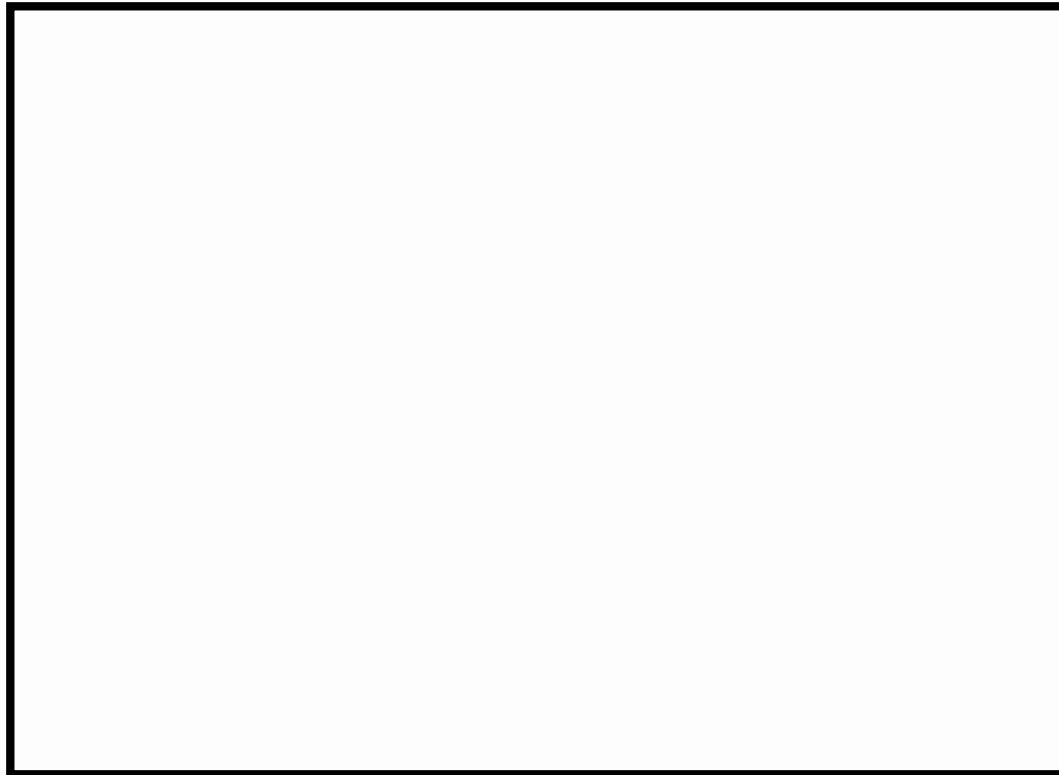


Lecture 22

The Mirror System

- **The Mirror System**
 - **We “mirror” observed behaviors in others**
- **The Chameleon Effect**
 - **We automatically mimic others behaviors**
- **Why do we mimic?**
 - **Facilitates liking and rapport**
 - **Promotes “pro-social” behavior**

