

Animal agency: Implications for enriching farm animal lives¹

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Overview

Animal welfare relies on both the prevention of suffering and the facilitation of positive experiences. A growing body of academic literature considers the concept of 'animal agency' to be a key organising principle of positive welfare – over and above *having* good things, positive welfare is about *doing* them. Exercising agency is to lead an active life, applying effort, competence and choice in fulfilling one's own needs and wishes. Through expression of agency, animals flourish, actively creating well-being for themselves rather than passively consuming it. This policy brief considers strategies for facilitating animal agency on farms and proposes pathways for incorporating these in Scottish Government policy guidelines for environmental enrichment.

Main Findings

The aim of this briefing was i) to review the academic literature on the concept of animal agency, ii) to identify strategies for managing animal agency on farms, and iii) to make recommendations for incorporating animal agency in Scottish Government Animal Health and Welfare (AHW) policy guidelines for environmental enrichment.

Key characteristics of animal agency:

- Motivation to explore, play and learn, exercise choice and develop competence and control;
- Motivation to make decisions in shaping one's own life and well-being day by day;
- Motivation to live in partnership with other animals and humans in shared environments.

Key strategies for facilitating animal agency on farms:

- Understand that animals' expression of agency is essential for environmental enrichment to work;
- Open-up a farm's physical and functional structure, creating a diversity of places that animals can visit and use as they prefer;
- Create opportunities for animals to engage with novelty in safe and manageable ways, through i) materials for exploration and play, ii) technical devices for mental stimulation, iii) engagement with farm staff, iv) other sources of variation in the farm environment (e.g. visitors);
- Give animals space to learn to deal with stressors in the farming environment, so fearful reactions can make way for confident responses to cope with those stressors;
- Regard animals as valued social partners on farm and support them in that role, e.g. by encouraging them to build friendships, care for other animals, or protect the herd/flock.

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1. The concept of animal agency: key characteristics

In the animal welfare science literature, animal agency has been defined as “the capacity of individual animals to engage in voluntary, self-generated, and goal-directed behaviour they are motivated to perform” (21, 23, 36). Exercising such agency (e.g. through play and exploration), can be fun to experience in the moment, but, moreover, serves to maintain a sustained flow of meaningful engagement with the environment, by paying attention, making decisions, acting to fulfil functional needs, trying out new things, and learning. A primary benefit of such active engagement is the development of competence, gaining skills that enhance an animal’s ability to create a successful life and flexibly cope with challenges coming its way (12,33). Increasingly, research is elucidating the complexity of intelligence with which animals can do this (16), showing that animals find developing competence rewarding in its own right (13,27,32). Through exercising agency animals can flourish, actively creating well-being for themselves rather than passively consuming it. Lawrence and colleagues (19) speak of animals ‘doing’ rather than ‘having’ welfare in this light, considering this an essential condition for positive welfare (8,26).

In the social science and humanities literature, animal agency is understood as the capacity for self-determination, exercised through what is called ‘self-willed’ decision-making and choice (14,17,18). Most authors clarify that where for human beings this tends to be considered a high-level rational capacity equated with free will, for animals this does not necessarily follow (4). In the social sciences/humanities domain, animal agency is regarded primarily as a relational, social issue, recognising that humans share life with animals in ‘more-than-human’ communities and cultures (3,6,18). The so-called ‘wild’ is not regarded as a place separate from such communities where animals can be exclusively ‘free’ – self-determination as a capacity can be active anywhere, in both wild and domesticated places, and as a social concept has moral connotations of responsibility. Animals become participants, stakeholders, with a perspective they are motivated to pursue – and as with other stakeholder groups, independently of their perceived rationality, we are morally bound to honour these perspectives (4,10,14). Then, when given the freedom to exercise agency, animals cease to be mere objects for our use and emerge as co-subjects of a life – friends, collaborators, competitors, or sometimes enemies (36).

This approach should not be seen as merely a philosophical aspiration – as research is showing, it can have tangible benefits. In wildlife conservation for example, animals are often found to respond flexibly and creatively to human interventions rather than follow fixed species-specific patterns, leading conservationists to realise that treating animals as competent collaborators is a more effective strategy than trying to predict and control their response (1,2,11). Similarly for farm animals, social scientists are asking whether farm animals could meaningfully be regarded as co-workers on farms (25,29). If farms could be regarded as shared living/working spaces rather than unilateral production systems, animal and human lives might flourish in mutually beneficial ways (28).



