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Editorial: Positive welfare: from concept to implementation

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Editorial on the Research Topic

Positive welfare: from concept to implementation

Positive welfare is a rising concept in animal welfare science (Yeates and Main, 2008; Mellor, 2015; Lawrence et al., 2019; Rault et al., 2020). It recognises the importance of offering animals opportunities for rewarding experiences and fulfilling states, beyond the alleviation of suffering. This scientific approach aligns with common societal views about animal welfare: that animals should be provided with opportunities for positive experiences, with the assumption that one should not inflict pain or suffering on an animal (Vigors, 2019).

The concept of positive welfare raises many open questions. For example, does positive welfare require a new conceptual view or simply involve flipping assessment indicators from negative to positive (e.g., mortality vs survival)? Do mental states exist in a continuum from negative to positive or are there discrete positive and negative mental states that can co-occur and be traded off? How are short-term positive experiences integrated over time and related to longer-term welfare? How does positive welfare relate to other concepts such as “a life worth living”, environmental enrichment, sustainability, and One Welfare? What are the underlying ethical bases and implications of positive welfare?

The contributions to this Research Topic address some of these questions, ranging from theoretical contributions on the concepts and mechanisms that may underlie positive welfare (Vigors et al.; Arndt et al.; Rault et al.; Broom) to its assessment and implementation in practice (cattle: Keeling et al.; pigs: Clarkson et al.; Lidfors et al.; Franchi et al.).

Vigors et al. examine the similarities and differences between scientific and societal perspectives of positive welfare. Studies show that farmers and members of the public typically consider both negatives (i.e., minimising harms) and positives (i.e., promoting positive experiences) within positive welfare but rarely take a whole life perspective. The authors develop a proposal to consider both scientific and societal perspectives points by accounting for both positive and negative experiences, prioritising them (e.g., by seeing positive experiences as dependent on basic animal needs being fulfilled), and assessing the balance of positives and negatives over the lifetime of the animals.

Arndt et al. present an extensive theoretical article on a dynamic concept of animal welfare. They propose that an animal is likely in a positive welfare state when able to experience positive emotions and react adequately to changes in internal and external factors over the long term. They emphasise the importance of adaptive plasticity while considering the dynamic interplay between emotions and cognitive processes and the animal's perception of its emotional state.

Rault et al. offer a worldwide perspective on positive welfare. They conceptualise it as either bridging the gap or conversely raising inequalities in animal welfare between countries. Discussing the benefits and challenges of various animal housing and husbandry practices, the authors highlight the delicate balance between positive welfare and welfare risks relating to health and survival, with inextricable ethical dilemmas. They see the inclusion of positive welfare as stimulating a more balanced approach to animal welfare. They stress the need to account for human factors such as societal and cultural location-specific aspects to find solutions that benefit and respect both animals and people.

Broom explores whether positive welfare can counterbalance the negative. He reviews welfare indicators and provides insights into evaluating whether positive or negative components of welfare prevail in a given situation, covering studies of humans and other animal species and providing a range of examples. The article concludes with the state of the art in relation to measuring "net welfare", considering both positive and negative components, with the take-home message that "good welfare can often counterbalance poor welfare but does not do so in all circumstances".

Keeling et al. compile a critical review of potential indicators of positive welfare in an effort to develop a positive welfare assessment protocol for cattle. Their "ideal" protocol includes animal-based measures and indicators of affective state, structured according to indicators of short-term emotions, medium-term moods, and long-term cumulative negative and positive experiences. They propose ear position, play, allogrooming, brush use, and Qualitative Behaviour Assessment as candidates for a prototype positive welfare protocol for cattle.

Clarkson et al. study the effect of the fostering of piglets in impoverished or enriched neonatal environments on play behaviour. Using social network analysis, they show that piglets reared in enriched environments engaged in more play invitations. Fostered piglets were involved in less play bouts than their birth littermates, even 2 to 3 weeks after having been fostered. Fortunately, fostered piglets housed in an enriched pen were better connected within their litter than fostered piglets housed in an impoverished pen, demonstrating that enriching their housing environment can help piglets integrate into a new group.

Lidfors et al. evaluate a hypothesised play reward cycle in pigs, with anticipatory, consummatory, and post-consummatory phases. They observed pigs on their first opportunity to visit an open play area containing objects and after becoming accustomed to visiting the play arena. When accustomed, the pigs showed more locomotor play, social interactions, and standing just prior to entering the play arena, suggestive of anticipation. Other behavioural changes suggested possible consummatory and post-consummatory effects,

demonstrating the promise of this innovative approach for exploring the existence of reward cycles in animals.

Franchi et al. investigate the effects of weaning methods and genetic hybrids on play behaviour in pigs around weaning time. Following weaning, pigs who stayed in their farrowing pen after their dam was removed engaged in more social play than those moved to a weaner pen and mixed with another litter. They also showed a steeper increase in locomotor-rotational play after weaning. Overall, keeping litters intact in a familiar environment after weaning, and using a genetic hybrid featuring higher birth and weaning weight, stimulated play behaviour around the stressful event of weaning.

This Research Topic only scratches the surface of the rich ground that the study of positive welfare promises to offer. Nonetheless, the diverse contributions illustrate the breath of the topic and the multiple research directions emerging in this exciting field of study. We are positive that progress will be achieved quickly, also thanks to the large number of scientists now involved in the research network "LIFT", Lifting farm animal lives - laying the foundations for positive animal welfare, funded by EU COST Action (LIFT, 2022). This effort promises to not only give animals a life free of suffering but a good and fulfilled life.

Author contributions

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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