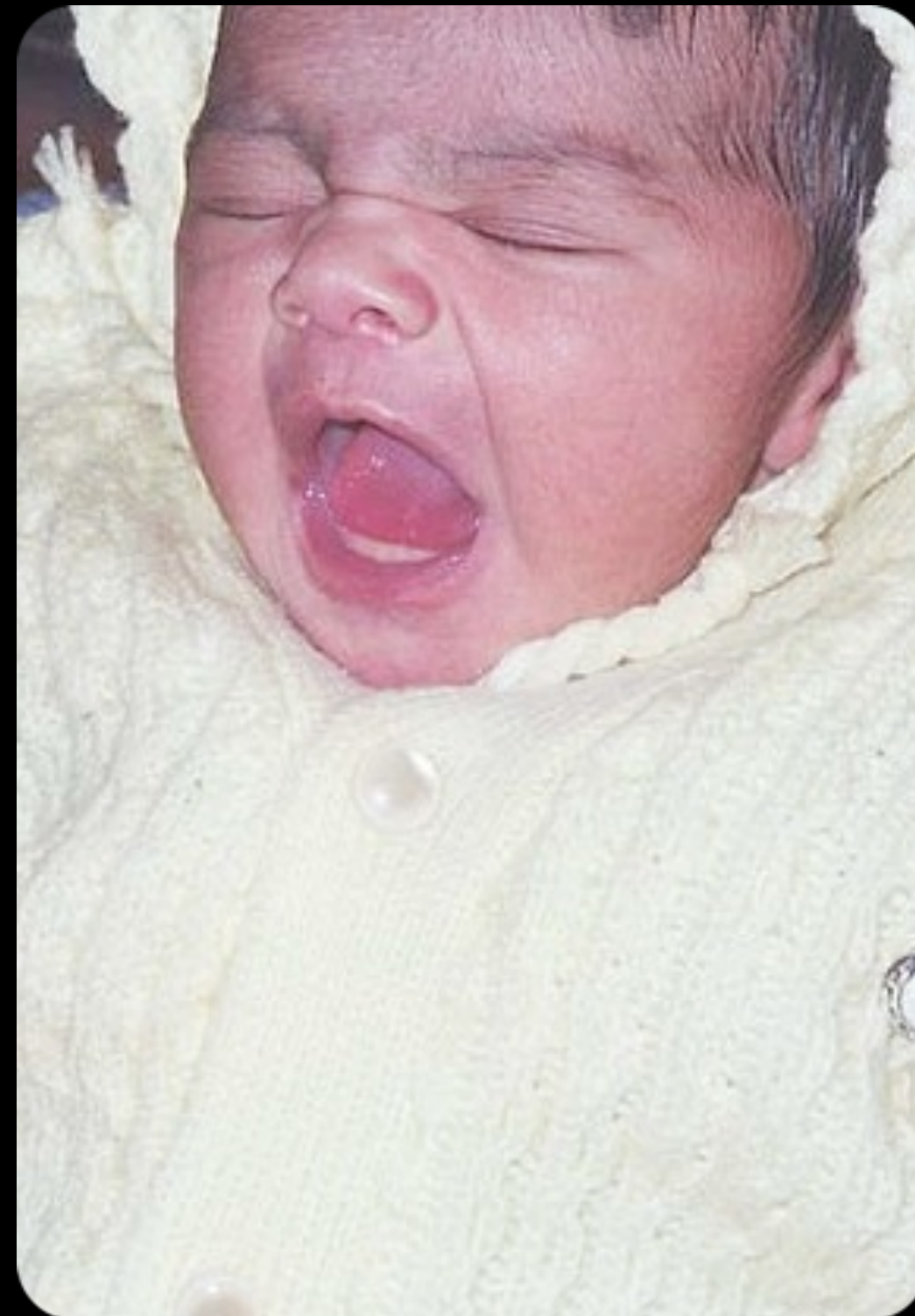
Emotional Expressions



Emotional Expressions Smiling



Emotional Expressions Crying



Emotional Expressions Surprise & Anger

SURPRISE



ANGER



Emotional Expressions



Dr. Lisa Parr
Emory University



Dr. Kim Bard
University of
Portsmouth

Facial Action Coding System (FACS)