Key characteristics of animal agency

- Explore, play and learn
- Exercise choice
- Develop competence and control
- Make decisions in shaping one’s life
- Live in partnership with others

2. How to facilitate animal agency on farms

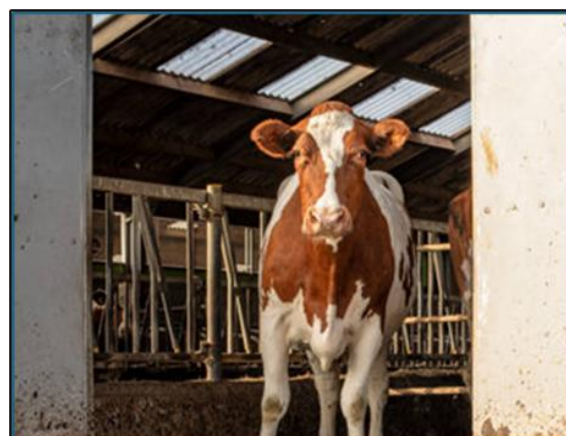
The goal of providing environmental enrichment to farm animals is to support their behavioural and cognitive needs, such as searching for food, building nests, satisfying curiosity, or playing with companions. We assume that to achieve this we should furnish animals' enclosures with suitable objects, materials and facilities, such as straw, toys, automated feeding devices, video games, or outdoor runs. However, as recent reviews of environmental enrichment indicate (9,20), such items by no means guarantee the sustained stimulation of behaviours indicative of good health and welfare. Animals may never use provided objects or materials, stop using them after some time, or use them intermittently in ways not supportive of welfare.

The notion of animal agency introduced in this brief suggests that **provisions for enrichment will be most effective if animals can choose and shape how to engage with them**. What is to be 'enriched' is not the environment, but the animal, empowering its capacity to act and enhancing the quality of its interactions (21). To consider 'enrichment' a feature external to the animal that one can simply add to the environment is misleading; if the wider farming environment does not support an animal's expression of agency, adding objects and facilities will have little lasting effect. For enrichment provisions to truly benefit welfare, we must care for the animal's agency first. The question is, what does that mean?

Farms can support animal agency by giving animals more freedom to engage with the different aspects of a farm in the way they prefer – to let animals 'self-generate' their movements in ways we don't necessarily need to understand or control (see text box).

A primary means of achieving this is by enabling animals as much as possible to exercise complex patterns of decision-making and choice. For example: dairy cattle don't show clear preference for either indoor or outdoor housing, what they prefer is having a choice: to be able to self-regulate where, when and how they spend their time depending on a day's conditions (29,30). 'Indoor' and 'outdoor' are abstract notions that may not reflect the reality of a farm's available spaces on the ground. Rather than humans deciding which of the two options cows can have, it will be more empowering for cows to be able to structure the space around them according to their needs and likes. Who knows what a particular corner in a stall means to a cow? Is it cool, has a view, smells nice? That is for the cow to know and may change from day to day (29).

As this example illustrates, an animal's competence to manage its life is a dynamic capacity, that requires dynamic environments to thrive. Animals can enjoy and learn from facing the unexpected, for example by playing with objects or pen mates, exploring new spaces, or approaching a trusted person. In a busy farming environment, however, much of what happens cannot be controlled by animals and is likely to scare or frustrate them. Yet, if we can create ways for animals to learn to



A dairy farmer's recognition of cow agency:

"The way I see it, is you would look at the cow's perspective on life rather than yours. What would the cow want out of life, rather than what *you* would want the cow to have? What does the cow want to do?"

I feel we underestimate that. We think we know, and we think we can, because it is an animal, we herd it and we tell it what to do and all the rest of it.

We've got mats and everything else, scraper systems, everything is washed every day and the cows are clean. TMR mix has all been designed by nutritionists ... the length of the straw that we chop in to it, it's all there.

But they are still right keen to go out of the house, so you've got to let the cow go out. You've got to let it go out. . . . because that cow will reward you for giving it its choice".

Quote taken from Vigors 2019

actively manage their response to stressful challenges, this will grow resilience and confidence and transform stress into a positive experience of well-being (9,31). Positive well-being does not require constant happiness – it requires the opportunity to learn and grow.

Modern digital technology has great potential to increase animals' freedom to move around the farm environment and decide what to do and where at any given moment (5,18,34). Sensors can be used, for example, to create invisible electronic fences so animals can roam across fields, to offer individualised access to food so they can eat in peace, or let them regulate physical comfort by turning lights or heaters on and off. Digital technology furthermore offers virtually limitless potential for animals to create mental stimulation for themselves, for example by giving them control over what music to hear or which computer games to play (7). However, such devices don't always have a positive effect – as is the case for humans, computer games are known to lead to repetitive over-use resembling addiction. Care must be taken to align technology installed on a farm with an animal's natural way of perceiving and behaving, so its benefits can be as 'animal-centred' as possible (5, 22,24). Ultimately, like any type of farm hardware, digital technology lets humans decide how animals can or cannot express themselves – any freedom we allow animals is always constrained by human boundaries (15). However, within those constraints, supporting animals as 'self-willed' agents does have the potential to substantially improve their quality of life.

