

# The Blind Hens' Challenge: Does It Undermine the View That Only Welfare Matters in Our Dealings with Animals?

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## ABSTRACT

Animal ethicists have recently debated the ethical questions raised by disenfranchising animals to improve their welfare. Here, we focus on the particular case of breeding hens for commercial egg-laying systems to become blind, in order to benefit their welfare. Many people find breeding blind hens intuitively repellent, yet 'welfare-only' positions appear to be committed to endorsing this possibility if it produces welfare gains. We call this the 'Blind Hens' Challenge'. In this paper, we argue that there are both empirical and theoretical reasons why even those adopting 'welfare-only' views should be concerned about breeding blind hens. But we also argue that alternative views, which (for example) claim that it is important to respect the *telos* or rights of an animal, do not offer a more convincing solution to questions raised by the possibility of disenfranchising animals for their own benefit.

## KEYWORDS

Animal welfare, animal ethics, disenfranchisement, egg production, blind hens, utilitarianism, *telos*, perfectionism.

## 1. WHAT IS THE BLIND HENS' CHALLENGE?

Serious animal welfare problems often occur in modern egg-production systems. Laying hens either live in cages where their scope for movement is strictly limited, or are kept in large flocks in barn systems or systems with outdoor runs, where they have more space and better facilities, but where they may experience severe feather-pecking and cannibalism. Attempts to prevent these problems through breeding, feeding, and changes in the housing systems have somewhat reduced the problems, but have not eliminated them. Thus a recent review of different housing systems concludes 'that no single housing system is ideal from a hen welfare perspective' (Lay et al., 2011). One of the stated reasons for this conclusion is that 'environmental complexity can create opportunities for the hens to express behaviors that may be detrimental to their welfare' (Lay et al., 2011).

There is, however, another solution that may allow farmers to keep laying hens in large flocks without harmful behavioural problems: to use blind hens. A study by Ali and Cheng (1985), of hens from a line of birds which are blind due to a natural mutation, showed that the blind birds displayed no feather-pecking or cannibalism. They did not appear to have any other obvious welfare problems, and they were more productive. Clearly, for these reasons, Ali and Cheng were of the opinion that blind hens could play a role in future egg-production. This seemed, so to speak, to be a win-win situation: Farmers would make more money and hens would live better lives.

Ali and Cheng's idea of using blind hens in commercial egg-production has not yet been taken up by any commercial poultry-breeder. So far their main influence has been on discussions in animal ethics. Beginning in 1999 (Sandøe et al.), a number of authors have used the example of blind hens as part of a discussion about which values matter in our dealings with animals (for instance Thompson 2007, 2008; Palmer, 2011; Webster, 2011).

The debate has been framed mainly in terms of a challenge to utilitarianism and other views which claim that welfare outcomes are all that matter in our dealings with animals. These views, while accepting the importance of welfare outcomes, may diverge in terms of what they take to be the right distribution of welfare across individuals. Whereas dominant forms of utilitarianism claim that, in principle, the right distribution of welfare is the greatest possible sum of welfare across all affected individuals, other related views (including other forms of utilitarianism) favour a different distribution. Some views, reflected in much current animal-welfare legislation, take the position that all animals in our care must be brought to achieve a certain minimum level of welfare, while others maintain that we should strike a balance between getting the largest possible sum of welfare and giving special priority to the worst-off individuals (Parfit, 1997). Nevertheless, these views share with utilitarianism the assumption that only welfare matters in our dealing with animals; and different ideas

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about welfare *distribution* between affected individuals will not make a difference to the central arguments in this paper. So we do not need to consider these differences further here; we will just call such views 'welfare-only' views.

The views we consider here, however, may also differ in terms of what they take welfare to *mean*. Both in the literature on animal welfare (Fraser, 1997; Sandøe and Christiansen, 2008) and in the philosophical literature on wellbeing (Sandøe, 1999), welfare is defined in different ways. Here, we will at the outset assume some kind of hedonist account, according to which welfare is defined in terms of the presence of positive feelings (pleasure) and the absence of negative ones (discomfort or suffering) (Duncan, 1996). This interpretation of welfare will allow the blind hen case to be stated in a clear and forceful way, and we will refer to this subjective idea of welfare when we use the expression "welfare-only' views'. Later in the discussion, however, we will bring in different accounts of welfare.

In response to the blind hen case, adherents of such 'welfare-only' views seem to be obliged to say that the breeding and use of blind chickens should not generate additional ethical concerns. According to Ali and Cheng (1985), blindness does not itself seem to create suffering (or to prevent pleasure), and it does seem to reduce harmful behaviour; so blind hens may, overall, be better off than sighted ones. Breeding chickens to be blind might be morally superior to breeding them as sighted; from a utilitarian position, it might even be morally required. Yet since most people intuitively find the idea of breeding blind hens ethically disturbing, there seems to be a problem for utilitarianism and other 'welfare-only' views (Sandøe and Christiansen, 2008). This problem, which we will call 'The Blind Hens' Challenge', is the subject of this paper.