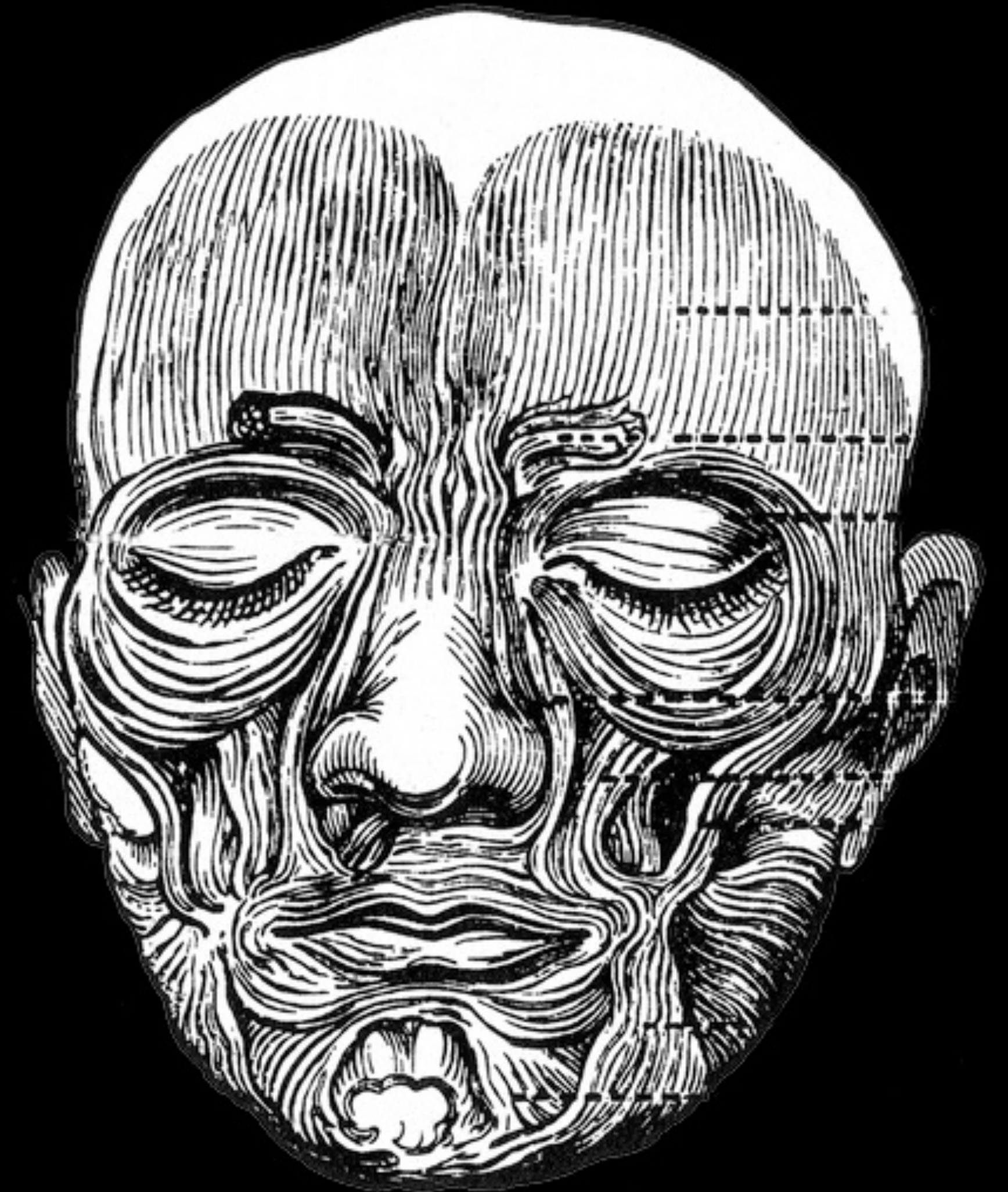
Developed Ekman & Friesen 1970's

Categorize facial behaviors based on muscles that produce them

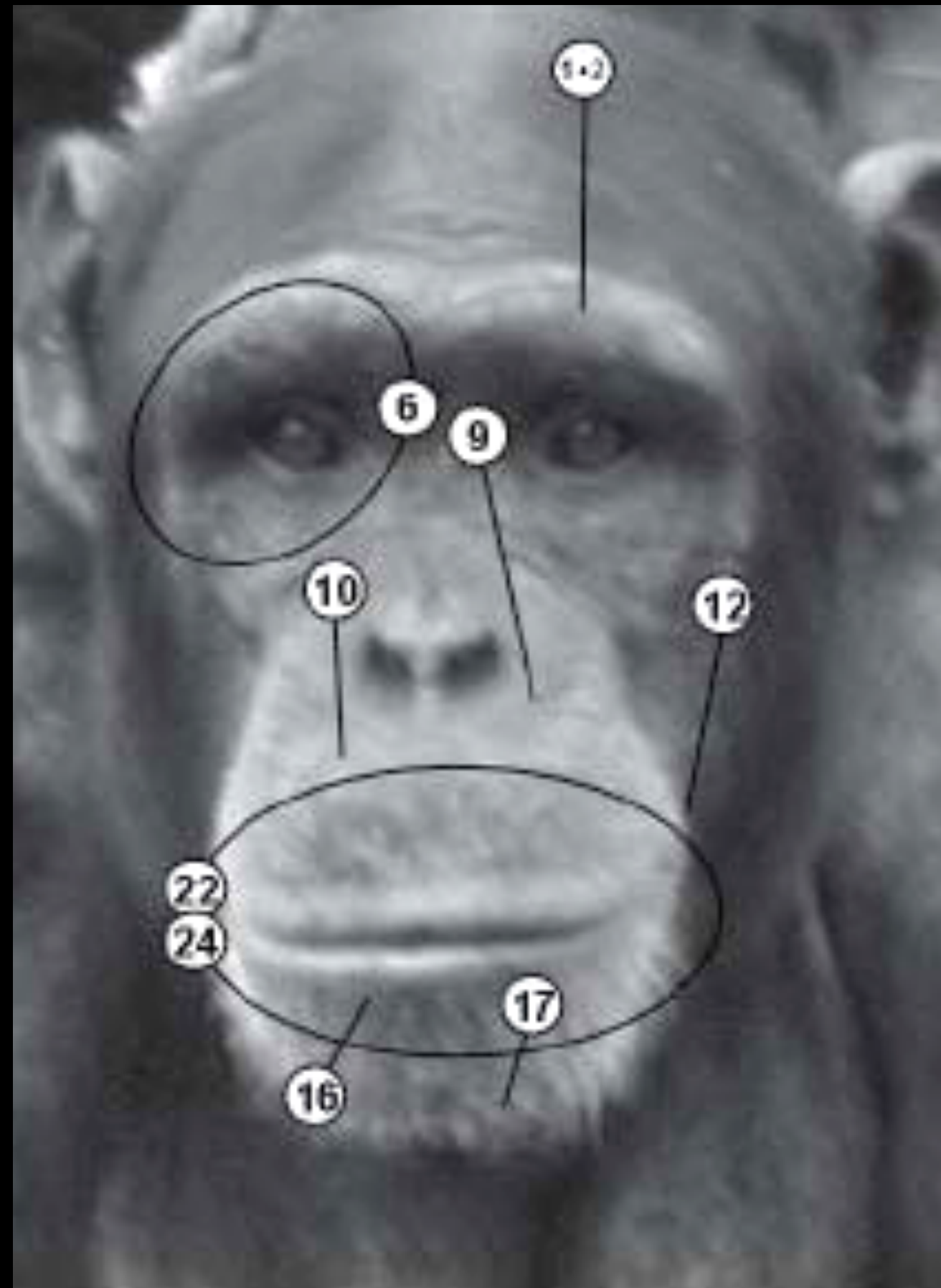
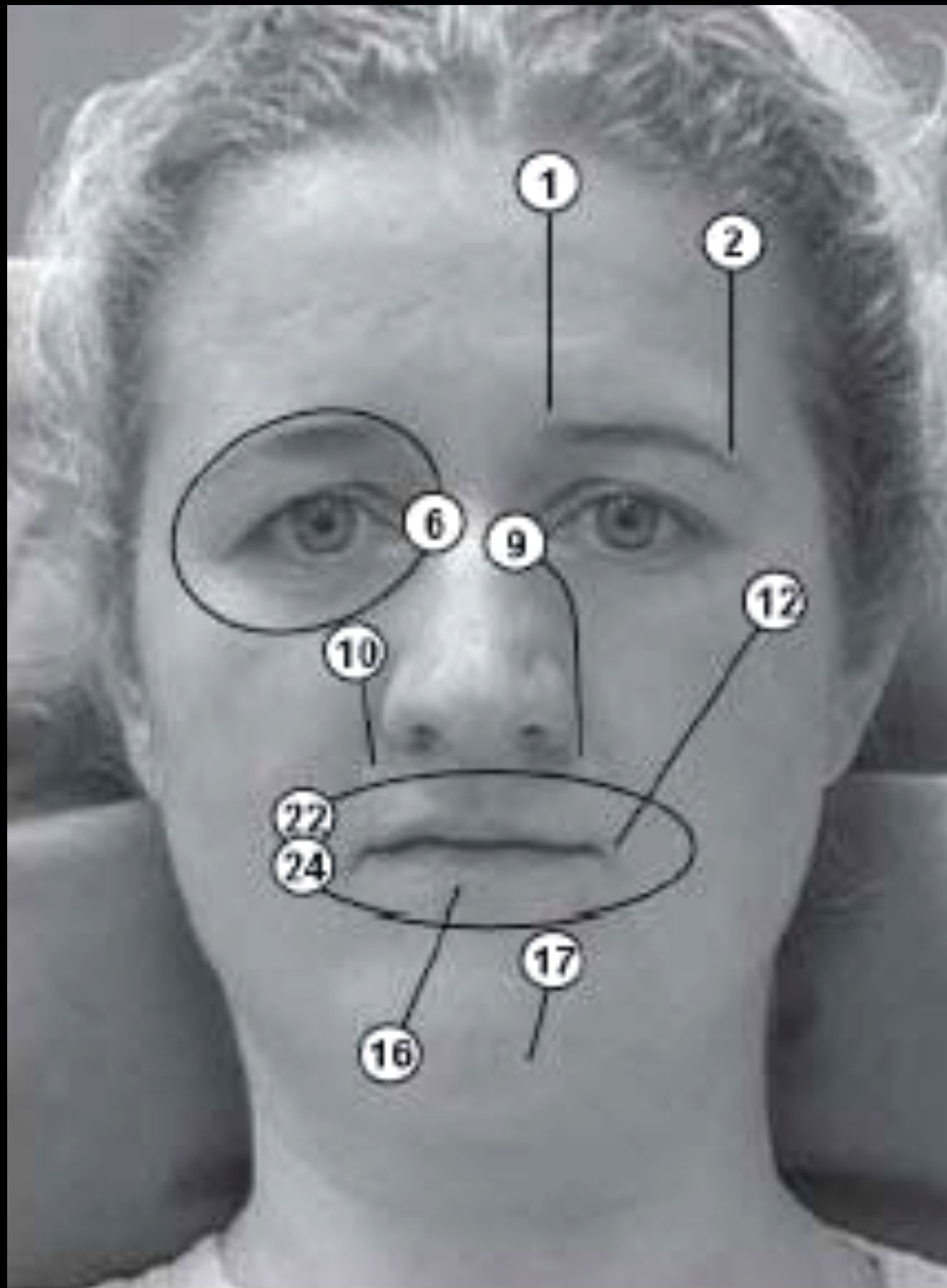
Unit of measurement = Action Unit (AU's)

