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The use of judgement bias to assess welfare in farm livestock

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Abstract

The development of accurate measures of animal emotions is important for improving and promoting animal welfare. Cognitive bias indicates the effect of emotional states on cognitive processes, such as memory, attention, and judgement. Cognitive bias tests complement existing behavioural and physiological measures for assessing the valence of animal emotions indirectly. The judgement bias test has been used to assess emotional states in non-human animals; mainly in laboratory settings. The aim of this review is to summarise the findings on the use of the judgement bias test approach in assessing emotions in non-human animals, focusing in particular on farm livestock. The evidence suggests that it is possible to manipulate affective states and induce judgement bias effects in farm livestock. In addition, the results support the effectiveness of manipulating environmental variables for inducing negative or positive affective states. However, the evidence from farm livestock does not consistently confirm the directionality of the hypotheses. The use of specific strategies to induce positive or negative judgement bias, such as the manipulation of housing conditions, could account for the inconsistency of findings. The study of cognitive processes related to emotional states in livestock has great potential to advance and improve our understanding of animal welfare.

Keywords: affective state, animal cognition, animal welfare, emotions, optimistic-like, pessimistic-like