We want to be clear, at this point, that we are not discussing whether or not to accept the use of animals for food production, including hens for intensive egg-production. Rather the question is whether, in a situation where *as a matter of fact* there is ongoing intensive egg-production, it should be seen as a moral improvement – or the opposite – to introduce blind hens. Thus no assumptions are being made regarding whether, more fundamentally, it is morally acceptable to use hens for intensive egg-production.

The 'Blind Hens' Challenge' can be seen as a special case in the general challenge of justifying disenfranchising animals for welfare reasons (Thompson, 2008). Some argue, on the basis of this challenge, that 'welfare-only' views should be given up. John Webster provides a recent example of this. Here he defends an alternative view, according to which, in our dealings with animals, we should:

recognize the '*telos*', i.e. the fundamental biological and psychological essence of any animal; in simple terms 'the pigness of a pig'. A pregnancy stall for sows that denies them the freedom to express normal behaviour is an insult to *telos*, even if we cannot produce evidence of physical or emotional stress. If you disagree with this concept (and many do), consider two more extreme

possible manipulations of farm animals in the interests of more efficient production: breeding blind hens for battery cages, or genetically engineering pigs to knock out genes concerned with perception and cognitive awareness (in essence, to destroy sentience). A strictly utilitarian argument could be marshalled to defend both practices since it could be argued that blind hens would be less likely to damage one another, and less sentient pigs would be less likely to suffer the emotional effects of discomfort and frustration. I offer these examples in support of the argument that, even when considering non-human animals, utilitarianism is not enough. (Webster, 2011)

In the rest of the paper, we will discuss Webster's argument, with a specific focus upon the case of blind hens. We focus upon this case, rather than having a general discussion about disenfranchising animals for welfare reasons, because there are new and interesting findings in the case of blind hens that may enrich the discussion.

We first discuss why it is supposed to be problematic for utilitarianism and other 'welfare-only' views if blind hens in commercial egg-production enjoy a higher level of welfare than sighted hens. Secondly, based on recent literature and the findings of some of the authors of this paper, we will discuss whether, as a matter of fact, blind hens are likely to enjoy a higher level of welfare in commercial egg-production systems than normal, sighted hens. Thirdly, we will present our own thoughts on blind hens and other forms of animal disenfranchisement, and argue that – even though such interventions will in practice rarely contribute to animal welfare – there is no reason to oppose them in circumstances where the animals are still to be produced and kept on a large, commercial scale, provided that disenfranchisement *does* improve welfare and is better in this regard than other long-term alternatives. Finally, before concluding, we discuss the extent to which Webster's suggested alternative (2011), i.e. to recognise the telos of an animal, is a coherent and well-thought-through alternative to a 'welfare-only' view; and we consider whether alternative views regarding our duties towards animals may deal with the blind hens' challenge in a more plausible way than 'welfare-only' views do. The general thrust of the paper will be to argue against Webster, to the effect that the 'Blind Hens' Challenge' does not provide a sufficient reason to reject the view that welfare (interpreted as 'what it feels like' for the animals and other affected parties) is all that matters in our dealings with animals.

## 2. WHY IS IT SUPPOSED TO BE A PROBLEM FOR 'WELFARE-ONLY' VIEWS THAT BLIND HENS ENJOY A HIGHER LEVEL OF WELFARE?

When Ali and Cheng argued in favour of using blind hens in commercial egg-production, they tacitly assumed that all that matters here, morally speaking, is the subjective welfare of the affected parties. This, however, is precisely the

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assumption contested by those who invoke the Blind Hens' Challenge as an argument against welfare-only views.

The relevant part of Webster's argument can be roughly spelled out as follows:

1. If utilitarianism (or any other 'welfare-only' view) is accepted, then any manipulation of farm animals which means that they enjoy a higher level of welfare should be accepted as a superior alternative to the way in which farm animals are treated in current production systems;
2. the breeding and use of blind hens in egg production is a manipulation which means that laying hens will enjoy a higher level of welfare;
3. yet the breeding and use of blind hens should not be accepted as a superior alternative to the way hens are treated in current egg-production systems;
4. utilitarianism (or any other 'welfare-only' view) should therefore not be accepted.

Premise One just spells out what utilitarianism and other 'welfare-only' views entail. It is important, however, to be clear about the *meaning* of saying 'any manipulation of farm animals which means that they enjoy a higher level of welfare should be accepted as a superior alternative'. What is meant here is *not* that any such manipulation is necessarily the best or the right choice; all that is being said is that this choice is superior to the current situation. It may not, *all things considered*, be the right choice, since it is possible that there is an even better choice which, for utilitarians, is the right one. This is important for thinking through Premise Three.