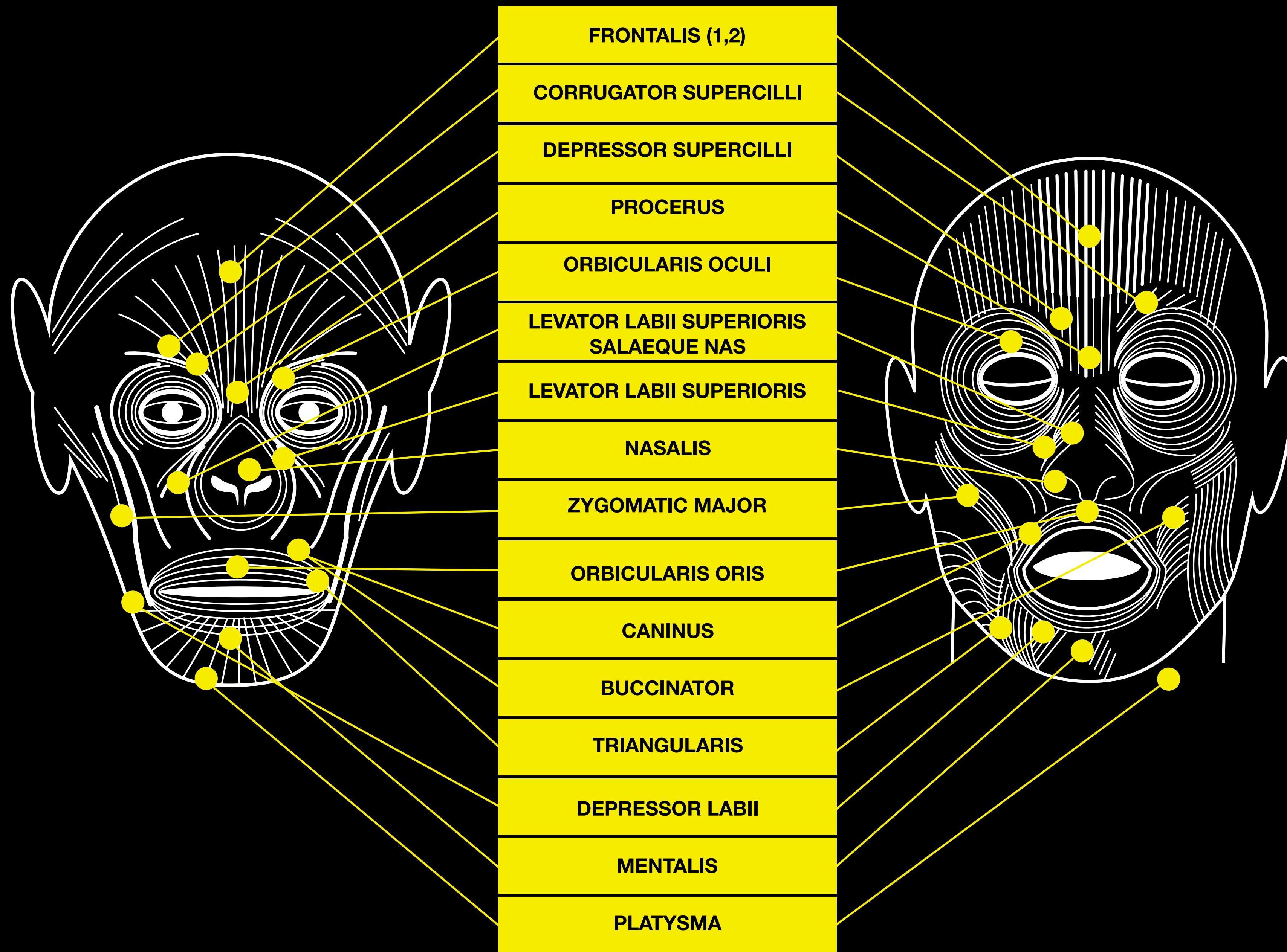
Specific AU combinations reflect emotions

Takes 80-100 hours to train on



Emotional Expressions Chimp (FACS)

