To choose or not to choose:

Stimulus- and intention-based process in action control

- Stimulus-based actions
  - Exogenous
    - Forced choice
    - Reactive
  - Effect-based
- Intention-based actions
  - Endogenous
    - Free choice

To choose or not to choose:

Stimulus- and intention-based process in action control

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It takes two to imitate: Imitation and anticipation in social interaction

TeaP 2012

Roland Pfister, Markus Janczyk, David Dignath, Bernhard Hommel, & Wilfried Kunde
Automatic Imitation

Imitation is...

- ... a tendency to copy observed actions...
- ... even when these actions are not relevant to the task at hand.
- Truly stimulus-based behavior.

Heyes, 2011; Meltzoff & Moore, 1977
Measuring automatic imitation: Motor Priming

Roland Pfister - It takes two to imitate

Brass et al., 2000
Imitative tendencies play a powerful role for human action control.
Automatic Imitation

Model

Imitator

Automatic imitation:
Stimulus-based motor priming

Roland Pfister - It takes two to imitate
Automatic Imitation

Hommel et al., 2001; Kunde, 2001; Kunde et al., 2011; Pfister et al., 2010
Is anticipated imitation functionally relevant for initiating an interaction?

Nagy & Molnar, 2006
Experiment 1: Design

Model

Imitator
Experiment 1: Design

Model

Go-Signal (Model)

Model-Response (short vs. long keypress)

Imitator

Imitator-Response (imitation vs. counter-imitation)
Experiment 1: Hypotheses

Model

Imitation

vs.

Counter-Imitation

[Factor blocked]
Experiment 1: Results

n = 24
Experiment 1: Results

Roland Pfister - It takes two to imitate
Experiment 1: Discussion

Roland Pfister - It takes two to imitate

Model

Imitation

vs.

Counter-Imitation

Imitator
Experiment 1: Discussion

Motor priming by anticipated imitation

Model

Mechanism:
Benefits of being imitated vs. interference by counter-imitation?

Imitator

Automatic imitation:
Stimulus-based motor priming
Experiment 2: Design

Model

+ Imitation

vs.

Random (Unpredictable)
Experiment 2: Results

n = 16
Experiment 2: Discussion

Model

Motor priming by anticipated imitation
and interference by incompatible social responses

Imitator

Automatic imitation:
Stimulus-based motor priming

Roland Pfister - It takes two to imitate
The distinction of stimulus- and intention-based actions also applies to social behaviour.

Anticipating to be imitated facilitates the production of own motor actions; it takes two to imitate!
Roland Pfister - It takes two to imitate
Experiment 1: Results
Experiment 1: Results

[Graphs showing the relationship between imitation effect as imitator and imitation effect as model.]
Experiment 1: Results

Roland Pfister - It takes two to imitate