The role of texture in object generalisation in typical dogs (*Canis familiaris*)

Una Kranzelic
MSc project: Applied Ethology and Animal Biology
Supervisors: Lina Roth, Claudia Fugazza, Ádám Miklósi
IFM Biology – Linköping University | una.kran@gmail.com

Introduction

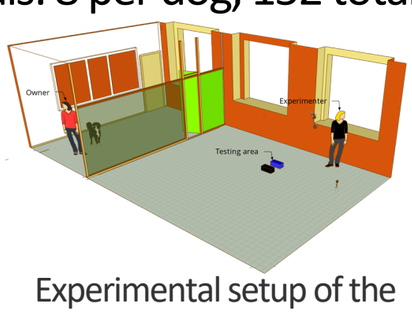
- Typical (T) vs. Gifted Word Learner (GWL) dogs:
  - The majority of dogs referred to as T dogs, lack the capacity to learn object names.
  - GWL dogs are a rare exception to the T dog population that possess this ability.
- **Infant humans** can **categorise** objects **based on shape**, but research on **dogs' generalisation** abilities is **limited**.

Aim of the study

I examined the **generalisation abilities of typical border collies** when presented with **objects** that **vary** in **shape** and **texture** from the **target** object and assessed their behaviour when the **target object** was **absent**.

Methods

- Subjects: **19 border collies**
  (8 ♀, 11 ♂; mean ± SD age 3.01 ± 1.84).
- Location: Department of Ethology of Eötvös Loránd University, Budapest, Hungary.
- Stimuli: **3 textures** and **3 shapes**.
- Task: **Two-way choice** situation.
- Trials: 8 per dog, 152 total.

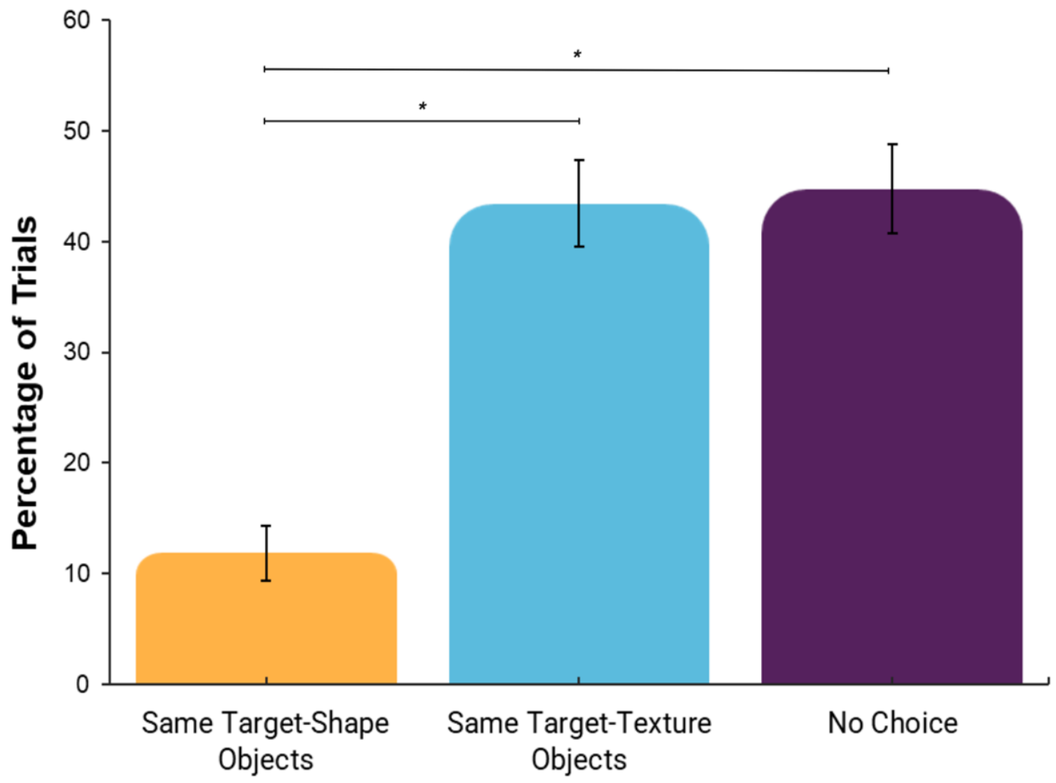


Experimental setup of the testing area.

Objects used in the Experiment.

Results

Dog Performance in a Two-Way Choice Object Generalisation Test (N=19).



The dogs showed a **significant preference** for objects with the **same texture as the target object** over those with the same shape (*$p < .001$).

for full project

Conclusions

Unlike human infants, the **border collies** in this study appeared to **rely less** on **object shape** and **more** on **texture** for object generalisation.

The dogs may have developed **specialised abilities** to discriminate objects that are **relevant** to their **ecological niche**.

The dogs may rely on **multiple sensory cues**, such as tactile and visual cues, **to discriminate objects**.