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We demand compromise: which achieves more, asking for small or large changes?

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Abstract

Welfare is the state of an animal on a continuum, from poor to good, so many decisions about it are decisions of degree, such as how much feed, space or environmental enrichment should be provided. Other decisions are more discrete, such as whether animals should be kept in cages. However, in practice, many such decisions also involve a range of possibilities — such as whether laying hens should be kept in conventional cages, furnished cages, other housed systems or free range — so that decisions within the range are also of degree. Furthermore, in broader contexts, such as husbandry standards for farm animals, decisions are needed as to how many criteria are to be addressed, which are also decisions of degree. Similarly, decisions about which species to protect and from how early in individual development they need protection are to some extent categorical. This is sometimes referred to as 'line drawing.' However, this mainly refers to whether or not animals are sentient, and sentience is not clearly distinguished from other aspects of animals' cognition and responses, so there is no conclusive boundary between 'haves' and 'have nots.' So, these decisions are also of degree: is there sufficient evidence to 'move the line' further? When there are pressures against change, such as financial cost, should welfare advocates ask for small or large changes? The answer to this question will depend upon circumstances. But discussion of different circumstances suggests that compromise, realism, gradualism and pragmatism are all important in achieving improvements in animal welfare, while noting that other tactics also contribute in particular contexts.

Keywords: *animal welfare, compromise, diplomacy, policy, sentience, strategy*

Introduction

How applied is applied science? All of us involved in science relevant to animal welfare are also — to a greater or lesser extent, and willingly or unwillingly — involved in the use of that science to evaluate, to safeguard and/or to advance the welfare of animals with which humans interact. As one illustration of the increasing recognition of that, when we revised the book *Animal Welfare* (Appleby & Hughes 1997) to produce the second edition (Appleby *et al* 2011), we found it appropriate to add a chapter on 'Practical strategies to assess (and improve) welfare' (Butterworth *et al* 2011, see also Butterworth *et al* 2018).

This raises the complicated question of how such application can be achieved: how the behaviour of humans who interact with animals can be influenced to benefit animals. It also raises the two-sided nature of that question: first, what human behaviours are needed to safeguard or improve animal welfare (for example, providing appropriate environments and treatment)? In other words, what resources or inputs are desirable? And, second, what is actually the aim, regarding animal welfare? In other words, what welfare outcomes are desirable? The balance to be struck between inputs and outcomes is well discussed by Butterworth *et al* (2011, 2018). However, as this article is mainly about influencing the behaviour of people who impact animals, the emphasis here will be on inputs, on what they do that affects animal welfare.

The issue of influencing human behaviour was recently addressed by Appleby and Mitchell (2018; p 2):

> Understanding human behaviour is complex and involves many disciplines in addition to ethology, including sociology, economics, politics and diplomacy. But it is helpful to consider the people and groups of people who impact animals as a hierarchy, from numerous individuals with direct impact up to smaller numbers of institutions — such as governments and intergovernmental organisations — whose impact may be large but indirect (Figure 1). And our experience as scientists active in animal advocacy convinces us that to improve animal welfare it is important to engage both low down in this hierarchy — to produce case studies and other evidence that will be persuasive to decision-makers — and high up — to lobby for policies that will influence and affect large numbers of people and animals. We therefore refer to this hierarchy as the 'pyramid of influence.'
>
> It is also important to recognise, though, that scientists do not generally have a special or privileged voice in

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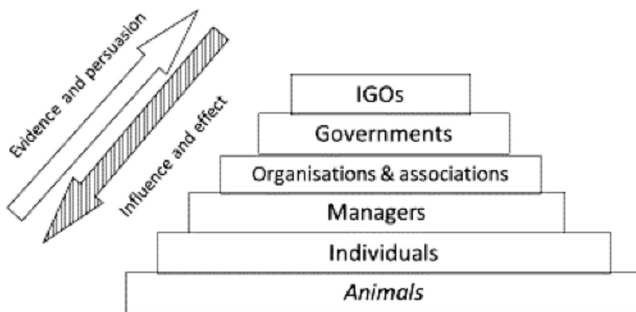
Figure 1



The pyramid of influence. IGOs = Intergovernmental organisations, eg UNESCO, World Organisation for Animal Health (OIE). Organisations and associations include institutes, universities and professional associations. From Appleby and Mitchell (2018).

> such interactions. As well as scientists and veterinarians, other stakeholders involved include producers, retailers, trade associations, non-governmental associations, consumers/citizens, religious groups, cultural groups and the media

We went on to argue that for application of science to the benefit of animals, people and the environment, it is important for applied scientists to get involved where appropriate and possible in both the practice and policy of animal use (for example, livestock agriculture).