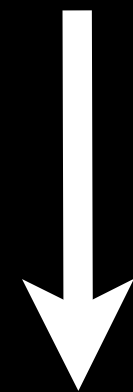




Compared facial musculature



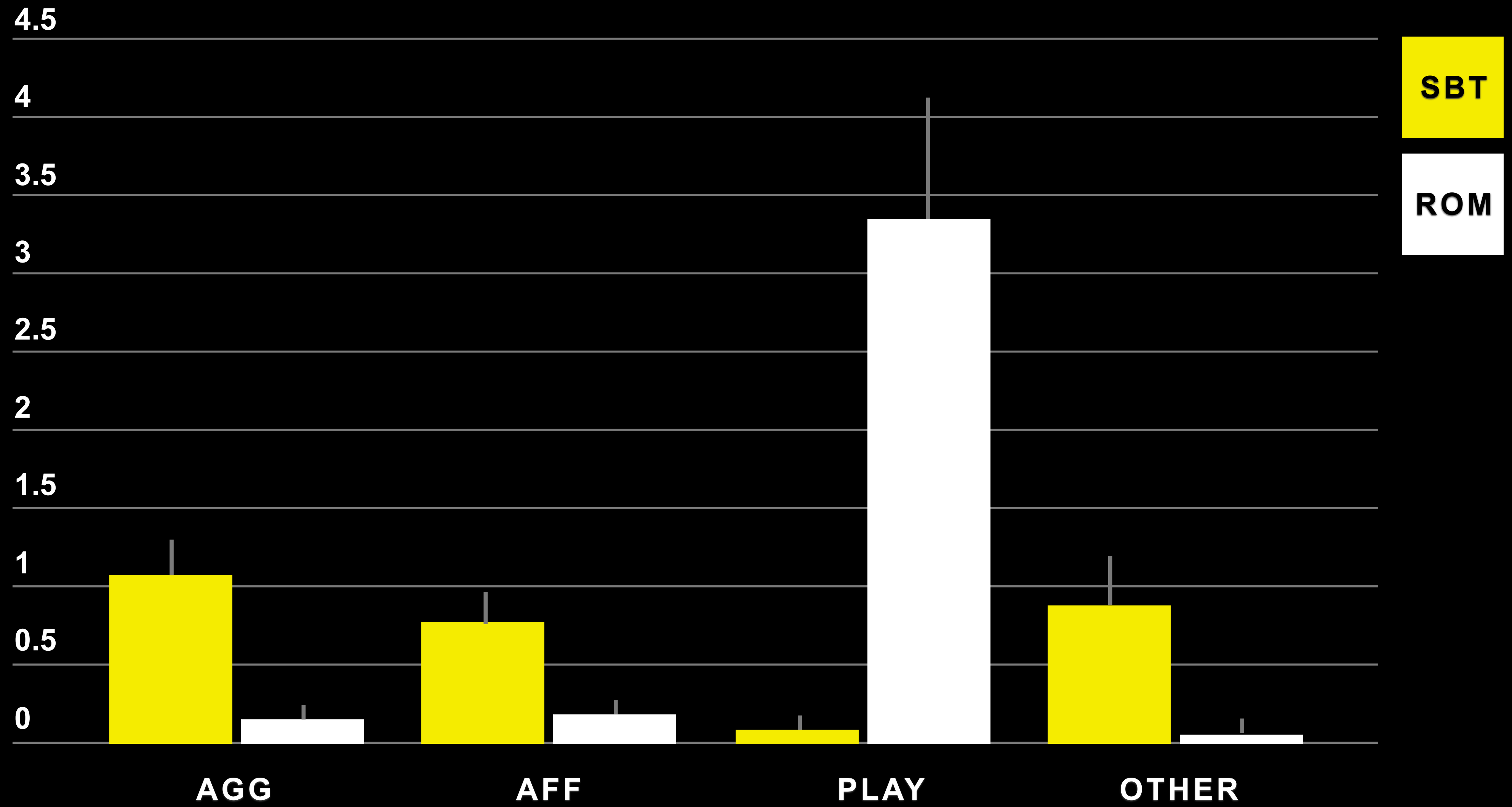
Compared facial landmarks



Arrive at ChimpFACS
www.chimpfacs.com

FREQUENCY OF DISPLAYS IN DIFFERENT CONTEXTS

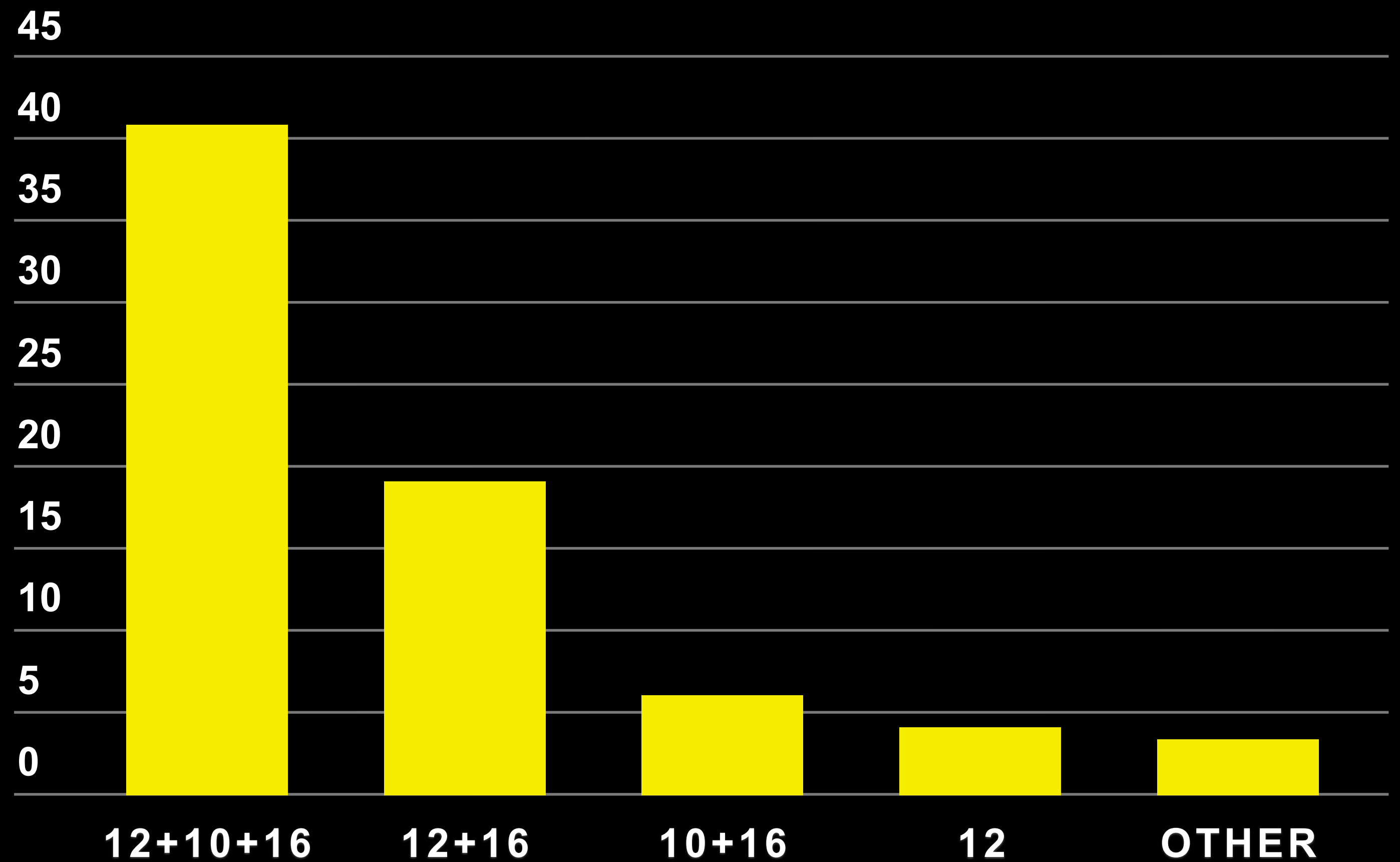
(Mean + SE)