Premise Two asserts the empirical assumption which will, for now, be accepted for the sake of argument.

Premise Three is the key moral premise of the argument. Yet how this premise could be defended is unclear. Paul Thompson (2007) argues that most people would think it wrong to breed and use blind hens in egg production. But a moral premise cannot simply be justified by reference to a sociological fact about how people think. Even if that problem is set aside, however, there are still some subtle terminological nuances here. Premise Three does not say anything about what is right and wrong, only about one alternative not being superior to another. Claiming that it is wrong to breed blind hens is not necessarily the same as denying that breeding blind hens should be accepted as a superior alternative to the current situation in intensive egg-production.

An analogy may be appropriate here. Conventional battery-cages are now being phased out in egg production in Europe. One of the alternative solutions is so-called enriched cages. It may be argued that these cages, which allow hens access to perches, a nest and a dust-bathing area, are superior not only to traditional battery-cages but also to the most prevalent alternative cage-free system. The basis of this argument would be that the enriched-cage system

gives the hens opportunities to exercise their important behavioural needs, and at the same time has a low mortality rate compared to non-cage systems (see reviews by Lay et al., 2011; Rodenburg et al., 2012). Alternative non-cage systems, while also providing hens with opportunities to exercise their important behavioural needs, often have a higher mortality rate (Rodenburg et al., 2012); and therefore the enriched case system may, so to speak, be seen as the least bad alternative currently available.

To say that something is currently the least bad alternative is equivalent to saying that it is superior to the existing alternatives. This, however, is not the same as saying that it is the best *possible* choice, or the right one, because what we choose has implications for future developments in methods of egg production. In the case of enriched cages, it may be argued, as many people do, that even though they are the least bad alternative for the time being, they are not the right choice, because they will not in the long run be conducive to the development of the best possible system, i.e. a free-range system where the mortality rate is at least as low as it is in the cage systems.

So, even if we assume that the welfare of blind laying-hens is superior to sighted birds, it is at least possible to question the foundation of Premise Three. When people question the rightness of breeding and using blind chickens, they are not necessarily denying that the breeding and use of blind laying-hens is superior to the treatment of hens in the most common current systems for producing eggs. Rather, their view may be that even though blind hens are superior, they do not constitute the right solution. The right solution would be superior both to the existing alternatives *and* to the breeding and use of blind hens.

An adherent to a 'welfare-only' view, however, is not prevented from agreeing with this merely by virtue of adhering to the key 'welfare-only' premise. From a 'welfare-only' position, it is perfectly possible to defend the view that we should not endorse minor improvements in animal welfare because this may stand in the way of better solutions in the longer term. An adherent to a 'welfare-only' view could therefore argue that the breeding and use of blind hens, even though superior when viewed in isolation, is problematic because it prevents investment in finding better long-term solutions to the problems of modern egg-production. Of course, it must be likely both that better solutions will be found if blind hens are not used, and that the use of blind hens will stand in the way of finding these solutions. The mere *logical possibility* of a better alternative in the long run will not do. Thus adherents of utilitarianism and other 'welfare-only' views are not bound to endorse blind hens, even if the hens would enjoy better welfare than sighted hens in current egg-production systems, provided they can argue that this option *as a matter of fact* would stand in the way of better solutions in the longer run.

In addition to this, however, the *empirical* premise of improved welfare can be questioned.

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## 3. DO BLIND HENS ENJOY A HIGHER LEVEL OF WELFARE THAN THEIR SEEING COLLEAGUES?

The discussion about blind hens has so far relied on a single study by Ali and Cheng (1985). Here they examined so-called *rc* chickens from twenty to 28 weeks of age. These chickens were blind from hatch. During the short period of time studied, however, the blind birds laid more eggs and consumed less feed than sighted control birds. Body- and egg-weights were similar in both lines, but the blind birds had less feather- and comb-damage. No physiological differences were found to indicate that the blind birds were more or less stressed than sighted controls, though there were more social interactions in the sighted birds. Furthermore, fertility in the blind birds was poor because blind males had difficulty making the appropriate contact with the hen, and the latter was less likely to respond correctly to the approach of the male. Ali and Cheng speculate that despite these potentially negative factors, blind hens may be under less stress than sighted hens, all things considered. Thus their main conclusion seems to be that, overall, blind hens would enjoy a higher level of welfare in egg-production systems than sighted birds do.

Two recent studies, however, paint a less rosy picture of the welfare of blind chickens. Collins et al. (2011) studied chicks from a line called 'blind enlarged globe' (*beg*) which inherit an autosomal recessive mutation that causes blindness from hatch (Pollock et al., 1982). The research examined the development of social behaviour to determine whether it would be adversely affected in the blind birds. Behavioural evidence was also gathered, to follow up on previous observations that blind (*beg*) birds displayed abnormal behaviour and had difficulty feeding, particularly during the first two weeks after hatching. Finally, data regarding mortality and weight-gain were recorded. In a follow-up study (Haldane et al., unpublished), the behaviour and physiological data of a line of chickens (*rdd*) – which inherit a sex-linked mutation and are sighted at hatch, but turn blind before adulthood – was compared with *beg* chickens and sighted controls, from hatch to ten weeks of age and as adults.