The Mirror System



From *E.T., the Extraterrestrial*

The Mirror System

Rizzolatti's finding

Originally recording
from what they
thought were motor
neurons

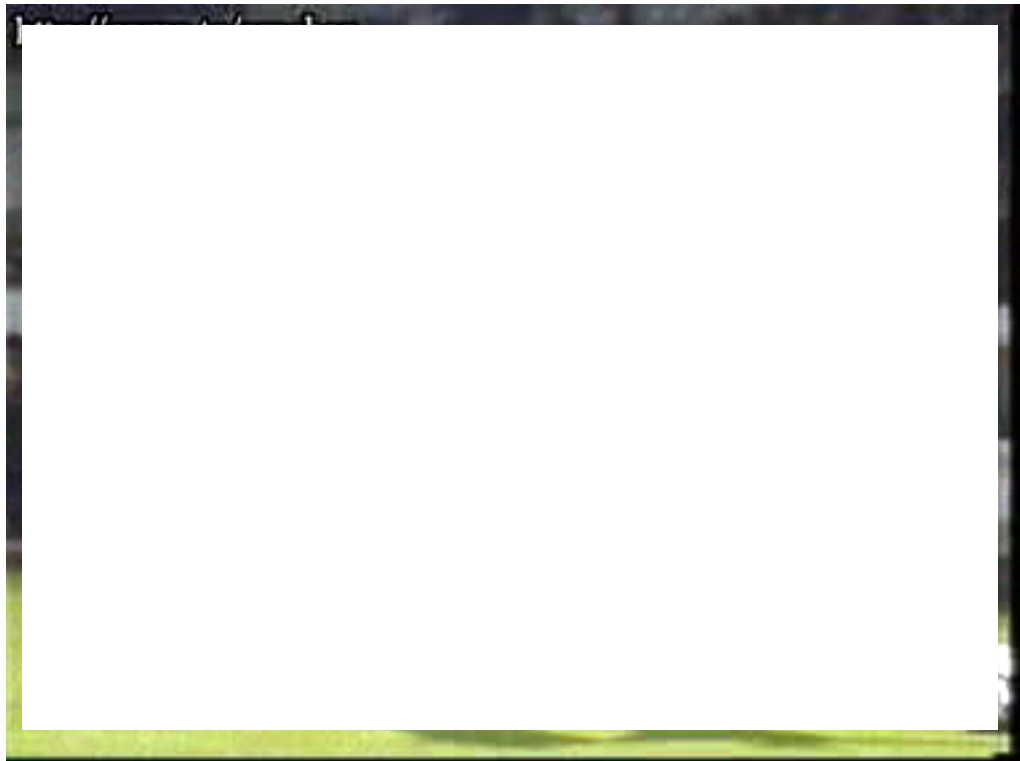


Accidentally discovered
that the neurons
also responded to actions
observed in others

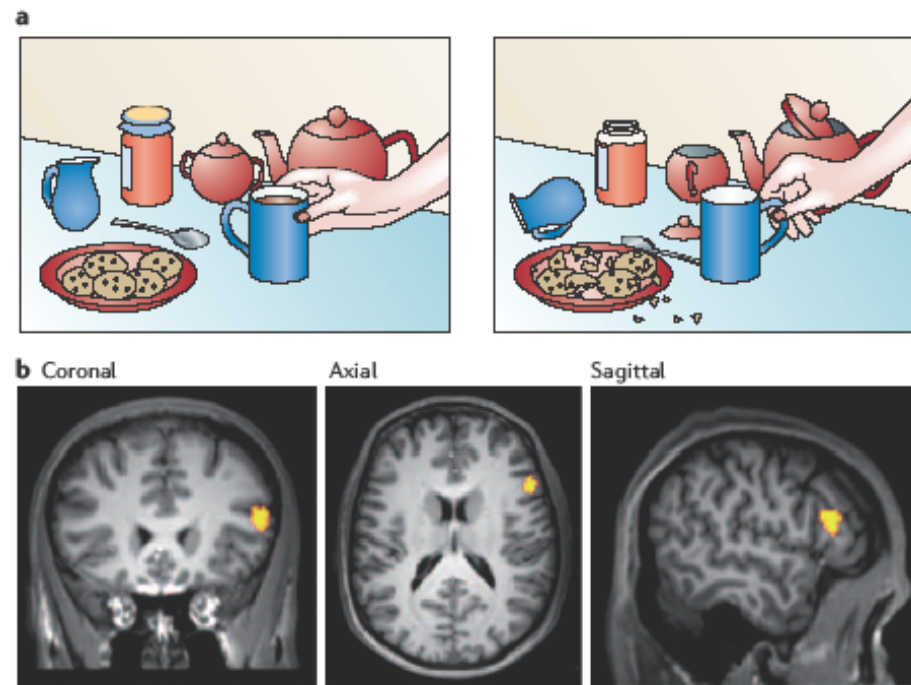


The Mirror System

Why is this hard to watch?!



The Mirror System



Brain area showing increased activity for “drinking” action (panel a, left), relative to “cleaning” action (panel b, right). Indicates the area doesn’t just code “grasp cup”, but rather, the *reason or intention* for grasping the cup.

Iacoboni (2006)

The Chameleon Effect

A consequence of the mirror neuron system

The *chameleon effect* refers to the nonconscious mimicry of the postures, mannerisms, facial expressions, and other behaviors of one's interaction partners, such that one's behavior passively and unintentionally changes to match that of others in one's current social environment.

We suggest that the mechanism involved is the *perception-behavior link*, where the mere perception of another's behavior automatically increases the likelihood of engaging in that behavior oneself.

Chartrand (1999)

The Chameleon Effect

Experiment 1

Overview. Students participated in two consecutive dyadic sessions. Session 1 consisted of a 10-min interaction with 1 other "participant" (Confederate 1; C1), during which they took turns describing various photographs. Participants then repeated this photograph description task in Session 2 with a 2nd "participant" (Confederate 2; C2). **Confederates varied their mannerisms and facial expressions through out the interactions: Confederates either rubbed his or her face or shook his or her foot, and either smiled or had a neutral expression (i.e., did not smile) throughout the session.**

Chartrand (1999)