Emotional Expressions Complex



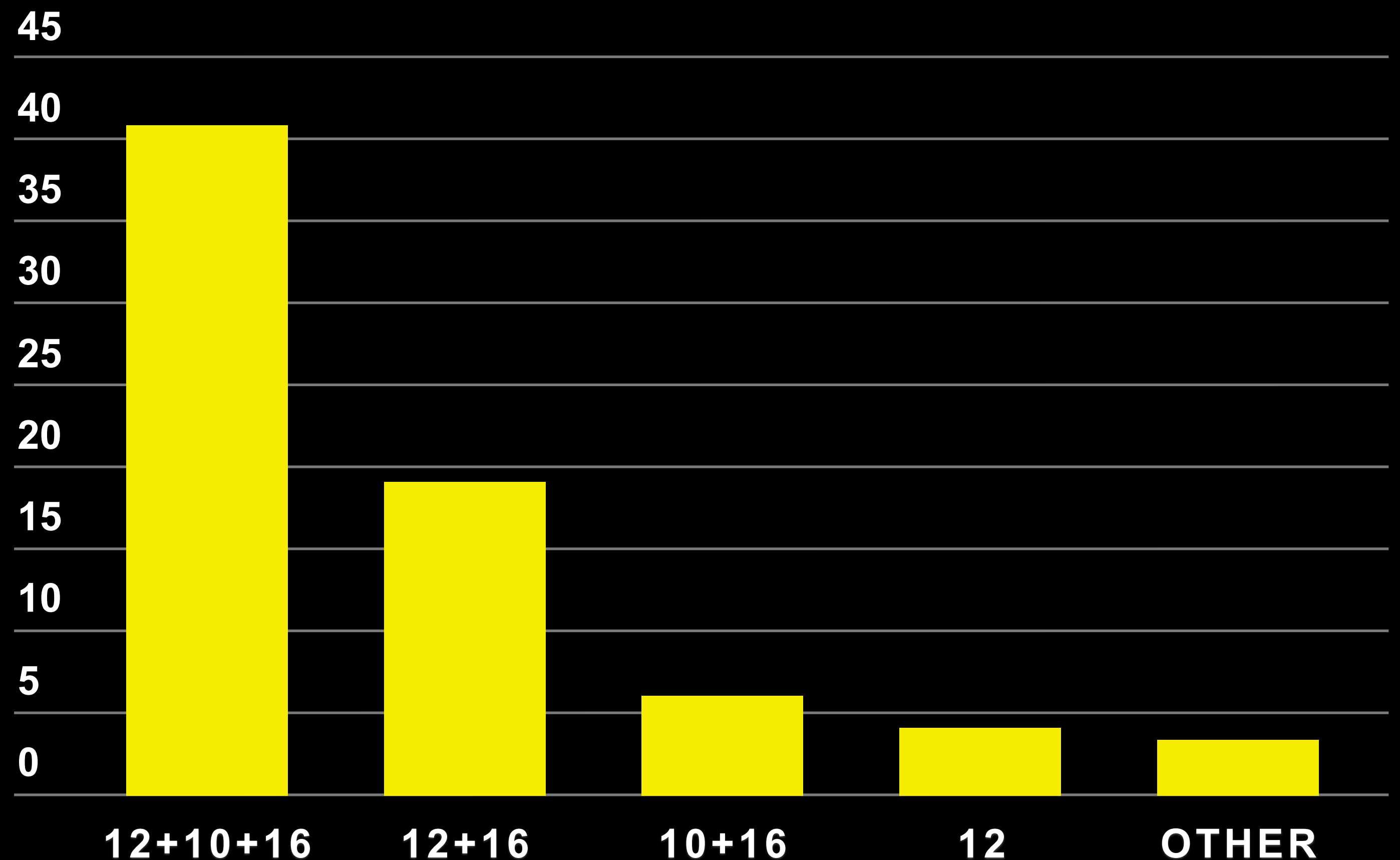
Emotional Expressions Complex



Emotional Expressions Complex

“Like human smiling, there may be meaningful variations in bared-teeth displays”

(van Hooff, 1973)



Emotional Expressions

Can only be properly understood when:

- Careful objective coding of facial expressions are used (e.g., ChimpFACS)
- Focus on underlying emotion signaled by facial expression
- Consider context in which expression is being used to communicate message

Silent-Bared
Teeth Display (SBT)

Silent Bared-Teeth Display
AU10
AU12
AU16
AU25



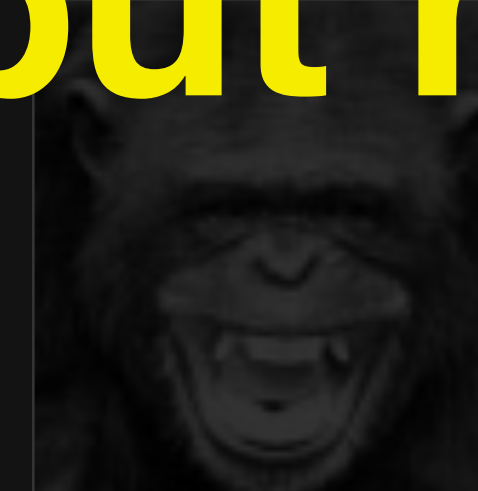
Smile
AU6
AU12
AU25

Smiling

Similar, but not Identical

Scream

Scream
AU10
AU12
AU16
AU25
AU27

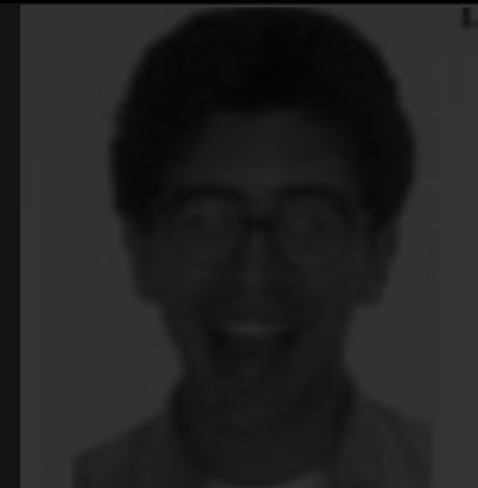


Scream
AU4
AU16
AU6
AU25
AU7
AU27
AU10
AU12

Scream

Relaxed Open
Mouth (ROM)