The results of these studies showed that in terms of social behaviour, reduced rates of behavioural synchrony and group aggregation were observed in *beg* chickens in both studies, and in *beg* and *rdd* adults in the second study. We think that there is reason to believe that these results reflect welfare problems for the blind birds. Chickens are highly social animals: social behaviour and social comfort are important aspects of their normal behavioural repertoire (Marx et al., 2001), and they naturally carry out behaviours in synchrony. It has been suggested that they can suffer frustration when denied this experience (Hughes, 1971). Behavioural synchrony is thought to be important in the regulation of normal behaviours such as feeding and, when roosting, in conserving and sharing heat (Lill, 1968; Hughes, 1971; Waldvogel, 1990; Webster and Hurnik, 1994). Chickens live in flocks and have a strong motivation to

remain members of the group, preferring to aggregate with conspecifics rather than to disperse throughout free-range pasture (Keeling and Duncan, 1991). Furthermore, they normally find separation and isolation from social companions stressful (Jones and Williams, 1992; Marx et al., 2001).

Blindness will clearly reduce the number of sensory pathways available to the chickens, thereby limiting information available to them about their social and physical environment. As an adaptive result, the birds need to rely on non-visual cues, and would potentially compensate by increasing their perception of alternative stimuli (auditory, olfactory, tactile, and so on), as has been shown in other species (e.g. Munoz and Blumstein, 2012). Yet the results from the two above-mentioned studies suggest that blind birds are unable to engage in social behaviours to the same extent as sighted birds. While it is logically possible that being blind changes the social nature of chickens, this is very implausible. It is more likely that the need for social engagement with other birds persists, but that blindness acts as an ongoing obstacle to realising such engagement. If that is so, the blind chickens lack the positive states that sighted chickens would have, and may be undergoing negative states; if this is correct, being blind has substantial welfare implications for laying hens.

Blind and sighted adult hens also differed in their time spent pecking the environment, with sighted adults spending significantly more time environmental-pecking (21.2 per cent) than blind hens, whether they were blind from hatch (8.2 per cent) or became blind later in life (13.6 per cent). The relatively high proportion of time spent pecking the environment, even in blind hens, suggests an underlying motivation for environmental pecking even when visual stimuli are absent, whereas the significant differences between the lines suggest the importance of visual stimuli for pecking and exploratory behaviour in hens (Rogers, 1995; Collins et al., 2011). It seems reasonable to say that even though blind hens may not suffer because they peck less, they may forego opportunities for pleasure linked to environmental pecking. Abnormal behaviours were also observed in blind birds (circular walking, 'star gazing' and air-pecking), and blind birds were frequently observed to walk into furniture or conspecifics. The abnormal behaviours may be a response to the lack of visual cues, suggesting poor welfare, and clearly unexpected collisions are likely to be at least unpleasant (Collins et al., 2011; Haldane et al., unpublished).

The frequency of feeding behaviour was not statistically different between blind and sighted adult birds, but body weight was significantly lower from fourteen days of age in both *beg* and *rdd*, reflecting the apparent difficulty that blind chicks experience in identifying and ingesting feed. Mortality in the first two weeks was higher in the blind chicks, but not statistically so in Collins et al. (2011); mortality, however, was nearly thirty per cent in *beg* compared to four per cent in sighted controls in the subsequent experiment (Haldane et al., unpublished).



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The results of these two later studies clearly contrast with the results of Ali and Cheng (1985). One explanation for this could be that the sighted control birds in the early experiment suffered a high rate of feather-pecking, pulling and cannibalism as adults, which contributed to a very high stress-level among these birds. Low levels of welfare in the control animals will make a comparison with the blind hens favour the interpretation that blind hens have better welfare. The subsequent studies have not found the same low level of welfare in the sighted controls.

Taken together, the results of the two later studies suggest that blind laying-hens do, after all, have poor welfare compared with similar sighted birds. Blind birds are likely to suffer from extended hunger, due to their difficulty in learning to feed, and for the same reason they have lower body-weights and higher mortality than sighted birds. The development of abnormal behaviours, and changes in the frequency of other behaviours, suggest that blind birds undergo negative experiences due to their lack of sight. And there is reason to believe that they also miss out on important social behaviours that may affect their welfare.

