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Learning

Definition: change in an animal that is caused by a specific experience at a certain time, t_1 , and that is detectable later, t_2 , in the animal's behaviour (Rescorla, 1988)

INANIMATE Stimulus / Reinforcer:
food, smell, noise, mechanism



Video



<https://il.equine-behaviour.de>

Social Learning

Definition: any process through which one individual ("the demonstrator") influences the behavior of another individual ("the observer") in a manner that increases the probability that the observer learns (Hoppitt and Laland 2008)

ANIMATE Stimulus / Reinforcer:
horse or person



Video



<https://so.equine-behaviour.de>

Individual or Social Learning depending on availability of stimuli and difficulty of task

Learning Mechanism

similar mechanisms are responsible for individual and social learning (Heyes 1994)

TABLE I
DEFINITIONS ADOPTED FOR DIFFERENT SOCIAL LEARNING PROCESSES (Hoppitt and Laland 2008)

Social learning process	Definition	Source
Stimulus enhancement ^{a,b}	Stimulus enhancement occurs when observation of a demonstrator (or its products) exposes the observer to a single stimulus at time t_1 and single stimulus exposure effects a change in the observer detected, in any behavior, at t_2 .	Heyes, 1994, p. 216
Local enhancement ^b	Local enhancement occurs when, after, or during a demonstrator's presence, or interaction with objects, at a particular location, an observer is more likely to visit or interact with objects at that location.	After Thorpe, 1963
Observational conditioning ^a	Observational conditioning is a subset of stimulus-stimulus learning in which observation of a demonstrator exposes the observer to a relationship between stimuli at t_1 , and exposure to this relationship effects a change in the observer detected, in any behavior, at t_2 .	Adapted from Heyes, 1994, p. 220
Social enhancement of food preferences ^a	Social enhancement of food preferences occurs when after being exposed to a demonstrator carrying cues associated with a particular diet, the observer becomes more likely to consume that diet.	After Galef, 1989
Response facilitation ^b	Response facilitation occurs when the presence of a demonstrator performing an act (often resulting in reward) increases the probability of an animal that sees it doing the same.	Byrne, 1994, p. 237
Social facilitation ^b	Social facilitation occurs when the mere presence of a demonstrator affects the observer's behavior.	After Zajonc, 1965
Contextual imitation ^a	Contextual imitation occurs when directly through observing a demonstrator performing an action in a specific context, an observer becomes more likely to perform that action in the same context.	Adapted from Byrne, 2002, p. 82
Production imitation ^a	Production imitation occurs when after observing a demonstrator performing a novel action, or novel sequence, or a combination of actions that is not in its own repertoire, an observer then becomes more likely to perform that same action or sequence of actions.	After Byrne, 2002
Observational R-S learning ^a	Observational R-S learning is defined as "a subset of response-reinforcer learning (R-S)" in which observation of a demonstrator exposes the observer to a relationship between a response and a reinforcer at t_1 , and exposure to this relationship effects a change in the observer detected, in any behavior, at t_2 .	Heyes, 1994, p. 225 ("Observational learning")
Emulation ^a	Emulation occurs when after observing a demonstrator interacting with objects in its environment, an observer becomes more likely to perform any actions that bring about a similar effect on those objects.	After Tomasello, 1990 and Custance <i>et al.</i> , 1999

^aIndicates that the process described leads directly to social learning.

^bIndicates that the process described influences the observer in a way that might often lead indirectly to social learning. Stimulus enhancement, by definition, directly involves learning, but might also lead indirectly to further learning about the stimulus in question.

Hypothetical Examples:

'social' stimulus is about making the individual learning more likely to happen

- demonstrator feeding causes horse to learn to open the feeder at the location the demonstrator fed
- demonstrators presence at feeder causes horse to learn to open the feeder at the demonstrated location
- seeing demonstrators opening the box and feeding causes the horse to focus its attention on relationship between food and box
- smell of the feed at demonstrators mouth causes learning where the feed came from
- demonstrator opening causes an increase in the likelihood to learn displaying an action already in its repertoire to open the feeder
- presence of another horse causes an increase in the likelihood to learn displaying an action already in the repertoire to open the feeder
- horse imitates how to open a feeder with a known technique in a novel context
- horse imitates a novel behaviour to open a feeder
- horse learns that a feeder can be opened with a particular technique
- horse understands option for opening a feeder but uses own technique

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