Relaxed Open Mouth
AU12
AU25
AU26



Laughter
AU12
AU25
AU26

Laughter

Emotion Experience



Complex Emotions Empathy



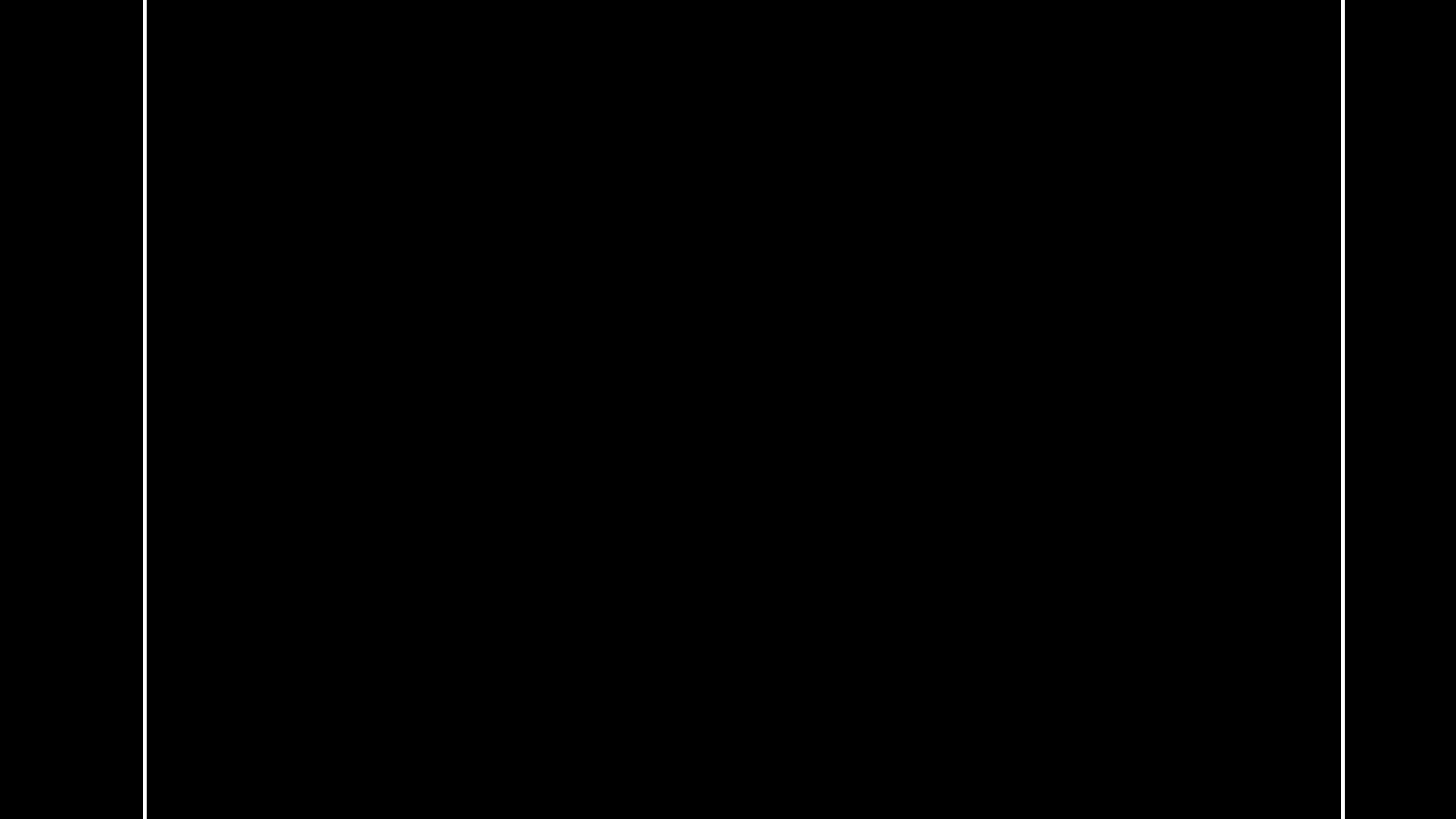
Empathy

- Ability to put yourself in another individual's shoes.
- Need a "theory of mind" or ability to mentalize others internal emotions.

Frans de Waal

- Empathy in all species who live in groups
(Preson & de Waal, 2002).

- Necessary for: (1) Group alarm and (2) Mother-infant relationship



Caveats

Careful not to anthropomorphize
ascribe human qualities to non-human entities

Lack of confirmatory self-report data

**Behavioral similarity does not =
same psychological experience of emotion**

Roadmap

Course Logistics

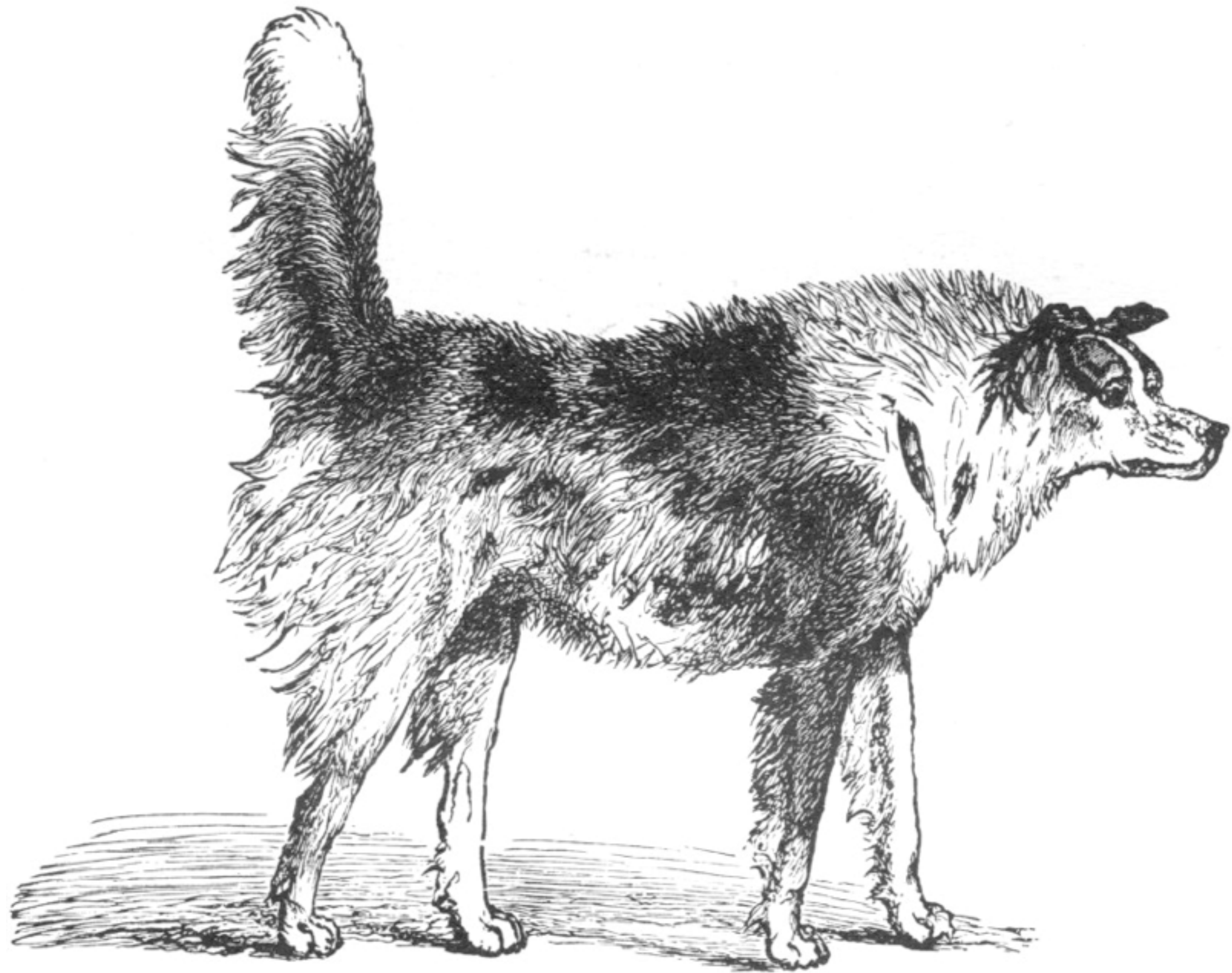
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Take-Away Qs