### 4. SECOND THOUGHTS REGARDING BLIND HENS?

In light of the results just presented, an adherent of a welfare-only view may conclude that the Blind Hens' Challenge has been overcome. While breeding blind hens may prevent some of the welfare problems that sighted hens suffer by virtue of feather-pecking and cannibalism, these will be counterbalanced by some potentially severe problems in blind hens in terms of increased mortality, abnormal behaviour and deprivation of important social behaviour. It is implausible that this balancing will turn out in favour of keeping blind hens, so there is unlikely to be a welfare benefit achieved by substituting seeing hens with blind ones in modern egg-production. Thus it can be concluded that the empirical part of the challenge, as formulated above, will turn out to be false, and therefore the conclusion will not follow.

Some opponents of utilitarianism and other 'welfare-only' views, however, may argue that this is an easy way out for the welfarist. They might retort: 'So, it turns out in this case that, in practice, blind hens suffer more and experience less positive satisfaction than sighted hens. But there is a sense in which this is serendipitous. It could have been otherwise; and there will no doubt be other cases where it is otherwise – where creating animals 'disenhanced' in some way improves their welfare. But it is wrong to disenhance animals, even if it does improve their welfare. So utilitarian and related welfare-only theories are untenable'. Thus, even though the empirical part of the Blind Hens' Challenge is overcome in this case, the theoretical challenge persists.

The welfarist can respond to this theoretical challenge in several ways. One would be to give an account of moral thinking based on Hare's (1981) two-level approach. Hare distinguishes between the everyday moral decisions we make, based on our intuitions and current moral norms, and decisions made at a different, reflective level, when we have the opportunity to step back from our ordinary moral practice and to reassess it critically in the light of underlying principles. On this view, the intuitive, everyday response is that breeding disenhanced animals such as blind chickens is morally wrong. We know that quick technical solutions to complex biological problems usually fail. And we expect that being blind (for instance) is likely to make a chicken's life more difficult. So, at the everyday level, we have reason to react against practices such as breeding blind chickens (and indeed, the recent empirical evidence on blind chickens, reported here, backs up this intuitive view about their lives). But when we move to the second, critical and reflective level, we cannot rely on everyday norms and intuitions. We have to push ourselves to work through underlying principles. It is at this level that we must consider cases where disenhancing animals may improve their welfare, and why, if it does improve welfare, and better welfare alternatives are not available, there is something wrong with doing it. At this reflective level, assertions that a practice is simply untenable are inadequate.

This leads to a second, related response. Suppose that a disenhancement project actually did improve animal welfare. On many (though not all) theoretical approaches to ethics, this welfare benefit provides a positive moral reason for disenhancement, unless such disenhancement correspondingly reduces welfare elsewhere, or prevents the development of methods of animal production that would be better for welfare in the long run. Animals are better-off, and no-one is worse-off. The onus, then, appears to be on those who would *resist* such disenhancement, that they should give a satisfactory reason why the principle they are adopting takes priority over animal welfare.

One alternative view that rejects – or at least may appear to reject – the disenhancements allowed by 'welfare-only' views is suggested by John Webster in the quotation above. Webster argues that this view, based on the idea of recognizing the *telos* of an animal, leads to less counterintuitive conclusions than utilitarianism, and is therefore superior. To this we will now turn.

## 5. IS THERE A SUPERIOR ALTERNATIVE VIEW BASED ON THE IDEA OF RESPECTING THE *TELOS* OF ANIMALS?

In his argument against welfarism, Webster apparently assumes that there is a coherent and plausible idea of respecting the *teloi* of animals that goes beyond looking after their welfare. Here he seems to piggyback on the work of the American philosopher Bernard Rollin who says: 'Not only will welfare mean

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control of pain and suffering, it will also entail nurturing and fulfilment of the animals' natures, which I call *telos*.' (Rollin, 1993: 48) As it stands, however, this is not necessarily in conflict with utilitarianism or any other welfare-only view. What Rollin says here is that welfare is more than the absence of pain and suffering: there is also what one may label 'positive welfare', a conclusion with which no adherent of 'welfare-only' views should disagree. In traditional utilitarianism, for instance, the point is not merely to prevent negative welfare, pain, but also to promote positive welfare, pleasure. In what Rollin says here and elsewhere (1995), however, we need to consider whether he is claiming that 'nurturing and fulfilment of animals' natures' according to *telos* is good for the animals because it is likely to lead to more pleasure, or whether it is good for the animals irrespective of whether it gives rise to pleasure or not. If Rollin accepts the latter view, he is an adherent of a form of what is sometimes called *perfectionism* (Hurka, 1996). According to the perfectionist, being able to realise significant species-specific potentials is an essential part of a good life. The key thing is not to *feel* well, but to *do* well. Underlying this approach, in the context of animals, is the common but also controversial assumption that animals have well-defined natures (the perfectionist uses these to define the criteria for living a successful life). For example, it is rather obvious that it is in the nature of a domestic cat to engage in reproductive behaviour. So, adopting a perfectionist view, one might argue that something crucial is lost in the life of the cat when it is neutered; and that this is so despite the fact that the neutered cat itself is not (in some suitable sense) 'aware' of missing anything.