Sometimes, such involvement consists of identifying and enabling mutual benefit between humans and animals (Appleby & Mitchell 2018). However, there is more difficulty in improving animal welfare where that conflicts with human interests, in particular when it entails financial cost (McInerney 2004). This article will consider one important aspect of the tactics of such advocacy: whether welfare advocates pressing for improved treatment of animals should be restrained or ambitious, whether they are likely to achieve more by asking for small or large changes.

Improvement of welfare

To establish that such consideration is appropriate, however, the very idea of improvement of welfare must first be discussed, because 'animal welfare' used to be — and occasionally still is — referred to conceptually and grammatically as something that is present or absent. The basic meaning of the word 'welfare' is 'health, happiness and fortunes' (Oxford Dictionaries 2018), and animal welfare was defined by Hughes (1976), for example, as:

> A state of complete mental and physical health, where the animal is in harmony with its environment

This usage is to some degree perpetuated in North America by use of the word 'welfare' to mean something provided for humans, and by extension animals in need (as an abbreviation for 'welfare payments' or 'welfare protection'). Thus, AF Fraser, writing from Canada (eg 1992), uses 'well-being' to refer to endogenous states of being within an animal and 'welfare' to human interventions designed to promote good well-being. In this article, the terms 'welfare' and 'well-being' are regarded as synonyms (see also Weary & Robbins 2019; this issue).

In any case, 'animal welfare' is now generally used to indicate the state of an animal on a continuum, from poor to good. This is not to say that it is a unitary variable, or that welfare can meaningfully be scored, for example, as a percentage: it is widely agreed to be multidimensional, with no 'common currency' between factors or dimensions (Weary & Robbins 2019; this issue). Nevertheless, the idea of a continuum is useful. Thus, Broom and Johnson (1993; p 75) say that:

> Welfare can vary between very poor and very good... In order to use the concept of welfare in a scientific way it is necessary always to specify the level of an animal's welfare and not simply to reserve the word to indicate that the animal has, or does not have, problems

In having this dual meaning, either all-or-nothing or continuously variable, welfare is, in fact, similar to other common concepts, such as luck, sustainability and localness. People refer to luck sometimes as present or absent ('my luck had deserted me'), sometimes as good or bad ('my luck improved as the day went on'). Regarding localness, there is occasionally confusion. When urged to source their food locally, some people respond that this is not possible because, for example, 'No-one grows bananas in London.' The answer is that in this case, 'Buy local' means not applying an absolute criterion but buying as much as possible of your food from sources that are as local as possible.

Similarly, use of 'animal welfare' as a variable means that it is logical to talk about safeguarding and improving welfare, rather than despairing of situations in which welfare is regarded as absent or baulking at the difficulties (conceptual as well as practical) of providing animals with utopian, ideal conditions.

Circumstances in which the dual meaning of 'welfare' persists, for example, in the marketing of 'humane food,' will be discussed at the end of the next section. First, it is appropriate to consider whether the continuous nature of variation in welfare is reflected in decisions to be made about it.

Changes of degree and of category

Given the scientific understanding of welfare as the state of an animal on a continuum, from poor to good, many decisions about provisions for animal welfare are decisions of degree, such as how much feed, space or environmental enrichment should be provided for animals. Many or most such decisions are non-trivial, because their effects will also be variable. For example, increasing space allowance will generally increase freedom of movement, and often movement itself (Appleby 2004), but on a continuous (perhaps linear, more likely curvilinear) basis, with no value at which the welfare outcomes are optimum (Figure 2; Appleby 1997). It may therefore be persuasive that increasing space allowance increases welfare, but not obvious how large an increase should be recommended or agreed upon.

Other decisions are more discrete, such as whether animals should be kept in cages, or castrated. Such decisions may be described as non-linear, or categorical. However, in practice,