Canine Compassion Tail Wag

Asymmetric Tail Wag

- 30 dogs placed in cage with camera
- View (1) owner, (2) unfamiliar human, (3) cats, and (4) unfamiliar dominant dog

Left Tail Bias (RH = negative emotion):

Unfamiliar dominant dog

Right Tail Bias (LH = positive emotion):

owners, unfamiliar humans, cats



Canine Compassion Guilt

The screenshot shows a web browser window with the URL 'insideofadog.com'. The website has a dark red header with the title 'INSIDE OF A DOG' and the author's name 'ALEXANDRA HOROWITZ'. Below the header is a navigation menu with icons and labels for 'Home', 'Excerpts', 'Reviews', 'Events', and 'Author'. The main content area features a large image of the book cover on the left, which shows a close-up of a dog's face. To the right of the cover is a photo of the author, Alexandra Horowitz, sitting with a black dog. Below the photo is a short paragraph titled 'What is it like to be a dog?' and a note that the book was a '52 weeks as a New York Times bestseller!'. At the bottom, there is a 'Buy the book' section with links to various retailers and international editions.

INSIDE OF A DOG
ALEXANDRA HOROWITZ

Home Excerpts Reviews Events Author

INSIDE OF A DOG
WHAT DOGS SEE, SMELL, AND KNOW
ALEXANDRA HOROWITZ

cover photo by Erin Vey

What is it like to be a dog?

In *Inside of a Dog*, Alexandra Horowitz evokes the dog's perspective by interweaving the science of dog cognition and perception with personal reflections on her own dog's behavior. Ranging from what it might be like to be able to smell sadness in humans or the passage of time; how the smallest Chihuahua can play with the most formidable Great Dane; the experience of hearing the hum of fluorescent lights; to why some dogs relentlessly pursue bicycle or ball, *Inside of a Dog* gives us insights into how dogs view the world. This book gives anyone who lives with, deals with, or admires dogs a new understanding of their sensory abilities, a nuanced interpretation of their behavior, and an appreciation of their minds.

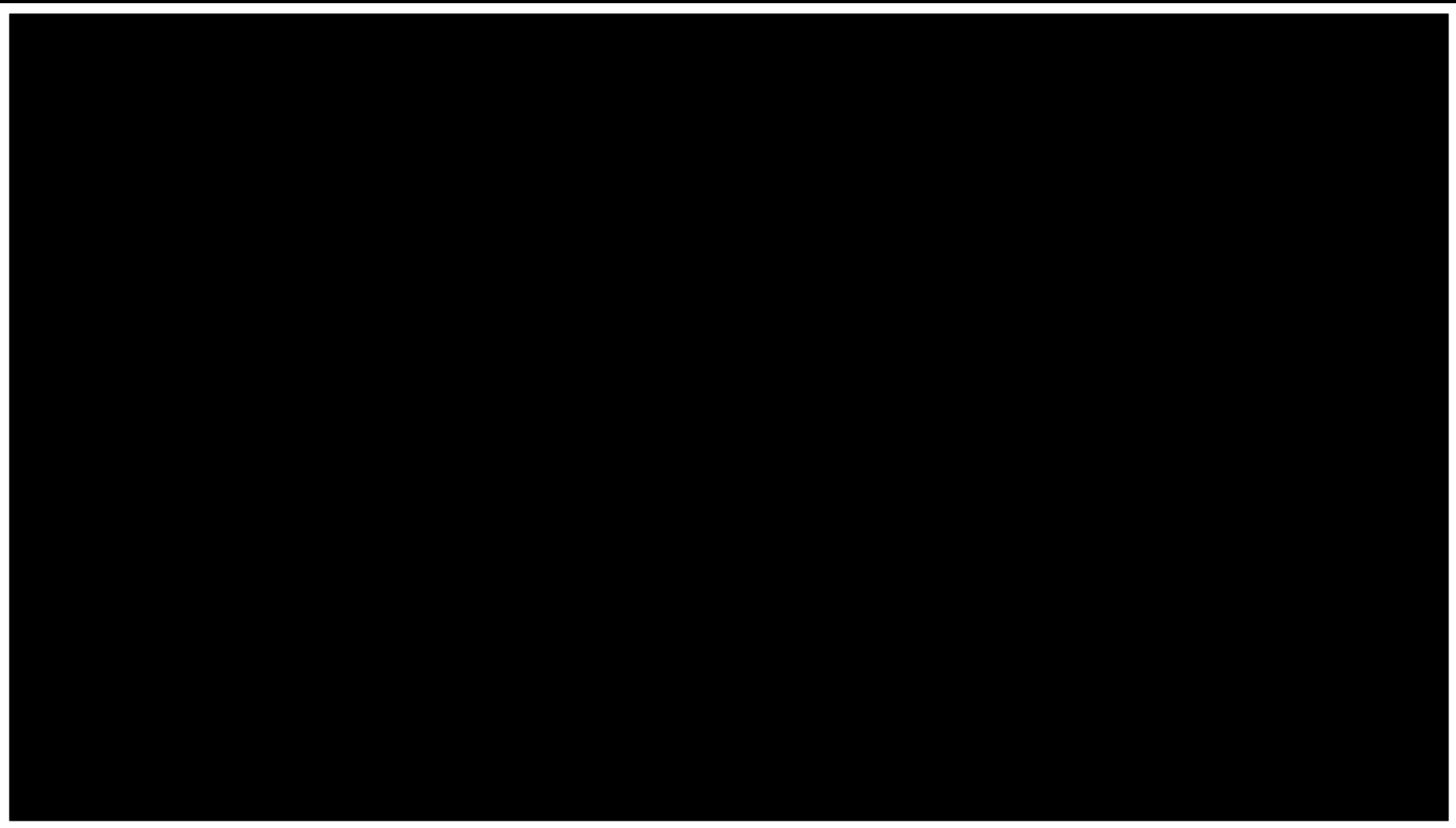
photo by Vegar Abelsnes

52 weeks as a New York Times bestseller!

Buy the book

- at an independent bookstore
- as an audio book
- at Amazon
- at Barnes & Noble
- in the UK (Simon & Schuster UK)
- in French (Flammarion)
- in German (Springer)
- in Italian (Oscar Mondadori)
- in Spanish (RBA Libros)

Publicity: Scribner
Speaking engagements: Kris Dahl, ICM



Canine Compassion Guilt

Do dogs really feel guilty?