In the case of the neutered cat, and even more so in the case of breeding blind hens, it is not that the humans involved prevent the animals in question from doing what it is in their nature to do. Rather, they have created these animals to have a different nature, in one case by means of surgery, in the other by means of breeding. Still, we can in the case of the cat make sense of saying that it has 'lost' something: a cat has literally been 'altered', from being intact to becoming castrated. The blind chickens, however, have not been changed from anything, they were bred blind: right from the start of their existence, they were different from normal chickens. They have not been 'altered'; blindness is built into their genetic identity.

Looked at this way, breeding blind chickens is surely a way of changing the *telos* of the animals. Blind chickens have a different *telos* to seeing chickens. If one thinks of *telos* as a key part of animal welfare, how, then, should one think about changing an animal's *telos*? Bernard Rollin is very clear here:

Given an animal's *telos*, and the interests that are constitutive thereof, one should not violate those interests. If the animals could be made happier by changing their natures, I see no moral problem in doing so (unless, of course, the changes harm or endanger other animals, humans, or the environment). *Telos* is not sacred; what is sacred are the interests that follow from it. (1995: 172)

Given this, Rollin does not seem to be a perfectionist. He accepts welfare as defined in terms of a satisfaction of interests. His valid criticism of much traditional thinking as regards animal welfare appears to be really concerned with including positive welfare, rather than just looking at the absence of pain and suffering and other aspects of negative welfare.

This understanding of telos, however, is a problem for Webster's approach to the Blind Hens' Challenge. For on this understanding, the telos of the hens has not been disrespected, because the telos of blind hens is different from that of sighted hens. If this is the case, then respecting the telos of the animals, as understood here, is not really incompatible with utilitarianism or any other 'welfare-only' view.

Of course, Webster may claim that since the idea of breeding and using blind hens is repugnant, this by itself speaks in favour of invoking an idea of respecting the telos of animals, one which is incompatible with utilitarianism or any other 'welfare-only' view. Thus he may defend a version of perfectionism which claims that it is a loss for an animal to be manipulated so that it cannot express aspects of its species-specific nature, or the species specific behaviour of its ancestor – in this case the jungle fowl – even if the individual animal does not experience reduced welfare as a consequence of the manipulation.

Indeed, something like this seems to be in the mind of some authors who invoke respect for telos, or the related idea of animal integrity, as part of the discussion of the Blind Hens' Challenge (Star et al., 2008; Alrøe et al., 2001). Yet none of these authors really try to engage in a discussion regarding the plausibility at the core of their view: i.e. that something we do to an animal, or to produce an animal, such as breeding from blind hens to produce blind offspring, may matter morally even though it does not matter to the animal itself (or to any other animals or involved humans).

Other views in animal ethics may do better here. It is, of course, not possible in this paper to engage in a full discussion of alternative views. It is, however, worthwhile to consider briefly how two alternative views can deal with the issue of animal disenchantment. This may serve to illustrate a general problem faced by attempts to formulate a principled alternative to the approach of 'welfare-only' views, when it comes to animal disenchantments for the benefit of animals' welfare. One view is based on animal rights; and the other takes a preference-utilitarian, as opposed to a hedonistic-utilitarian, perspective.

## 6. WOULD ALTERNATIVE ETHICAL VIEWS OPPOSE DISENCHANCEMENT IN PRINCIPLE?

Arguments that sentient animals (Francione, 2000) or animals which are 'subjects-of-a-life' (Regan, 1984) possess rights, have formed an important alternative to utilitarian and other 'welfare-only' views in debates about animal

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ethics. In principle, on these views, breeding chickens in industrial systems is normally morally impermissible, because it instrumentalises them and infringes upon their rights (for instance, by confining them and eventually killing them). In this sense, to ask a question about breeding blind chickens is irrelevant: chickens should not be commercially bred for human use at all.

Here, however, we have assumed that, as is almost inevitable, chickens *will* continue to be bred in intensive systems. It would be of particular interest here if a rights-view could offer a special objection to breeding blind chickens that it did not offer to breeding sighted ones. Yet as Thompson (2008) and Palmer (2011) have already argued, this does not appear to be the case. Rights-arguments normally apply to beings already in existence. So, were the proposal to blind normally-sighted chickens, there would be a rights-objection: the chickens would have been deprived of an important capacity which they already possessed.

In the case of the hens bred to be or become blind, however, this argument does not apply. These birds did not exist prior to having exactly the capacities they actually have; nothing has been taken away from them, since from conception they were destined to be blind. Certainly, it would have been possible to breed different, sighted individuals; but that does not mean that particular individual chickens, either blind from hatch or genetically destined to become blind, have been deprived of anything. At the point of human activity, there was no 'subject-of-a-life' or sentient being to wrong: prior to conception, no being exists to be harmed (Palmer, 2011). So it does not seem plausible that existing animal-rights arguments, at least, would especially object to the creation of blind chickens, even though they may object to the idea of breeding chickens for human use in general.