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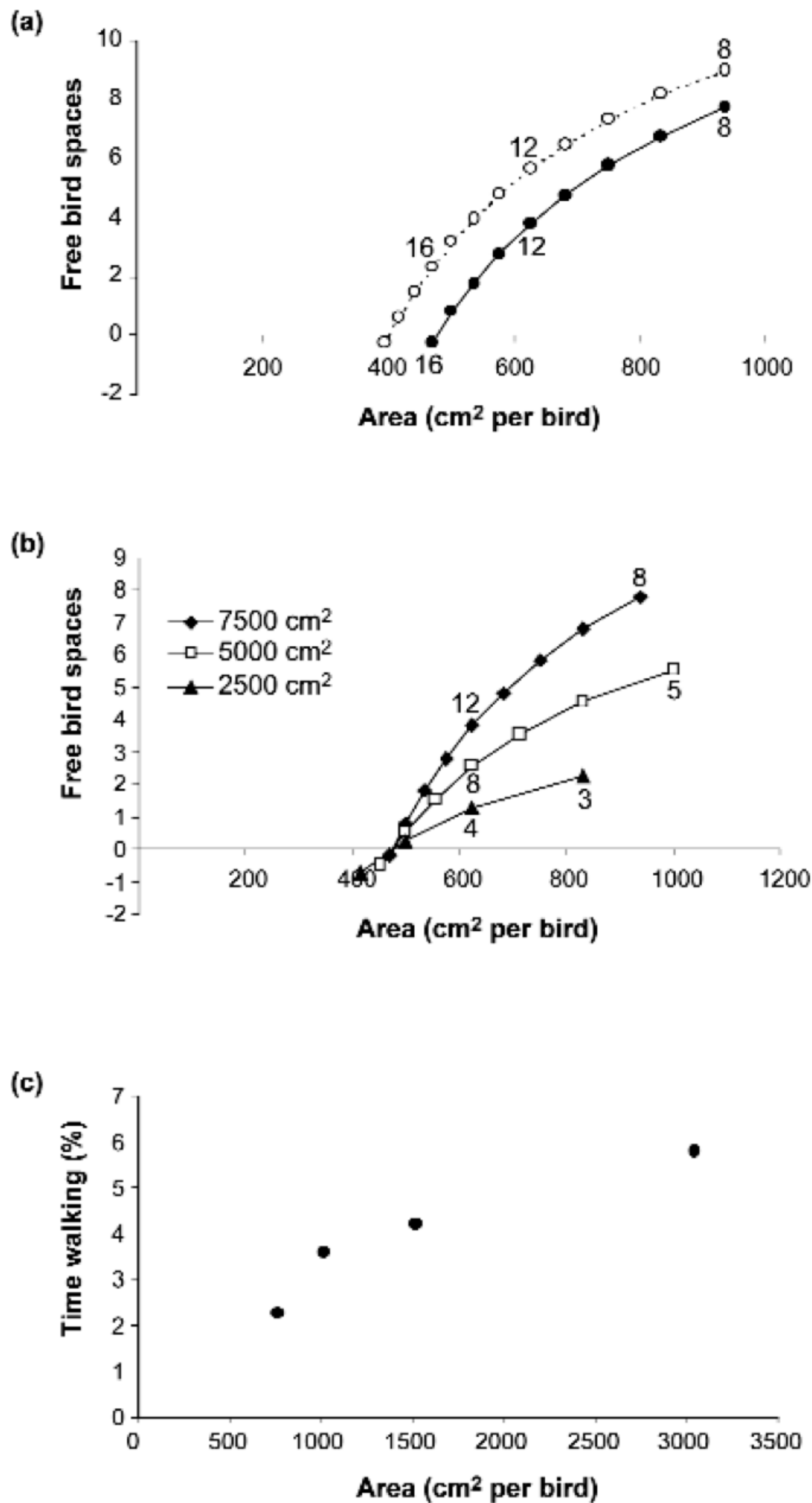
Figure 2



Freedom of movement and movement itself increase in a curvilinear way with space allowance, with no value at which the welfare outcomes are optimum. This is illustrated here for space in cages for laying hens. (a) Freedom of movement: number of free bird spaces (of 475 cm^2) in a cage of 7,500 cm^2 left by birds occupying 475 cm^2 (solid line) or 400 cm^2 (broken line); numbers by points indicate number of birds in the cage. (b) As in (a), for cages of different size with birds occupying 475 cm^2. (c) Time spent walking by hens in furnished cages; n = 16 cages for each point. From Appleby (2004).

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many such decisions also involve a range of possibilities, such as whether laying hens should be kept in conventional cages, furnished cages, other housed systems or free range, whether certain methods of castration should be proscribed or prescribed, or at what age males are most appropriately castrated. In such cases, decisions within the range of possibilities are also of degree: 'Should hens be given more or less freedom and facilities?' rather than just 'Should they be caged or uncaged?' and, similarly, 'Should male piglets or calves be given more or less protection from the pain of castration?' rather than just 'Should they be castrated?'