- 14 dogs videotaped repeatedly
- Coded for “guilty look” presence when disobeying owner’s command (not eat treat while owner was away) and varied whether owner’s knew of dogs behavior.
- No evidence of guilty look.
- Guilty look found more often when owners scolded dogs.
- Suggests guilt may be response to owner cues rather than appreciation of misdeed.

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What Are Animals Thinking?

Probe animal morality, the "swarm intelligence" of a beehive, the amazing navigation talents of pigeons, and more. **Aired November 7, 2012 on PBS**



What Are Animals Thinking?

[WATCH THE PROGRAM](#)[f Like 3.1k](#)[t Tweet 184](#)[✉ EMAIL A FRIEND](#)[Buy the DVD](#)

Canine Compassion Empathy



Dogs can read our feelings

- 18 pet dogs
- 4 separate 20-second encounters with humans (owners and strangers)
- Humans either hummed, talked, or cried
- Dogs most often comforted person by nuzzling and licking when human was crying



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Animal cognition

Man's best friend

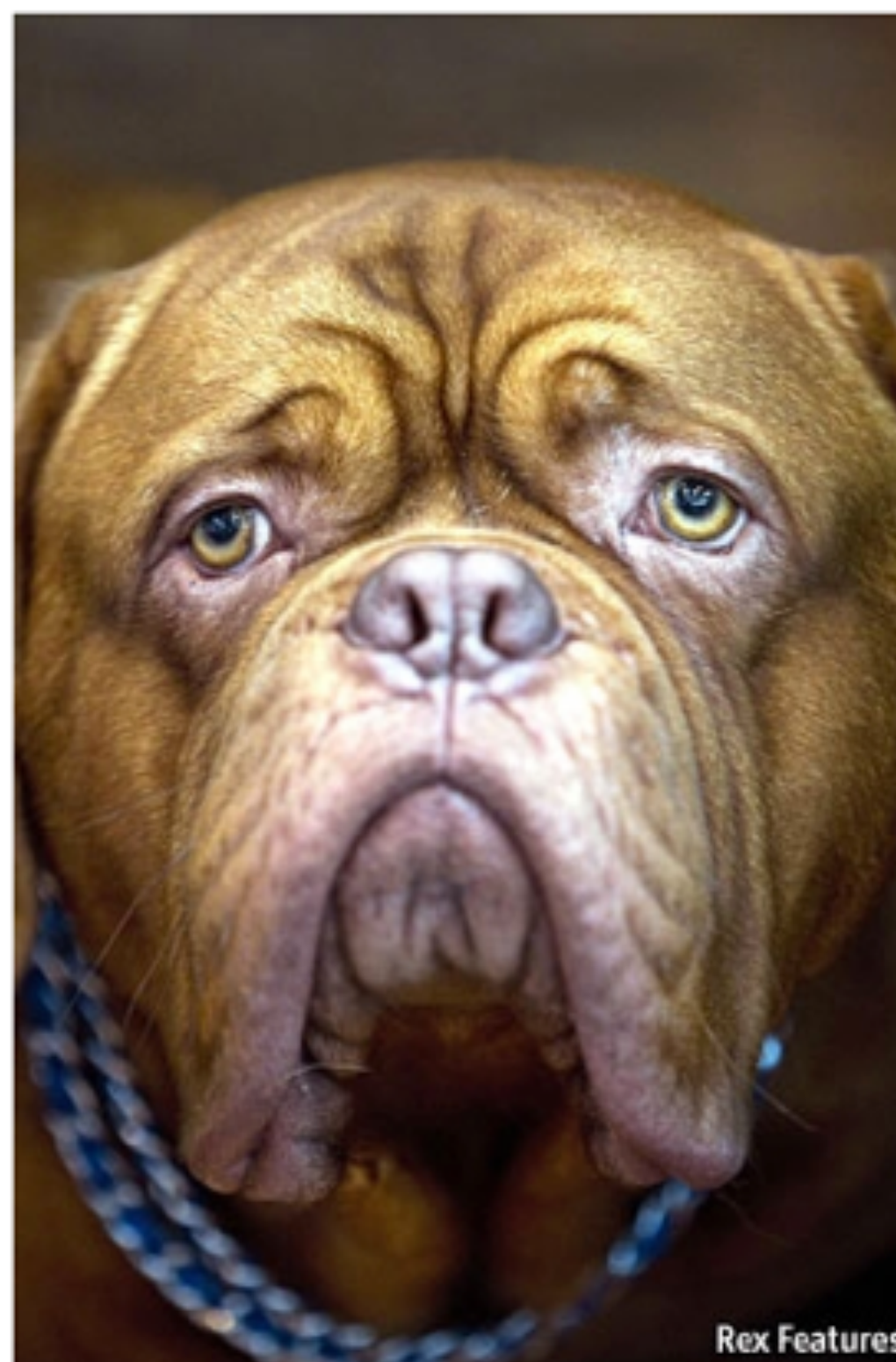
Can dogs really show empathy towards humans?

Jun 30th 2012 | from the print edition

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DOGS quickly become part of the family. Tales abound of dogs celebrating joy in a household or commiserating when tragedy strikes. This may not seem surprising after 15,000 years of co-evolution. But what hard evidence is there of dogs' empathy with humans? A new experiment suggests that behind all the waggy tails there really is something deeper going on.

Past experiments have hinted that animals can feel sympathy. Rats and monkeys had been found to forgo food to avoid delivering electric shocks to relatives. Similarly, apes have recently been documented consoling one another after conflicts. However, all these experiments and observations were demonstrating an animal's sensitivity to distress in other members of the same species. Deborah Custance and Jennifer Mayer of Goldsmiths College, London, set out to see if dogs could detect the emotional state of humans.



Rex Features

I feel your pain

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Where audiences grow via satellite

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No deal, but no drama

155 people recommended this.



What can James Bond's nemeses teach us?

636 people recommended this.



Ahn bows out

201 people recommended this.

Canine Compassion Empathy



“I think there is good reason to suspect dogs would be more sensitive to human emotion than other species”

- Deborah Custance

THE EMOTIONAL LIVES OF ANIMALS

A Leading Scientist Explores Animal Joy,
Sorrow, and Empathy — and Why They Matter



“A glorious, moving, important
book to enjoy and share.”
— INGRID NEWKIRK

MARC BEKOFF
FOREWORD BY JANE GOODALL

INSIDE OF A DOG

WHAT DOGS SEE, SMELL, AND KNOW

ALEXANDRA HOROWITZ



Rodent Rapture



Rodent Rapture

Laughter: Uniquely human?

- Originally thought that capacity for human laughter preceded capacity for speech and language in evolution of human brain.
- However, neural circuits for laughter exist in more primitive brain regions that date long ago in other animals before humans came along.

Rodent Rapture

Laughter in Rats

Jaak Panksepp (2005)

- Rats 50 Hz “chirp” during play and when playfully tickled.
- Rats also seek out tickling (sign of pleasure).





www.FreeScienceLectures.com

Thank You!

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