The Chameleon Effect

Experiment 1

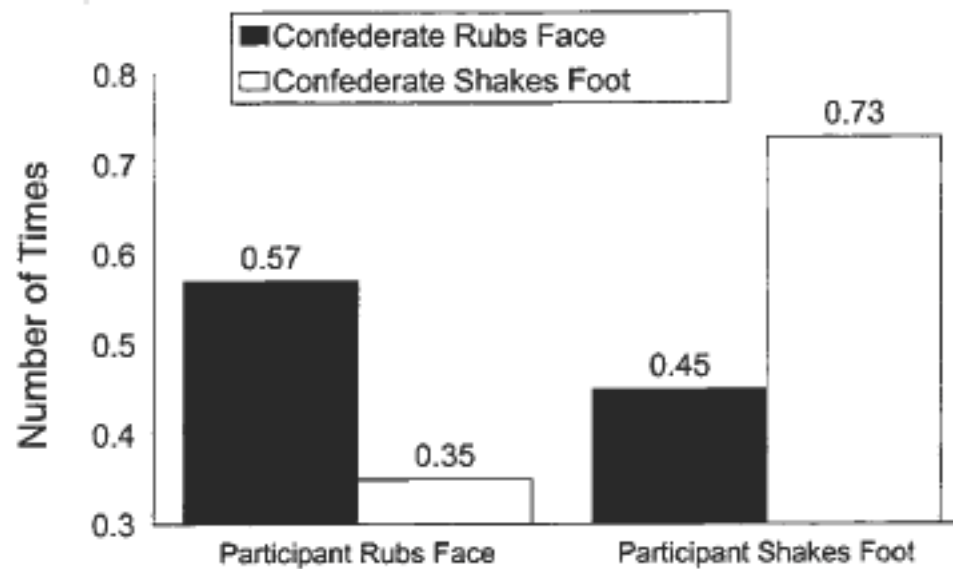


Figure 1. Number of times participants rubbed their face and shook their foot per minute when with a confederate who was rubbing his or her face and a confederate who was shaking his or her foot.

Chartrand (1999)

The Chameleon Effect

Experiment 1

**Participants were much
More likely to smile
When their partner
Smiled, relative to when
Their partner
Maintained a neutral
Expression.**



Chartrand (1999)

The Chameleon Effect

Why do we mimic?



From *The Office*

The Chameleon Effect

Experiment 1

Participants were less likely to mimic When their partner Smiled, relative to when Their partner Maintained a neutral Expression.



Chartrand (1999)

The Chameleon Effect

Why do we mimic?

What is the adaptive function served by the chameleon effect, the nonconscious tendency to behave with others as those others are behaving? There is consensus among researchers that behavior matching is related to greater liking and rapport between the interactants. Our second experiment tested whether behavior matching does in fact increase liking and create a sense of smoother social interactions.

Chartrand (1999)

The Chameleon Effect

Experiment 2

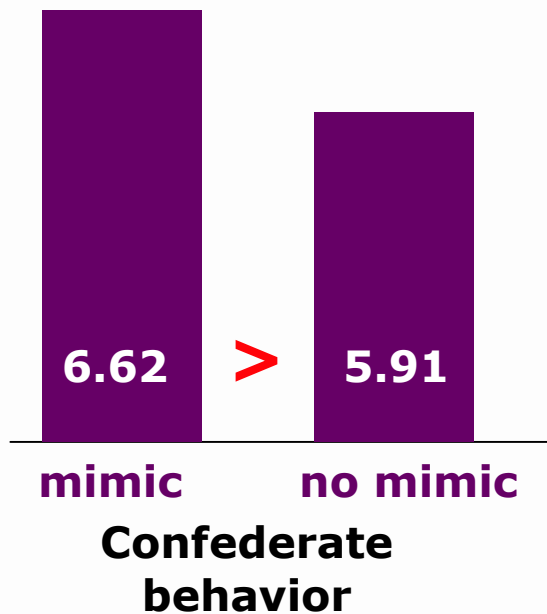
Overview. Participants had one 15-min session with another "participant" (a confederate). During this session, the participant and confederate took turns describing what they saw in various photographs. Confederates either mirrored the behavioral mannerisms of the participant throughout the interaction (the experimental condition) or engaged in neutral, nondescript mannerisms (the control condition). **When the interaction was over, participants completed a questionnaire on which they were asked to report (a) how much they liked the confederate and (b) how smoothly the interaction had gone.**

Chartrand (1999)