Furthermore, few if any specific changes in an animal's environment or treatment have just a single impact on welfare. The ways in which inputs of environment or treatment affect welfare outcomes are complex (Nielsen *et al* 2018). It follows that many apparently discrete decisions about inputs do not produce a straightforward increase or decrease in welfare. For example, one study that added environmental enrichment to cages for laboratory mice found that it improved welfare in some respects but also increased aggression between males (Marashi *et al* 2003). So, just as for decisions of degree, discrete decisions must be made with due consideration of their likely welfare effects, on a continuum from poor to good, which will probably be complex and difficult to assess.

Even when it does appear that a discrete decision is to be made, it rarely stands alone: it must be made in the broader context of the inputs affecting animals and their welfare outcomes. For example, one important context for such decisions is the development of overall welfare standards for husbandry of farm animals. This process will certainly involve discrete decisions ('Should animals be housed individually or in groups?'; 'Should bedding be provided?'). However, those decisions are not independent, either in their effects on welfare (the presence or absence of bedding affects social behaviour) or in their significance to the different stakeholders involved (including their financial cost). As such, whatever the nature of individual decisions within such a process, its overall decision-making — for example, 'How many criteria are to be addressed in this standard?' — will again be about 'more or less' rather than 'yes or no.' Indeed, different programmes of farm animal welfare standards vary in their strictness. Some are relatively strict, with few farms qualifying for approval (eg AWI Certified; Animal Welfare Institute 2017a). Others are more lenient, which may result in them including more animals (eg UEP Certified; United Egg Producers undated).

It is interesting to note, though, that the naming of some farm animal welfare programmes, whether led by animal welfare charities, producer groups, supermarket chains or governments reverts to the alternative conceptualisation of welfare as an all-or-nothing state rather than a variable. Strictness or leniency is not reflected in the names of such programmes: the programme run by Humane Farm Animal Care (undated), for example, is called 'Certified Humane,' rather than 'Certified Slightly More Humane' or 'Certified Much More Humane.' (This is distinct from programmes taking a comparative approach, such as 'The 5-Step® Animal Welfare Program' run by Global Animal Partnership 2018). It is then up to purchasers to judge each programme for strictness or leniency, if they are interested and can find the information, sometimes assisted by animal welfare organisations (Animal Welfare Institute 2017b). I only know of one case in which formal proceedings have been brought to appropriate authorities to challenge the claims inherent in such all-or-nothing categorisation. The US programme of husbandry standards for laying hens run by United Egg Producers was called Animal Care Certified until the animal advocacy group Compassion Over Killing filed a complaint with the Better Business Bureau that the label was misleading, as the standards were too low to meet public expectations of 'animal care.' The complaint was upheld, and UEP had to rename the programme simply UEP Certified (Rodriguez 2011).

Thus, and not only in that case, the marketing claim of all-or-nothing categorisation made by those welfare-friendly food-labelling programmes is misleading. As already emphasised, decision-making in discussion of such programmes must take into account the continuous nature of variation in welfare. The conclusion of this section is that this is true for much or most practical decision-making about welfare in the 'real world,' which is thus subject to the main question of the article: whether advocates should push for small or large welfare improvements in practice.

This discussion of decision-making has so far concerned decisions about the treatment of specific types or categories of animals, such as farmed pigs or laboratory rodents. Decisions about which categories of animals should be protected will be considered next.

Drawing lines

The question of which species or categories of animals should be protected is often categorical. Firstly, it is often determined by context: different protection is granted for animals under human care versus others, and for animals perceived to be useful versus pests and predators. And the pertinent contextual factors often include practicality and cost (as well as others such as attractiveness). Notoriously, the US Humane Slaughter Act (US legislature 1978) covers only mammals, not poultry, despite the fact that many more chickens and turkeys are slaughtered than pigs and cattle. Similarly, the US Animal Welfare Act (US legislature 1966) mandates care for the welfare of laboratory animals but excludes birds and rodents, which are the most numerous animals used. Presumably, in both cases, it was argued that covering these exclusions would be impractical or costly, rather than that the animals excluded were any less liable to suffer.

However, where there is legislation or other rule-making that defines the category of animals to be protected, that category has tended to expand over the years — very intermittently, and with considerable geographical variation — from certain subsets of mammals, to all mammals, to mammals and birds, to all vertebrates, to all vertebrates and certain invertebrates.

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The criteria for that limitation or expansion were often vague and inappropriate: in particular, similarity to humans was often used, consciously or unconsciously, as a criterion. But the main characteristic that is now used, appropriately, is sentience: animals' 'capacity for suffering or enjoyment' (Singer 1975). And the expansion of the category of animals to be protected has been influenced by increasing evidence of sentience in mammals other than humans, in vertebrates other than mammals and more recently in invertebrates (Kirkwood 2006).

