

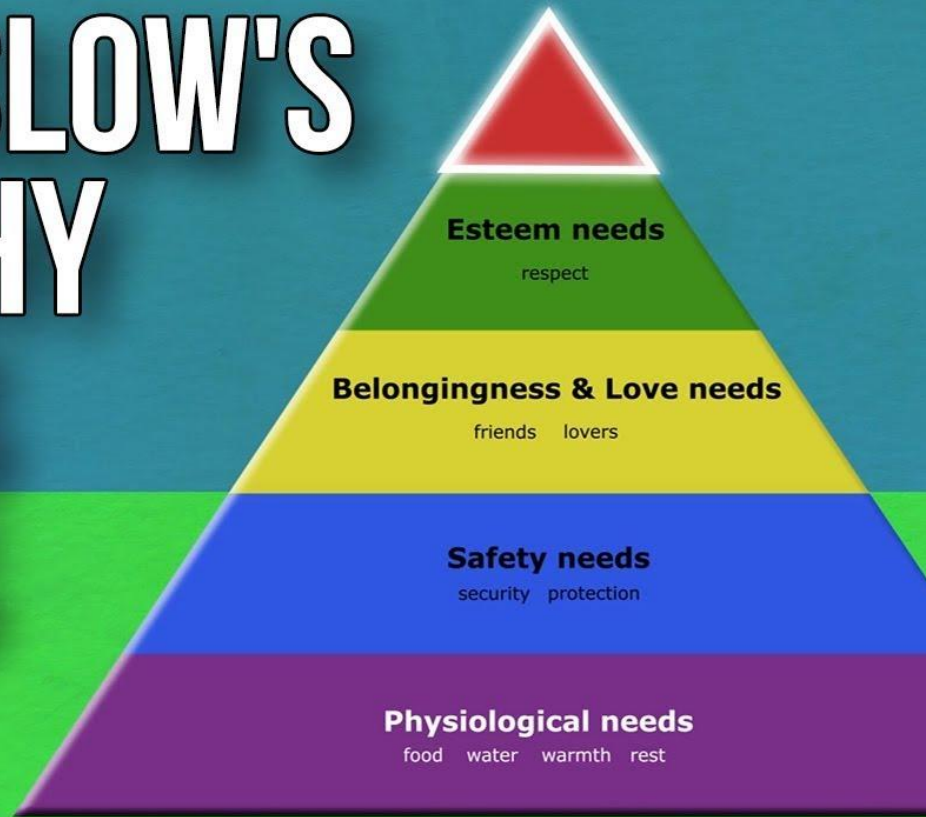
Play - Definition:

- An aspect of juvenile behaviour, in which the (usually) young animals spends time in apparently pointless activity, such as friendly fighting, hunting without prey, etc.
- Play is often accompanied by a characteristic facial expression and characteristically energetic movement.
- Type of leisure activity, in that it disappears from an animal's repertoire when demands upon the animal's time are very severe.
- It is a form of exploration of both the physical and the social environment.

When animal can play?



WHY MASLOW'S HIERARCHY OF NEEDS MATTERS



Play or exploration?