To support animals in any kind of role we must be able to imagine them in that role. It will be easier for us to find creative ways of giving animals choice and control in their lives if we can see them as valued members of a community rather than agricultural products. We need to give ourselves permission to communicate with animals as fellow sentient beings with a perspective, personality and social role, whether they are cows, chickens or salmon (3,24). Most farmers do this naturally as part of their daily administration of care, but this may be over-shadowed by the more controlling management style needed to run an efficient business. Yet it is that primary attitude of care and respect that can sustain a farmer's motivation to expand their animals' freedom to act. As animals come into their own, they become livelier, more confident and curious, and their relationship with humans and each other will improve. From a business perspective it may seem more efficient to just fix an animal's needs rather than, where feasible, let the animal deal with these itself, but in the longer run, from a perspective that includes emotional well-being, this is not necessarily the case. Evidence is growing that partnership with animals through mutual attunement is beneficial for both parties (28). However, building such relationships on farms has costs, and is viable only if farmers are supported by government and consumers, as part of a wider shift in how we connect with the natural world. Before we can support animal agency on farms, we must support it in our minds.



Key strategies for facilitating animal agency on farms:

- Understand the connection between agency and environmental enrichment
- Open-up a farm's physical and functional structure
- Create opportunities for animals to engage with novelty
- Give animals space to learn to deal with stressors on farm
- Regard animals as valued social partners on farm

3. Conclusion: Policy Implications

- **Current SG policy guidelines for AHW** in different livestock species generally address how housing environments must meet an animal's basic behavioural needs, such as resting, nesting or feeding. In addition, SG documents on Guidance for the Welfare of Pigs (2023), Laying hens (2020) and Broilers (2019) explicitly provide guidelines for environmental enrichment (EE). Guidelines for cattle and sheep, dating back to 2012, do not provide such guidelines.
- **SG guidelines for cattle (2012)**, in reference to housing requirements, state that animals must have "enough room to move and interact with each other" (p.20), "enough room to ... move around freely" (p.21), and, when tethered, be given time to "exercise" (p.22). SG guidelines for sheep (2012) state that animals "must be given the space appropriate to their physiological and ethological needs" (p.21) and that "the freedom of movement of animals must not be restricted in such a way as to cause them unnecessary suffering and injury" (p.21). It should be noted that 'moving around freely' in these contexts mostly refers to an animal's ability to move around physically as opposed to being caged or tethered.
- **Guidelines for pigs (2023)** more specifically state that "All pigs must have permanent access to enrichment materials which provide them with the opportunity to engage in proper investigation, manipulation and foraging activities" (p.35). Enough different materials must be provided "to provide the pigs with an element of control and choice" (p.35), and regular rotation and renewal of materials should enable animals "to maintain interest" (p.40).
- **Guidelines for laying hens (2020) and broilers (2019)**, also more specifically, state that "The aim of different enrichment materials is to increase the amount of time the birds spend actively standing, walking, running, jumping and dustbathing, and to increase normal foraging behaviours, providing the opportunity to seek and peck at other materials in their environment" (laying hens, p.41). "The process of environmental enrichment ultimately provides the bird with more choice in its activities" (broilers, p.38).
- **Thus, the direction of travel in SG policy** clearly is from generic advice on animals having enough physical space to move and interact with others, towards specifying the importance of varied and vigorous species-specific activity, enabling animals to express interest, choice and control. This direction is further apparent in SG commissioned animal welfare research on environmental enrichment and positive welfare, particularly at SRUC (<https://www.gov.scot/publications/scottish-animal-welfare-commission-review-scottish-government-activity-affecting-welfare-animals-sentient-beings-october-2022/pages/3/>).
- However, as discussed in this policy brief, adding enrichment materials to an animal's housing environment may elicit bouts of activity but does not necessarily sustain a flow of meaningful positive engagement over time. **For this to happen, an animal's agency must be facilitated at the same time as enrichments are added. Potential pathways for doing so are suggested below.**

Incorporating animal agency into SG policy guidelines on environmental enrichment