Another alternative to the hedonistic views discussed above is views that, even though they share the 'welfare-only' assumption, define animal welfare in terms of satisfaction of preferences or desires, so aiming (roughly) at satisfying preferences (or desires), and not causing the frustration of preferences (or desires). In making decisions about whether to disenhanse, the question would be whether, in any particular case, there would be, from the point of view of the affected animals, more preference-satisfaction through producing disenhanced or non-disenhanced animals. If producing disenhanced animals *reduced* preference-satisfaction, then the disenhansement should, other things being equal, not be pursued. As with a hedonistic-welfarist view, however, it is at least *possible* for there to be cases where disenhansement increases overall net preference-satisfaction, and these are the cases in which we are interested. Preference-utilitarianism cannot *in principle* rule out disenhansement as a way of increasing preference-satisfaction and/or reducing preference-frustration. As a matter of fact, it is possible that preference-satisfaction views would have a less restrictive, and thereby perhaps less plausible, stance towards disenhansements than hedonistic views. Disenhansements might remove preferences that,

had they been there, would have generated pleasure by being satisfied. On a hedonist view, this form of disenchantment can be seen as a moral problem because of the loss in positive welfare; whereas on a preference account there appears to be no loss, since no actual preference is being frustrated.

So neither a rights-view nor a preference-based form of welfarism will obviously be able to come up with arguments in principle against disenchanting animals for the benefit of their own welfare. Of course, there is very good reason – as the blind-chicken case makes clear – to be sure that a disenchantment *really will* improve animal welfare, and it may well be that cases where disenchantment will improve animal welfare are very rare. Nonetheless, where they do occur, the burden of argument surely lies with those who *object* to disenchantment, rather than those who advocate it, since – assuming the continuance of commercial animal production – their objections will lead to more animal suffering, and less positive animal experience, in the world.

## 7. CONCLUSION

The Blind Hens' Challenge raised both an *empirical* question ('Do blind hens have better welfare than sighted ones in modern production systems?'), and a *philosophical-cum-ethical* question ('If blind hens have better welfare, should we breed them?'). New empirical evidence suggests that blind hens have welfare problems because they are blind. It seems likely, then, that we should not produce them. Yet this empirical conclusion does not mean that the philosophical-cum-ethical question is closed; there may be cases, even if these cases are rare, where disenchanting animals does improve welfare in modern production systems. Even so, however, on 'welfare-only' positions, disenchantments may not be justified if adopting them stands in the way of developments that would, ultimately, be even better for animal welfare. Disenchantment is rarely likely to be what's best. But the 'welfare-only' view does not oppose animal disenchantment in principle, on the grounds (for instance) that disenchantment disrespects animals' *teloi*; in fact, arguments that disenchantment is 'disrespectful of *telos*' do not seem to stand up to critical scrutiny. On 'welfare-only' views, then, there is no principled objection to disenchantment, although there is a recognition that welfare benefits may be rare and other, better, options for welfare are likely to be available in the long term. The burden of proof is therefore on those who oppose the breeding of disenchanted animals on principle, where such disenchantments actually do improve animal welfare, to provide new arguments to support these objections.

## THE BLIND HENS' CHALLENGE

## REFERENCES

- Ali, A. and K.M. Cheng. 1985. 'Early egg production in genetically blind (rc/rc) chickens in comparison with sighted (rc+/rc) controls'. *Poultry Science Reviews* **64**: 789–794. [CrossRef](#)
- Alrøe, H.F., M. Vaarst and E.S. Kristensen. 2001. 'Does organic farming face distinctive livestock welfare issues? A conceptual analysis'. *Journal of Agricultural and Environmental Ethics* **14**: 275–299. [CrossRef](#)
- Collins, S., B. Forkman, H.H. Kristensen, P. Sandøe and P.M. Hocking. 2011. 'Investigating the importance of vision in poultry: Comparing the behaviour of blind and sighted chickens'. *Applied Animal Behaviour Science* **133**: 60–69. [CrossRef](#)
- Duncan, I. 1996. 'Animal welfare defined in terms of feelings'. *Acta Agriculturae Scandinavica, Section A – Animal Science. Suppl.* **27**: 29–35.
- Francione, G. 2000. *Introduction to Animal Rights: Your Child or the Dog?* Philadelphia, PA: Temple University Press.
- Fraser, D. 1997. Science in a value-laden world: keeping our thinking straight. *Applied Animal Behaviour Science*: **54**: 29–32. [CrossRef](#)
- Hare, R.M. 1981. *Moral Thinking: Its Levels, Method and Point*. Oxford: Oxford University Press. [CrossRef](#)
- Hurka, T. 1996. *Perfectionism*. Oxford: Oxford University Press. [CrossRef](#)
- Hughes, B.O. 1971. 'Allelomimetic feeding in domestic fowl'. *British Poultry Science* **12**: 359–366. [CrossRef](#)
- Jones, R.B. and J.B. Williams. 1992. 'Responses of pair-housed male and female domestic chicks to the removal of a companion'. *Applied Animal Behaviour Science* **32**: 375–380. [CrossRef](#)
- Keeling, L.J. and I.J.H. Duncan. 1991. 'Social spacing in domestic-fowl under seminatural conditions – the effect of behavioral activity and activity transitions'. *Applied Animal Behaviour Science* **32**: 205–217. [CrossRef](#)
- Lay, D.C., R.M. Fulton, P.Y. Hester, D.M. Karcher, J. B. Kjaer, J.A. Mench, B.A. Mullens, R.C. Newberry, C.J. Nicol, N.P. O'Sullivan and R.E. Porter. 2011. 'Hen welfare in different housing systems'. *Poultry Science* **90**: 278–294. [CrossRef](#)
- Lill, A. 1968. 'Spatial organisation in small flocks of domestic fowl'. *Behaviour* **32**: 258–290. [CrossRef](#)
- Marx, G., J. Leppelt and F. Ellendorff. 2001. 'Vocalisation in chicks (*Gallus gallus dom.*) during stepwise social isolation'. *Applied Animal Behaviour Science* **75**: 61–74. [CrossRef](#)
- Munoz, N.E. and D.T. Blumstein. 2012. 'Multisensory perception in uncertain environments'. *Behavioral Ecology* **23**: 457–462. [CrossRef](#)
- Palmer, C. 2011. 'Animal disenchantment and the non-identity problem'. *NanoEthics* **5**: 43–48. [CrossRef](#)
- Parfit, D. 1997. 'Equality and priority'. *Ratio* **10**: 202–221. [CrossRef](#)
- Pollock, B.J., M.A. Wilson, C.J. Randall and R.M. Clayton. 1982. 'Preliminary observations of a new blind chick mutant (beg)'. In R.M. Clayton, J. Haywood, H.W.

- Reading and A. Wright (eds), *Problems of Normal and Genetically Abnormal Retinas*, pp. 241–247. London: Academic Press.
- Regan, T. 1984. *The Case for Animal Rights*. Berkeley, CA: University of California Press.
- Rodenburg, T.B., K. de Reu and F.A.M. Tuytens. 2012. ‘Performance, welfare, health and hygiene of laying hens in non-cage systems in comparison with cage systems’. In V. Sandilands and P.M. Hocking (eds), *Alternative Systems for Poultry: Health, Welfare and Productivity*, pp. 210–224. Wallingford: CABI.
- Rogers, L.J. 1995. *The Development of Brain and Behaviour in the Chicken*. Wallingford: CABI.
- Rollin, B.E. 1993. ‘Animal welfare, science and value’. *Journal of Agricultural and Environmental Ethics* 6 (suppl. 2): 44–50.
- Rollin, B.E. 1995. *The Frankenstein Syndrome. Ethical and Social Issues in the Genetic Engineering of Animals*. Cambridge: Cambridge University Press. **CrossRef**
- Sandøe, P. and S.B. Christiansen. 2008. *Ethics of Animal Use*. Oxford: Blackwell.
- Sandøe, P., B.L. Nielsen, L.G. Christensen and P. Sørensen. 1999. ‘Staying good while playing God: The ethics of breeding farm animals’. *Animal Welfare* 8: 313–328.
- Star, L., E.D. Ellen, K. Uitdehaag and F.W.A. Brom. 2008. ‘A plea to implement robustness into a breeding goal: Poultry as an example’. *Journal of Agricultural and Environmental Ethics* 21: 109–125. **CrossRef**
- Thompson, P.B. 2007. ‘Ethics on the frontiers of livestock science’. In D. Swain, E. Charmley, J. Steel and S. Coffey (eds), *Redesigning Animal Agriculture*, pp. 30–45. Wallingford: CABI. **CrossRef**
- Thompson, P.B. 2008. ‘The opposite of human enhancement: Nanotechnology and the blind chicken problem’. *NanoEthics* 2: 305–316. **CrossRef**
- Waldvogel, J.A. 1990. ‘The birds-eye-view’. *American Scientist* 78: 342–353.
- Webster, A.B. and J.F. Hurnik. 1994. ‘Synchronization of behavior among laying hens in battery cages’. *Applied Animal Behaviour Science* 40: 153–165. **CrossRef**
- Webster, J. 2011. ‘Husbandry and animal welfare’. In J. Webster (ed.), *Management and Welfare of Farm Animals: The UFAW Farm Handbook*, 5th edition, pp. 1–30. Chichester: Wiley Blackwell.