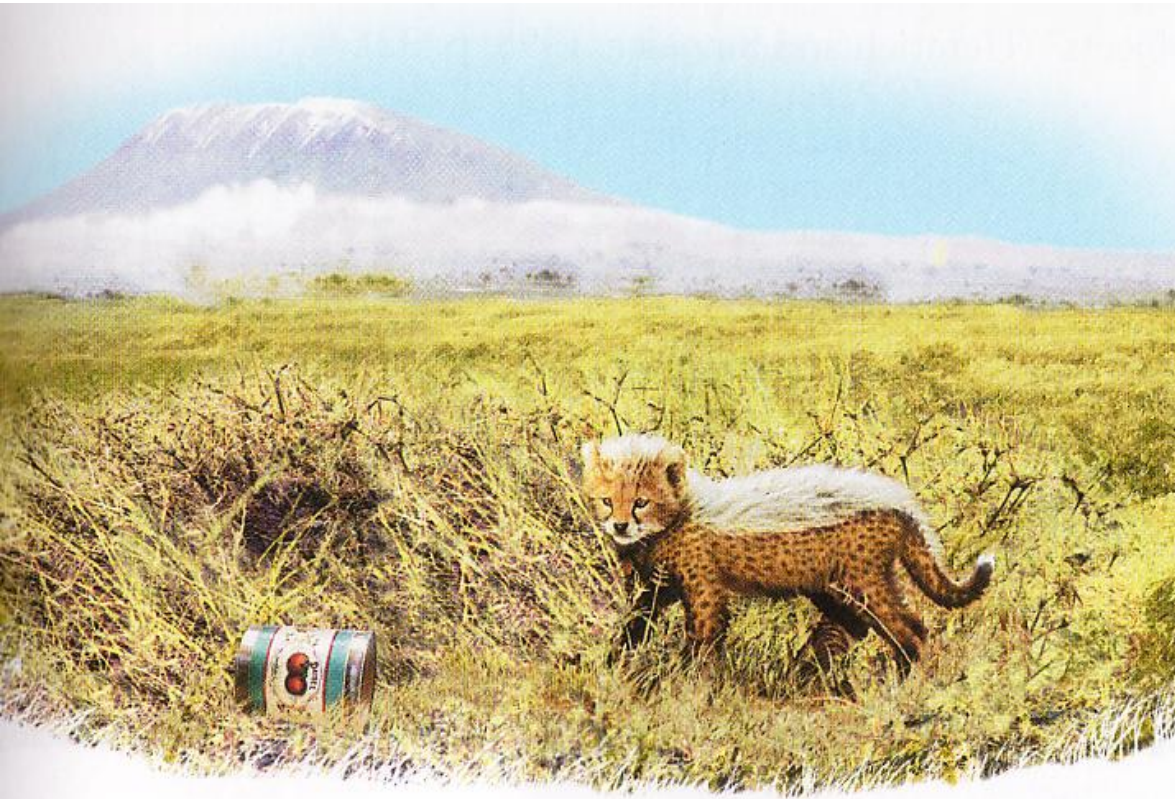
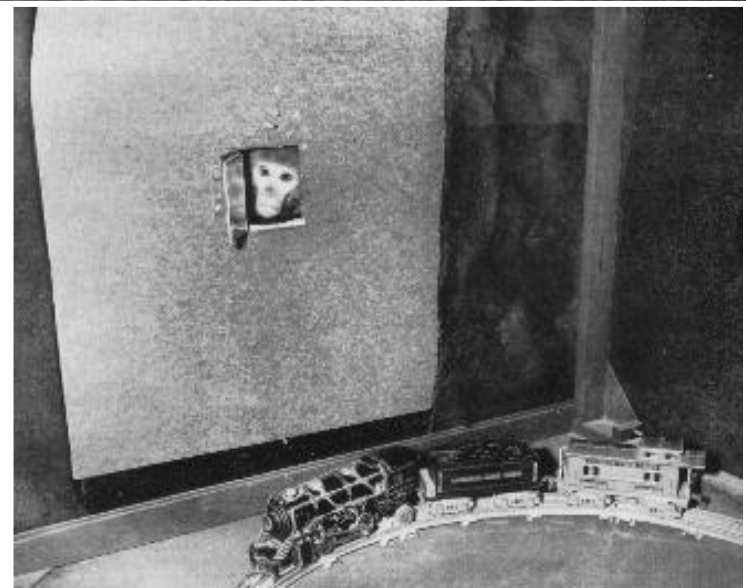
