

LEARNING IN HORSES

the STIMULUS differs between INDIVIDUAL and SOCIAL LEARNING not the MECHANISM



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Learning

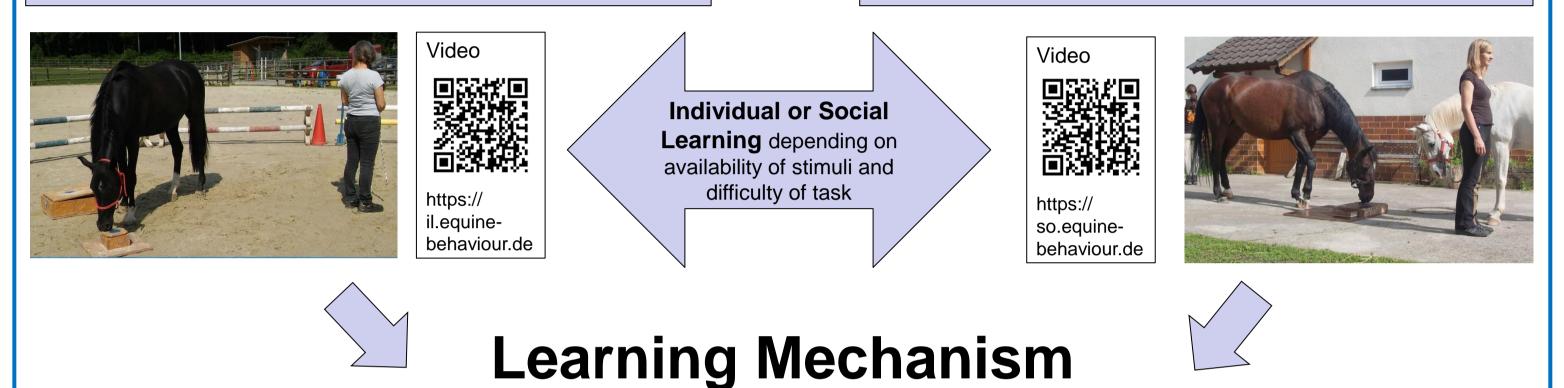
Definition: change in an animal that is caused by a specific experience at a certain time, t,, and that is detectable later, t,, in the animal's behaviour (Rescorta, 1988)

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

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



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

	TABLE I Definitions Adopted for Different Social Learning Processes (H	loppitt and Laland 2008)	Hypothetical Examples: 'social' stimulus is about making the
Social learning process	Definition	Source	individual learning more likely to happen
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	 demonstrator feeding causes horse to learn to open the feeder at the location the demonstrator fed
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	 demonstrators presence at feeder causes horse to learn to open the feeder at the demonstrated location
Observational conditioning"	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	- seeing demonstrators opening the box and feeding causes the horse to focus its attention on relationship between food and
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	box - smell of the feed at demonstrators mouth causes learning where the feed came from
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	- demonstrator opening causes an increase in the likelihood to learn displaying an action
Social facilitation ^b	Social facilitation occurs when the mere presence of a demonstrator affects the observer's behavior.	After Zajonc, 1965	already in its repertoire to open the feeder - presence of another horse causes an
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	increase in the likelihood to learn displaying an action already in the repertoire to open the feeder
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	 horse imitates how to open a feeder with a known technique in a novel context horse imitates a novel behaviour to open a feeder
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 relation ship effects a change in the observer detected, in any behavior, at t_2 .	- ("Observational	feeder - horse learns that a feeder can be opened with a particular technique
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.		- horse understands option for opening a feeder but uses own technique

"Indicates 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.

Heyes, C. M. (1994). Social learning in animals: categories and mechanisms. Biol. Rev., 69(2), 207-231.

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Literature: