Aggregating animal welfare indicators: can it be done in a transparent and ethically robust way?

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Abstract

A central aim of animal welfare science is to be able to compare the effects of different ways of keeping, managing or treating animals based on welfare indicators. A system to aggregate the different indicators is therefore needed. However, developing such a system gives rise to serious challenges. Here, we focus specifically on the ethical aspects of this problem, taking as our starting point the ambitious efforts to set up an aggregation system within the project Welfare Quality® (WQ). We first consider the distinction between intra- and inter-individual aggregation. These are of a very different nature, with inter-individual aggregation potentially giving rise to much more serious ethical disagreement than intra-individual aggregation. Secondly, we look at the idea of aggregation with a focus on how to compare different levels and sorts of welfare problems. Here, we conclude that animal welfare should not be understood as a simple additive function of negative or positive states. We also conclude that there are significant differences in the perceived validity and importance of different kinds of welfare indicators. Based on this, we evaluate how aggregation is undertaken in WQ. The main conclusion of this discussion is that the WQ system lacks transparency, allows important problems to be covered up, and has severe shortcomings when it comes to the role assigned to experts. These shortcomings may have serious consequences for animal welfare when the WQ scheme at farm or group level is applied. We conclude by suggesting ways to overcome some of these shortcomings.

Keywords: aggregation, animal welfare, ethics, expert opinion, farm animals, Welfare Quality®

Introduction

A key aim of animal welfare science is to be able to compare the effects of different ways of keeping, managing or treating animals. Typically, groups of animals, or the same flock or herd of animals at different times, are exposed to different forms of housing, management procedures or other treatments. A number of indicators may be used to measure welfare between groups of animals or in the same group or individual over time. Sometimes it is straightforward to add up things to be able to rank different forms of housing, management procedures or other treatments in terms of animal welfare outcome. Other times it may be more difficult, due to different welfare indicators pointing towards different welfare outcomes.

Traditionally, farm animal welfare research has focused on applying single welfare indicators, often in an experimental setting; and therefore the issue of aggregation has largely been avoided. This has changed gradually since the 1990s, beginning with the development of systems for assessing welfare impact on laboratory animals (eg Porter 1992; Stafleu et al 1999). Since around 2000, initiatives have been developed to assess farm animal welfare at group level, which have given rise to more systematic discussions about how to aggregate different welfare indicators (cf, for example, Capdeville & Veissier 2001; Spoolder et al 2003). These efforts have so far culminated in Welfare Quality® (WQ), a large project funded by the EU Commission that developed protocols to measure the welfare of cattle, pigs and hens at farm level (for further information, see Keeling 2009).

The WQ protocols take as their starting point a comprehensive definition of farm animal welfare in terms of four principles: Good feeding; Good housing; Good health; and Appropriate behaviour. These are subdivided into 12 welfare criteria. Each criterion is measured by a number of indicators that are dependent on the type of animal being studied. In the case of dairy cows, for example, there are 31 indicators, primarily focusing on the states of the animals themselves (so-called animal-based indicators), rather than the resources provided to the animals. So-called environmental-based indicators (relating to availability of resources) are only used when animal-based indicators are not available or are deemed less feasible or reliable, eg in the case of thirst, where availability of drinkers is used as a proxy indicator.