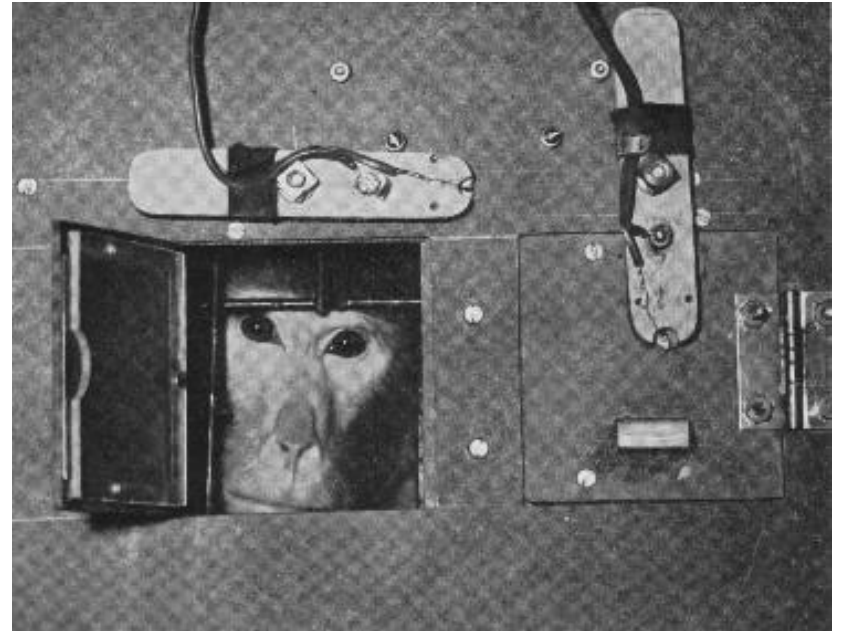
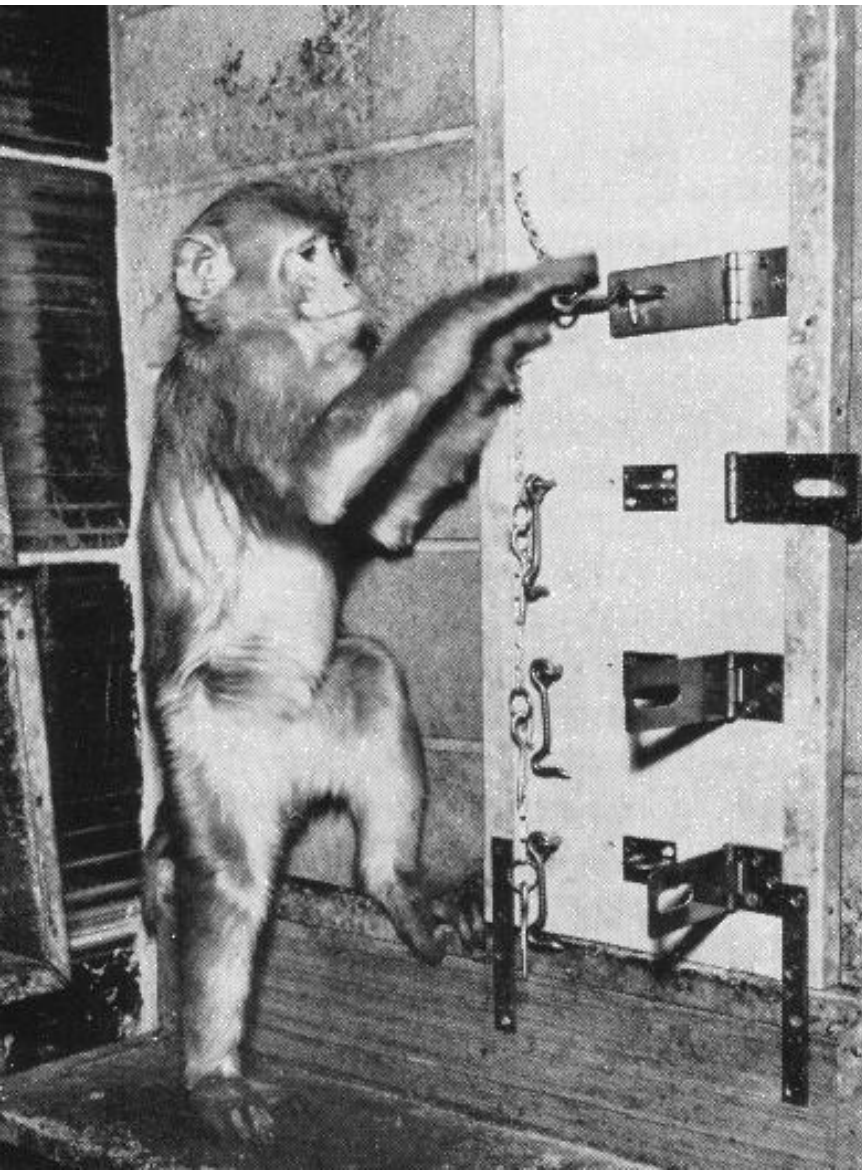


FIGURE 15.3. Play or exploration? Here a cheetah cub comes upon a novel object: a can. Exploring the can appears designed to address the “what is it?” question, while play appears designed to tackle the “what does this do?” question.

Curiosity / sensory stimulation / need for new sensations



Not only stimuli of biological significance have a rewarding value, but also stimuli of sensory significance

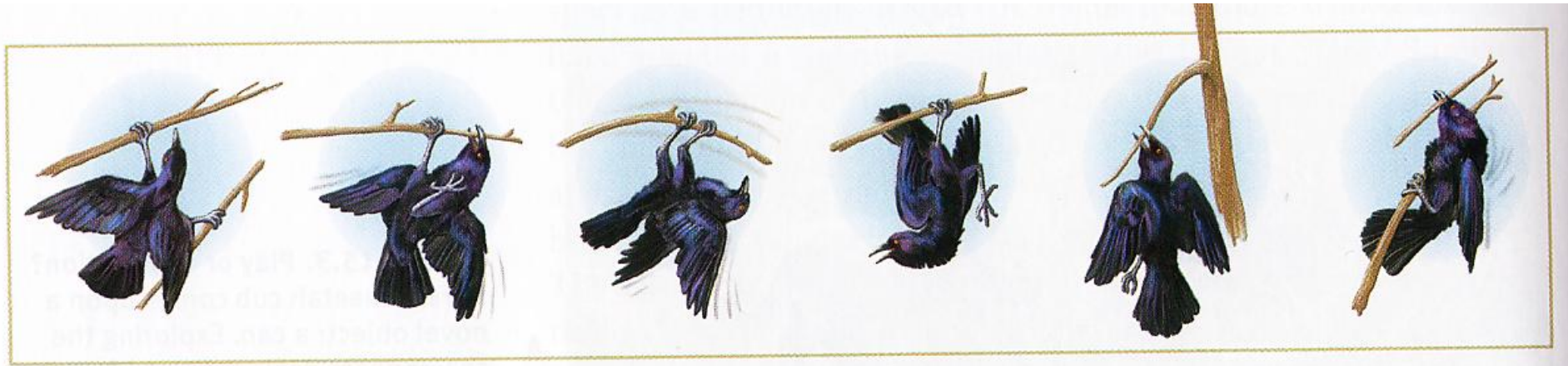


FIGURE 15.4. Hanging around. Various “hanging games” Heinrich observed in ravens. (*Based on Heinrich, 1999, p. 289*)

Features that distinguish play from other forms of activity:

- it flows from an inner need - proof of the inner life of animals;
- play takes place primarily in the social aspect;
- role reversal;
- play requires interaction;
- while playing, all movements, sounds and facial expressions are "exaggerated";
- "Play is fun" (dopamin / serotonin)

Who is playing?

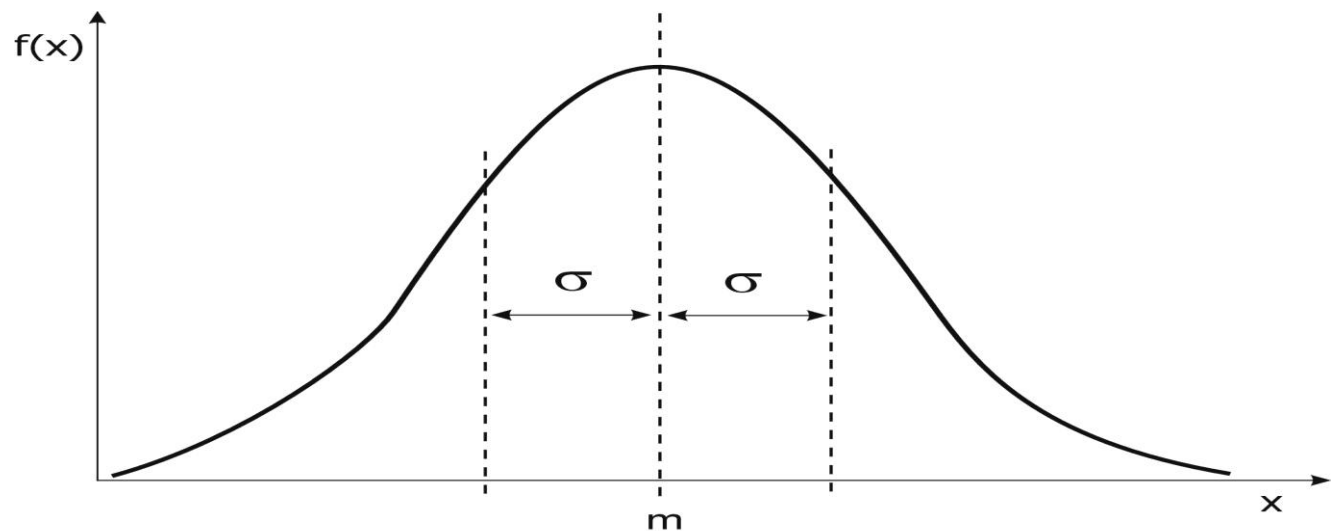
- Generally young mammals;
- Adults – with a high degree of intelligence;
- Primates, predators, whales, elephants
- Also crows (ravens), and just some turtles

Roles of play

1. Exercise training;
2. Cognitive training;
3. Socialisation.

Types of play in kittens

- playing with objects (in kittens - individual, in puppies - social);
- hunting;
- lurking (play with objects and in social play);
- staring at the „victim” (object or siblings);
- rough-and-tumble (wrestling)



Gauss curve (normal distribution)

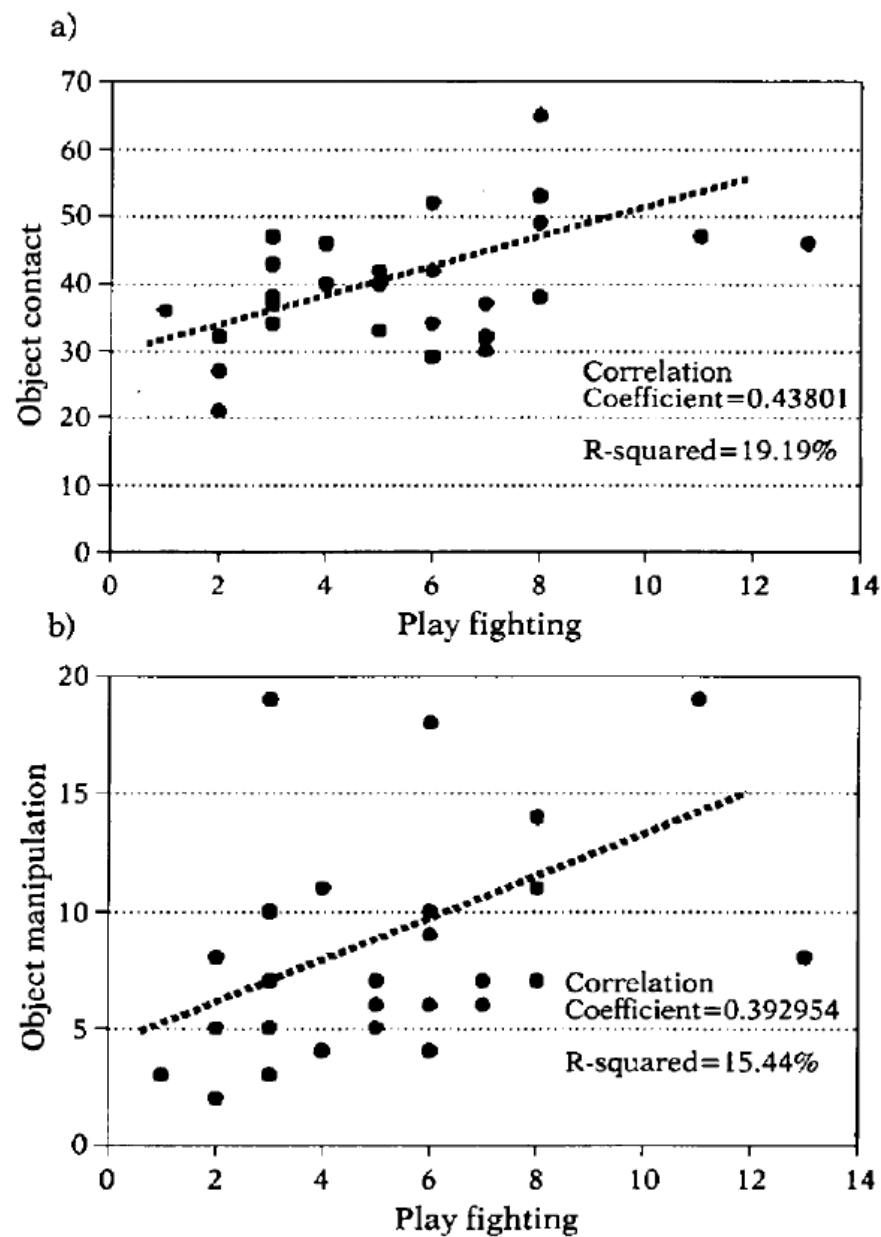


Figure 1. The relationship between play-fighting and object contact (a), and object manipulation (b).

The higher forms of the mental life of animals – numerical abilities

Adding 1+1: Babies

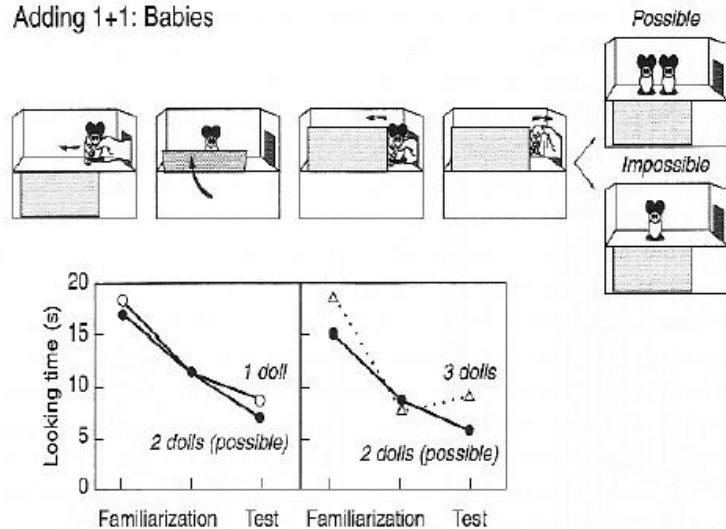


Figure 8.18. Counting in infants. Babies sat in an infant seat watching the "puppet show"; in the familiarization phase they were exposed to the individual events later presented in the test. Redrawn from Wynn [1992, 1995] with permission.

Adding 1+1: Monkeys

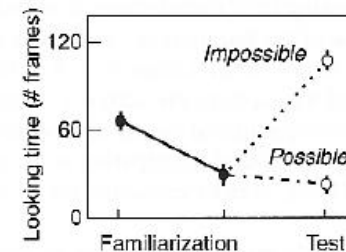
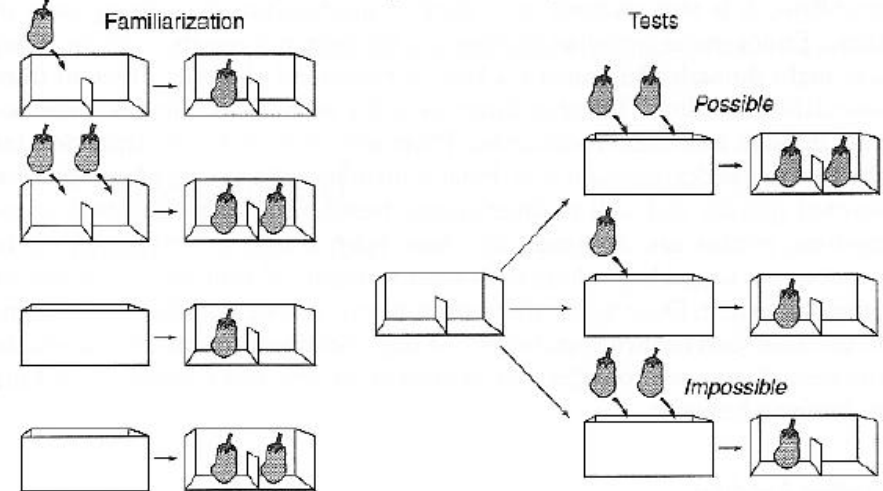


Figure 8.19. Counting in freeranging rhesus macaques. The objects were purple eggplants. Familiarization involved exposure to two of the four sequences on the left. As in figure 8.18, looking times (measured here in film frames) were scored by observers unaware of which condition the subject was viewing. Redrawn from Hauser et al. (1996) with permission.

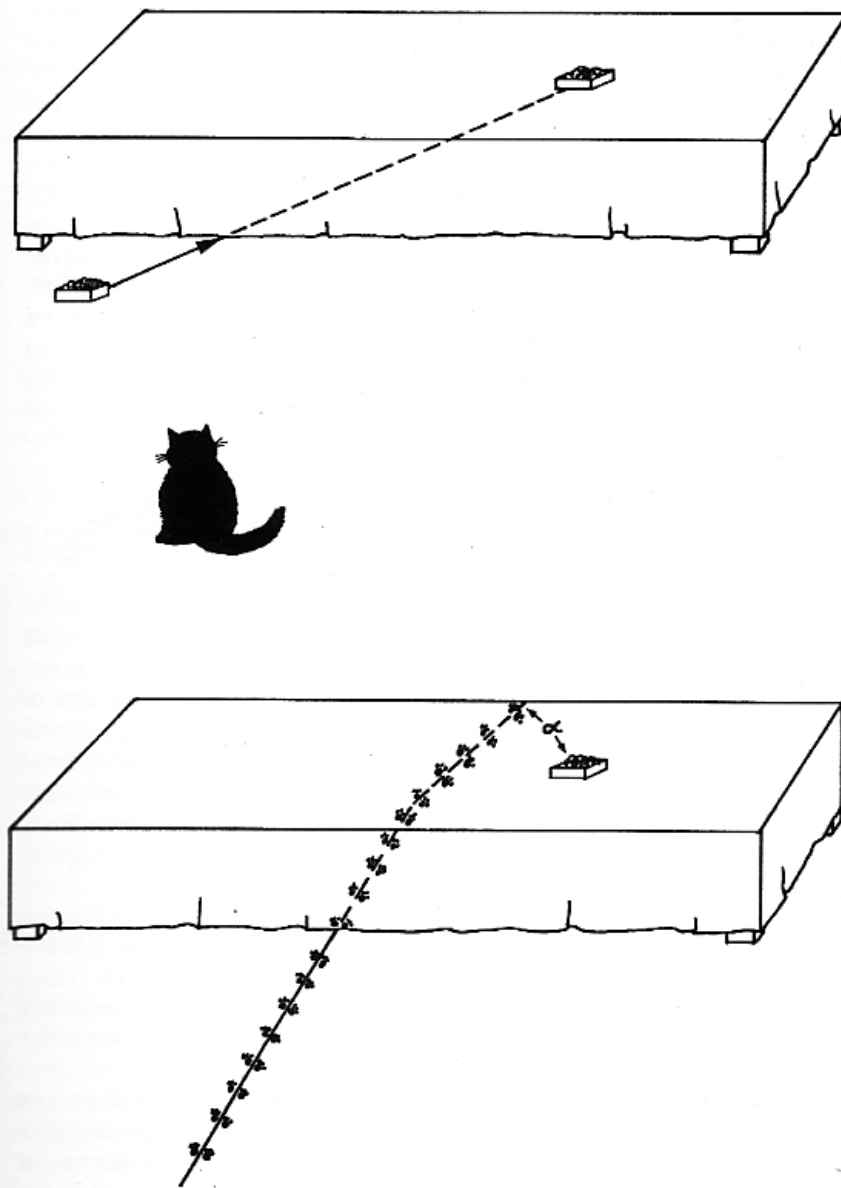


Fig. 4. Platform experiment: Top: Start of the experiment: the restrained animal watches the food dish moving (solid line) towards the platform ($400 \times 8 \times 6$ cm) at a 45° angle to the flap hanging down from the platform, and continuing below the platform (broken line). Bottom: The cat's pawprints show the path it takes after release, indicating its attempt to find the food. The angle between the pawprint path and path of the dish can serve as an estimate of extrapolatory ability.

The effect of breed on willingness to play in cats

- The highest willingness to play:
 - Abyssinian cat
 - Russian blue
- The lover:
 - Persian
 - Ragdoll
 - Main coon

Thus, the desire to play coincides with aggression, nervousness and general activity ...

(Takeuchi & Mori, 2009).

Which are the costs of play?

- Energetic – kitten which spends 9% of their time playing, increases energy utilisation of about 4% only.
- Risk of a predator attack is unknown (Bredshaw, 2010)

The consequences of inability of play...

