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Redefining human-animal relationships: an evaluation of methods to allow their empirical measurement in zoos

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Abstract

Scientific studies of human-animal interactions (HAIs) and how these develop into human-animal relationships (HARs) now represent some of the most significant contributions to animal welfare science. However, due to the current definition of HAR, studies have only been able to measure HAIs and infer its impact on HARs and animal welfare. Here, we redefine HARs as a series of repeated HAIs between two individuals known to each other, the nature of which is influenced by their historical HAIs and where consideration to the content, quality and the pattern of the interactions is also vital. With a new definition, it is now feasible to empirically measure HARs, however, first, it is important to evaluate current methods utilised in animal industries to allow standardisation across HAR research in zoos. Here, we review the current methods that have been used to assess HAIs in animals and determine their overall suitability for measuring HARs and their use in a zoo environment. Literature searches were conducted using the search terms 'human-animal' AND 'interaction', 'human-animal' AND 'relationship', 'human-animal' AND 'bond'. Subsequently, 'zoo', 'companion', 'agriculture', 'laboratory' and 'wild' were added to each combination yielding five potential methods to evaluate. These methods were assessed according to a panel of indicators including reliability, robustness, practical application and feasibility for use in a zoo environment. Results indicated that the methods utilising 'latency', 'qualitative behaviour assessment' and the 'voluntary approach test' were potentially viable to assess HARs in a zoo environment and could subsequently contribute to the assessment of welfare implications of these HARs for the animals involved. These methods now require empirical testing and comparisons within a zoo environment.

Keywords: animal welfare, behaviour, human-animal-interactions, human-animal-relationships, method, zoo