Ear position as an indicator of positive emotional states in dogs

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Background

There is a lack of potential measurement to identify good welfare and positive emotions in animals.

Right hemisphere hypothesis has been used in both humans and animals to assess emotions. It suggests that the right hemisphere process intense emotions which are displayed on the left side of the body.

The aim was to Investigate if ear expressions can indicate and be used to assess positive emotions in dogs by using the right hemisphere hypothesis

Conclusion

The meatball followed by the familiar person elicited the greatest left ear responses, suggesting that these were perceived as more positive since processed in the right hemisphere (dominant for intense emotions), than food pellet and less familiar person. Ear positions can therefore further be used to indicate positive emotions in dogs

Method

Reflective markers were attached on the ears of 9 beagles and their ear postures were recorded by infrared cameras (Oqus) when the dogs were exposed to 4 positive stimuli (fig. 1) from a stimuli theatre (fig. 1). The theatre was equipped with a sliding shutter and during 2 phases each, the stimuli were visible and not visible to the dogs. Differences in ear postures between left and right ear were analysed by using GENMOD procedure.

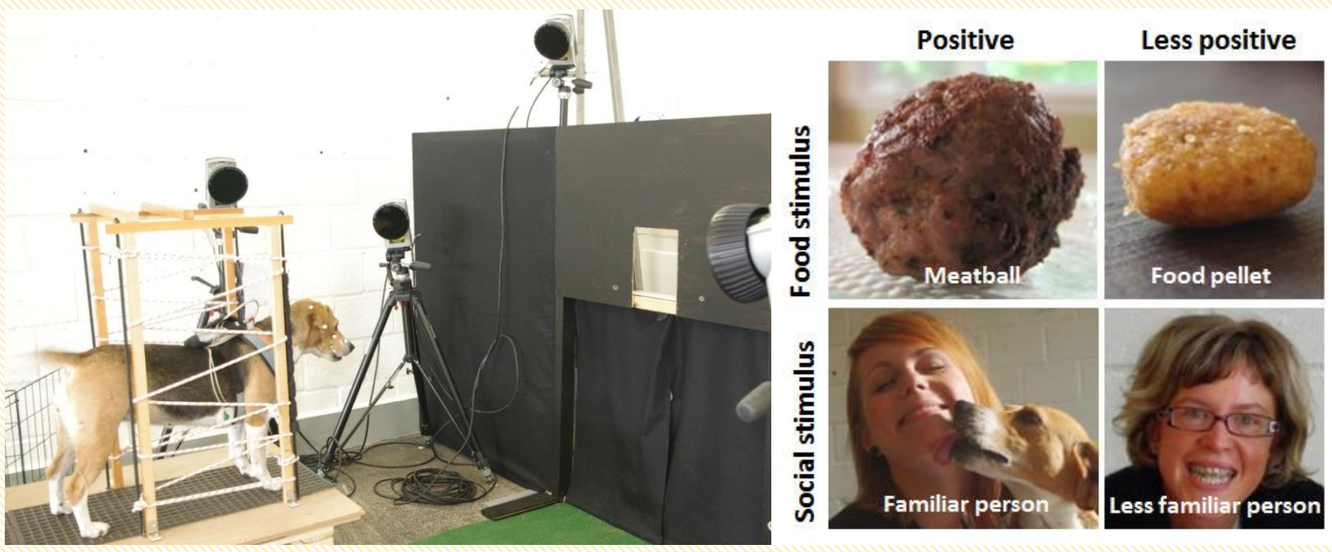

Figure 1. The dogs' ear postures were recorded when facing the stimuli theatre where four stimuli of different positive intensities were presented.

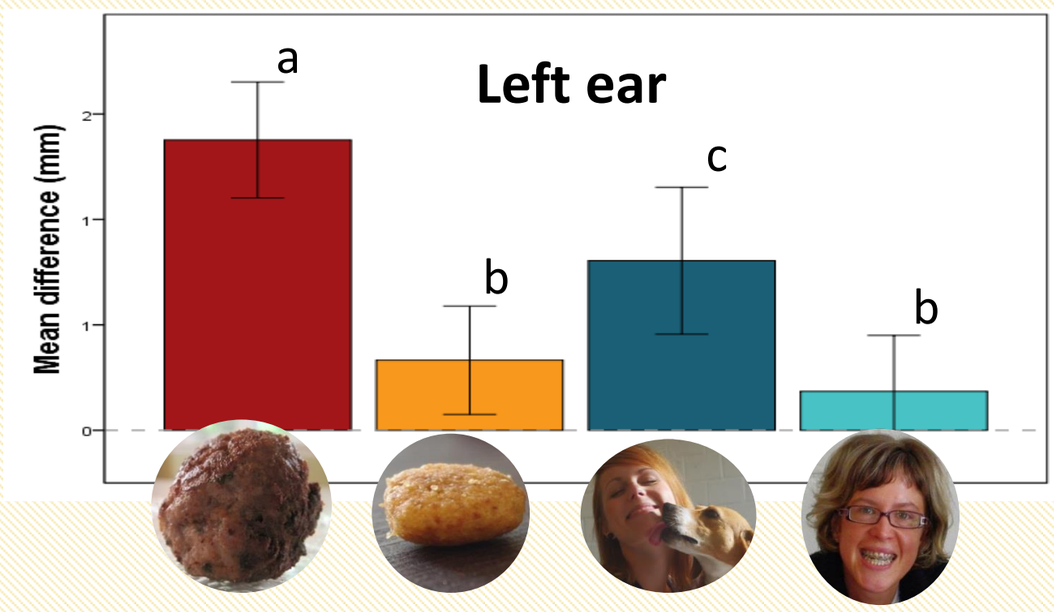

Figure 2. Ear positions in millimetre towards stimuli for all dogs, displayed in mean and ± SEM. Significant differences (P < 0.05) between stimuli are shown with different superscripts (a, b or c).

Results

The dogs showed left ear responses towards all stimuli (fig. 2). The magnitude of the left bias differed in the order: meatball, familiar person, food pellet, less familiar person, from most to least left bias.

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