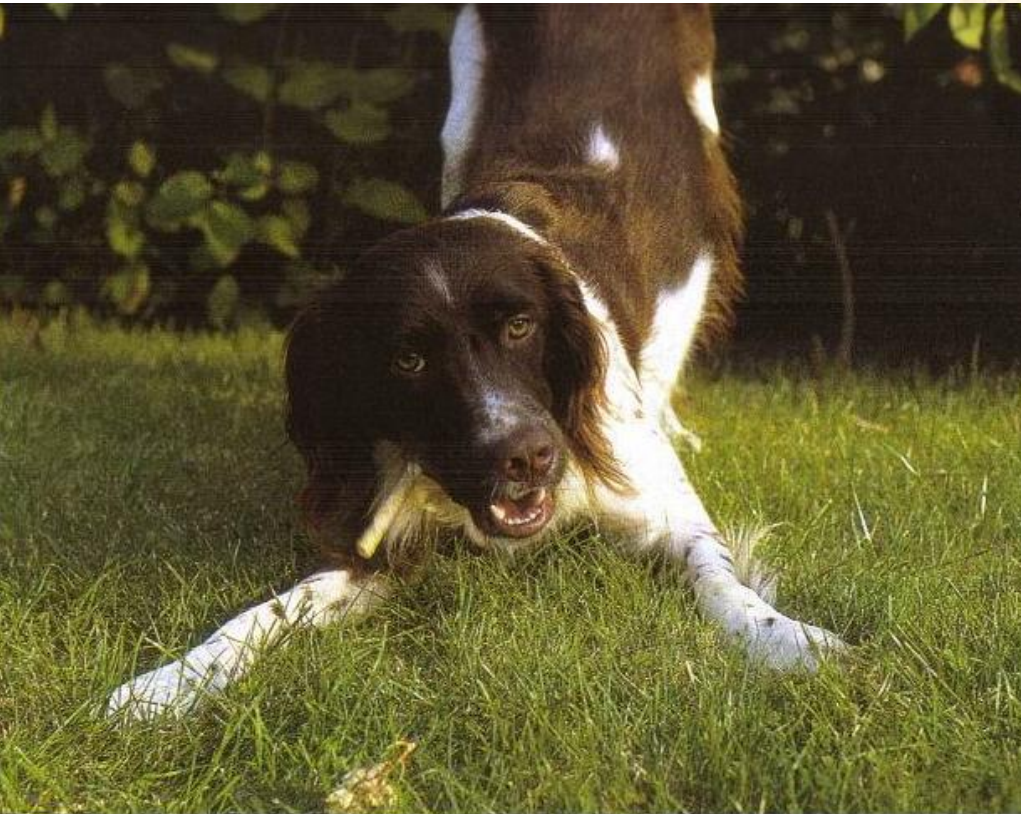
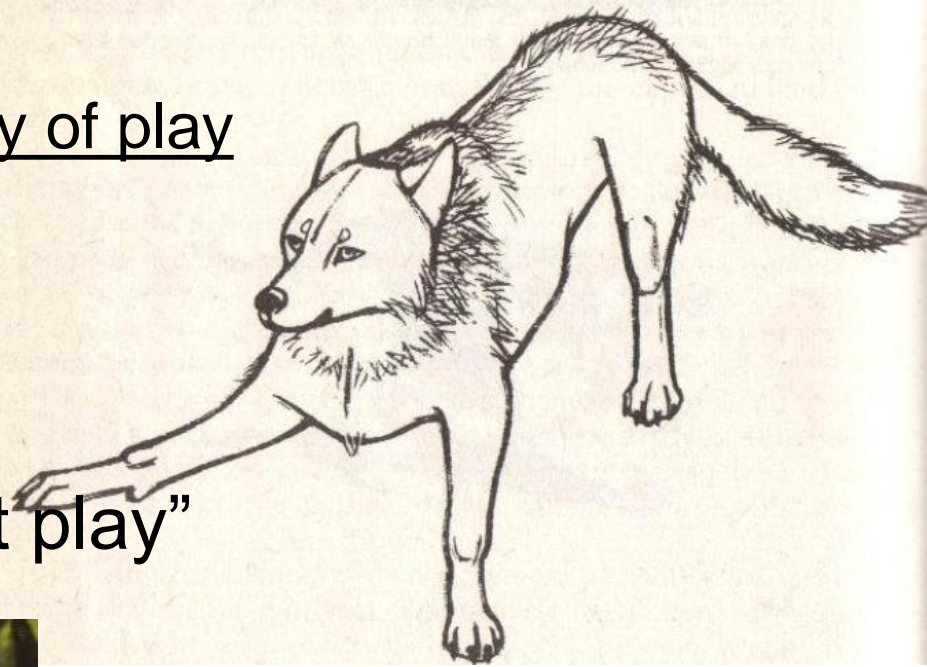
In mammals, the inability to play wrestling leads to:

- not engaging in sexual behavior in adulthood;
- the inability to depress aggression in a stronger opponent;

In birds – development disorders

Psychology of play

- The basis: voluntariness
- Invitation to play
- Communication: „it's just play”



Psychology of play

- The play is continued if:
 - there is an exchange of roles;
 - even the alpha individual exhibits submissive gestures;
 - striving for equal opportunities;
 - the rules of play are followed „fair play”
- Failure to follow these rules – play is over !

Can we then speak of animal morality?

(Marc Bekoff, 2010)