- This brief proposes that all SG AHW guidelines should contain sections on environmental enrichment, presenting information on both the expression of agency and the provision of enrichment materials, while clarifying the inter-dependence of these concepts.
- Encouraging animals to express agency is to increase their freedom to engage with different aspects of a farm in the way they prefer, to make individual decisions and choices as the day unfolds, developing competence and resilience.
- How best to provide such freedom depends on the temporal and spatial patterns along which life is organised on individual farms for different species. The question is, within the confines of those patterns, how animals can be given more choice, more control, and more opportunities for exploration, play and learning.
- In Section 2 of this brief, four domains are identified through which this might be achieved: i) spatio-functional diversification, ii) finding novelty, iii) coping with stress, and iv) social partnership. These are concrete aspects of an animal's daily life which farmers could aim to develop from the animal's point of view, creating more opportunities for animals to decide, choose, and express themselves.
- SG AHW policy guidelines on environmental enrichment should explain the above findings and illustrate them with realistic examples and suggestions.
- The findings of this brief should provide a starting-point for further research and practical inquiry.

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<https://sefari.scot/research/projects/practical-on-farm-solutions-for-welfare-and-sustainability-positive-welfare>

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References

1. Ampumuza, C. and Driessen, C. 2021. Doi:10.1177/2514848620966502.
2. Bhattacharyya, J. and Slocombe, S. 2017. Doi:10.1002/ecs2.1978.
3. Blattner, C.E. et al. 2020. *Politics and Animals* 6, 1–22.
4. Browning, H. and Veit, W. 2021. Doi:10.3390/ani11041148.
5. Browning, H. and Veit, W. 2025. Doi:10.3390/ani15020219.
6. Carter, B. and Charles, N. 2013. Doi:10.1111/jtsb.12019.
7. Clark, F. E. 2017. Doi:10.12966/abc.05.02.2017.
8. Colditz, I.G. 2023. Doi:10.1071/AN22285.
9. Colditz, I.G. et al. 2024. Doi.org/10.1016/j.animal.2024.101173
10. Donaldson, S. and Kymlicka, W. 2016. Doi:10.1007/978-3-319-44206-8_14.
11. Edelblutte, É. et al. 2023. Doi:10.1111/cobi.13853.
12. Englund, M. D. and Cronin, K. A. 2023. Doi:10.3389/fvets.2023.1250251.
13. Franks, B., 2019. Doi: 10.7120/09627286.28.1.001
14. Healey, R. and Pepper, A. 2021. Doi:10.1007/s11098-020-01472-5.
15. Holloway, L. 2014. Doi:10.1016/j.jrurstud.2013.01.006.
16. Huber, L. 2024. Doi:10.1007/978-3-031-60803-2.
17. Irvine, L. 2009. *Symbolic Interaction* 27 (1), 3–21.
18. Kramer, K. and Bovenkerk, B. 2024. Doi.org/10.1016/j.animal.2024.101191
19. Lawrence, A. B. et al. 2019. Doi:10.3390/ani9100783.
20. Lawrence, A.B. 2024. Environmental Enrichment in Farm Animals: An SRUC Working Paper. <https://www.positiveanimalwelfare.net/wp-content/uploads/2024/12/Environmental-Enrichment-Report-2024-formatted-for-upload.pdf>.
21. Littlewood, K.E. et al. 2023. Doi:10.3389/fvets.2023.1284869.
22. Mancini, C. 2017. Doi:10.1016/j.ijhcs.2016.04.008.
23. Mellor, D.J. et al. 2020. Doi: 10.3390/ani10101870.
24. Mills, K.E. et al. 2023. Doi.org/10.1016/j.animal.2023.100779
25. Porcher, J. and Schmitt, T. 2012. Doi:10.1163/156853012X614350.
26. Rault, J.L. et al. 2025. Doi:10.1098/rsbl.2024.0382.
27. Rust, K. et al. 2024. Doi:10.1016/j.applanim.2024.106270.
28. Ryan, E. B. et al. 2024. Doi:10.1017/awf.2024.62.
29. Shortall, O. 2024. Doi:10.1111/soru.12487.
30. Smid, A.C. et al. 2018. Doi:10.3168/jds.2017-13294.
31. Spiliopoulos, O. et al. 2025. Doi:10.1111/raq.70051.
32. Špinka, M. 2019. Doi:10.7120/09627286.28.1.011.
33. Špinka, M. and Wemelsfelder, F. 2018. Environmental challenge and animal agency. In: *Animal Welfare* (eds. M. C. Appleby, I. A. S. Olsson and F. Galindo), pp. 39–55. CAB International, Oxfordshire.
34. Vigers, B. 2019. Doi:10.3390/ani9040147.
35. Webber, S. et al. 2022. Doi:10.3389/fvets.2022.885973.
36. Wemelsfelder, F. 1997. Doi.org/10.1016/S0168-1591(96)01152-5