# Extending the 'Five Domains' model for animal welfare assessment to incorporate positive welfare states

## DJ Mellor* and NJ Beausoleil

Animal Welfare Science and Bioethics Centre, Institute of Veterinary, Animal and Biomedical Sciences, Massey University PN452, Palmerston North 4442, New Zealand
* Contact for correspondence and requests for reprints: D.J.Mellor@massey.ac.nz

## Abstract

*Contemporary animal welfare thinking is increasingly emphasising the promotion of positive states. There is a need for existing assessment frameworks to accommodate this shift in emphasis. This paper describes extensions to the Five Domains model, originally devised to assess welfare compromise, that facilitate consideration of positive experiences that may enhance welfare. As originally configured, the model provided a systematic method for identifying compromise in four physical/functional domains (nutrition, environment, health, behaviour) and in one mental domain that reflects the animal's overall welfare state understood in terms of its affective experiences. The specific modifications described here now facilitate additional identification in each domain of experiences animals have which may be accompanied by positive affects that would enhance welfare. It is explained why the grading scale and indices for evaluating welfare compromise necessarily differ from those for assessing welfare enhancement. Also, it is shown that the compromise and enhancement grades can be combined to provide a single informative symbol, the scaled use of which covers the range from severe welfare compromise and no enhancement to no compromise and high-level enhancement. Adapted thus, the Five Domains model facilitates systematic and structured assessment of positive as well as negative welfare-related affects, the circumstances that give rise to them and potential interactions between both types of affect, all of which extend the utility of the model. Moreover, clarification of the extended conceptual framework of the model itself contributes to the growing contextual shift in animal welfare science towards the promotion of positive states whilst continuing to minimise negative states.*