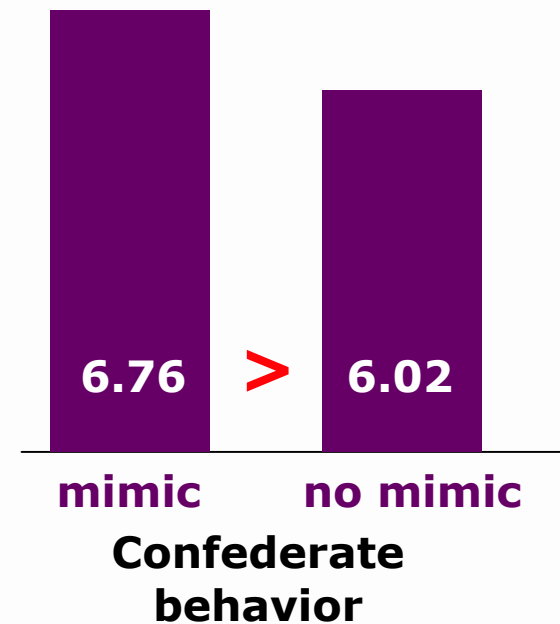
The Chameleon Effect

Experiment 2

Did they like the confederate?



Did the interaction go "smoothly"?



Chartrand (1999)

The Chameleon Effect

Promoting “pro-social” behavior

Mimicry occurs unintentionally and even among strangers. In three studies, we consistently found that mimicry increases pro-social behavior. Participants who were mimicked were more helpful and generous toward other people than were non-mimicked participants. The beneficial consequences of mimicry were not restricted to behaviour directed toward the mimicker, but included behaviour directed toward people not directly involved in the mimicry situation. These results suggest that the effects of mimicry are not simply due to increased liking for the mimicker, but are due to increase pro-social orientation in general.

Van Baaren (2004)

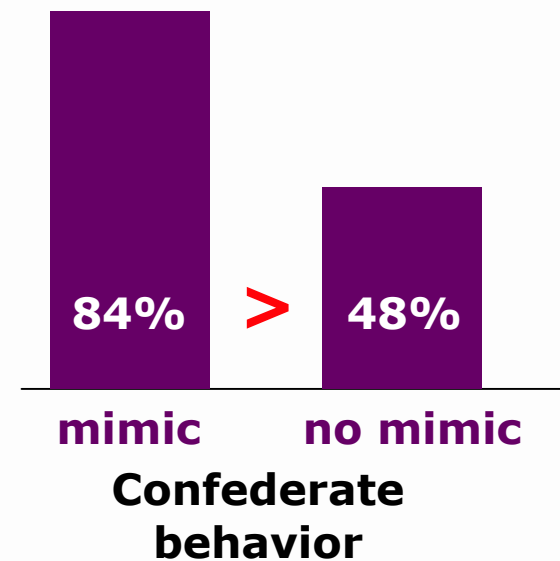
The Chameleon Effect

Experiments 1 & 2

How many picked up the confederates pens?



How many picked up Someone else's pens?

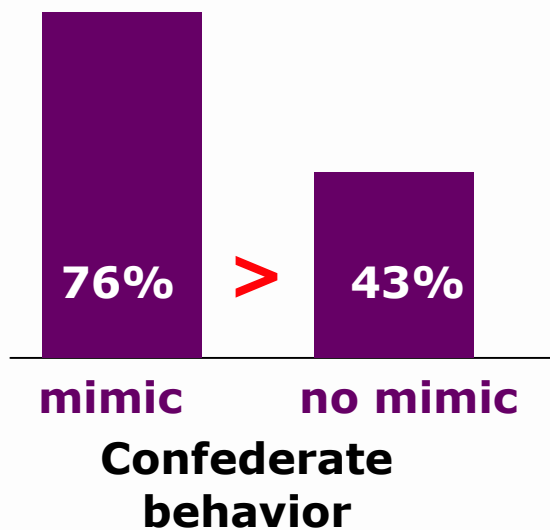


Van Baaren (2004)

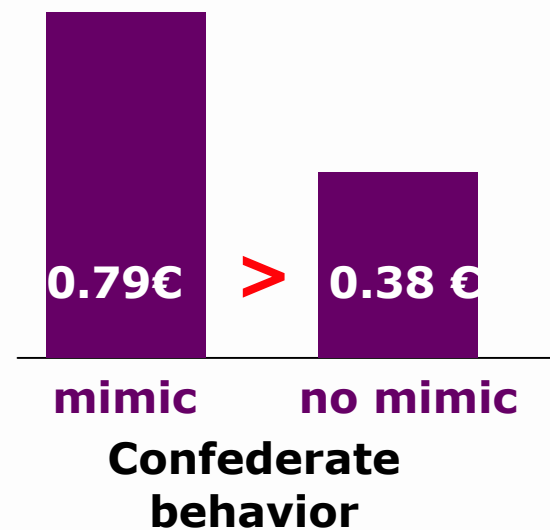
The Chameleon Effect

Experiment 3

How many donated?



How much did they donate?



Van Baaren (2004)