It is inarguable that animal species vary in complexity, with the simplest species clearly lacking capacity for sentience (ie for suffering or enjoyment). Given that variation, some people assume that it is possible to 'draw a line' between species that are sentient and those that are not. Kirkwood (2006; p 13) makes the case for such a line:

> To be sentient is to have a feeling of something. This implies that the phenomenon of sentience either exists or it doesn't: that an organism either is sentient or it isn't. How could this discrete presence or absence be consistent with the gradual process of evolution? There is no problem envisaging gradation in the intensity of a feeling – pain can vary from a barely discernible to a very severe sensation – but it is much harder to see how the very capacity to be aware of pain could be other than either present or absent. You either feel something, no matter how slightly, or you don't – it is hard to conceive a halfway stage here

He goes on to ask (p 19):

> Which organisms are sentient? … Scientific opinions have been diverse: some have argued that sentience is probably limited to humans and some that there is no reason to exclude arthropods and other protostomes. Others have presented cases for placing the line at various intermediate positions in the 'tree of life' between these extremes

However, I do not think there can ever be a conclusive line between sentient and insentient species, because feeling something 'no matter how slightly' will always be intimately integrated with other aspects of animals' cognition and responses and will be confounded by other differences in how they interact with the environment. I have argued before (Appleby 1999; p 46) that:

> There is no rigid dividing line between 'haves' and 'have nots', between animals with certain capabilities and those without. Firstly, there is no sharp distinction between sensations such as touch and feelings such as pain. Secondly, all animals have mechanisms for responding to damage or avoiding potential damage. In vertebrates these are similar to our own, but the way in which the incoming messages are processed in the brain differs between species: both chimps and chickens feel pain, but in different ways. Invertebrates are more different, and there is of course huge variety among the invertebrates. Nevertheless, it makes more sense to think of feelings such as pain being present to a greater or lesser extent in different species, than of them being simply present or absent. Thirdly, suffering is affected by thinking, and types of thinking vary between species. A particular animal species will therefore be able to suffer in certain ways but not others: chickens probably feel pain but not grief

So, I believe that while it may be necessary to 'draw a line' defining which animals should be protected for legislation or other rule-making, no such line can be definitive. Similar to the choice of how much space animals should be given, affecting their freedom of movement on a curvilinear basis, the choice of which species of animals should be protected is again a decision of degree, taking account of greater or lesser evidence of sentience in different species.

This is even clearer in another, related decision: within a species, from how early in development (eg from a certain stage in gestation in mammals) should individuals be protected (Campbell *et al* 2014)? I do not believe it is conceivable that there is a specific time during gradual development at which an embryo or foetus or young animal becomes sentient (indeed, Mellor & Diesch 2006 state that sentience in mammals does not start during gradual development of the foetus but only at birth when the newborn takes its first breath). Yet, in jurisdictions that protect animals, it is increasingly agreed that, say, late-gestation mammal foetuses should be protected. So, again, the timing for such protection is a decision of degree.

An interesting illustration of how one legislature has addressed all these points is given by the way in which 'animal' is defined in New Zealand's Animal Welfare Act (Table 1), determining which animals are protected.

All vertebrate species are included, whereas other legislations have sometimes excluded, for example, reptiles, amphibia and fish.

Two lists of invertebrate species are included: octopus and squid (cephalopod molluscs), and crab, lobster and crayfish (decapod crustaceans). There is most precedent for octopus, which was, for example, the sole invertebrate covered by the UK's Animals (Scientific Procedures) Act (UK Parliament 1986). These lists take into account increasing evidence of sentience in these species (Kirkwood 2006). It is notable that it is just these specific types of animals that are included, not all cephalopods or decapods. However, it is interesting that clause (a) (vii) allows other species to be added if similar evidence arises, or for other reasons.

Mammals, birds and reptiles are protected from half-way through gestation or development in the egg. This is clearly arbitrary as a specific time but seems reasonable once it is agreed that early foetuses do not need protection, but later ones do.

Marsupial mammals get special consideration. They are born at an early developmental stage, more similar in many ways to foetuses than other newborn mammals, but the decision has nevertheless been made to give them protection from birth (when they move to the pouch), as for the latter.

Embryonic amphibia and fish are not protected, though. This may be because they are free-living very early in development. There are difficulties in addressing the welfare of young fish (Farm Animal Welfare Committee [The Farm Animal Welfare Council was re-named as the Farm Animal Welfare Committee in 2012, continuing to use the acronym FAWC] 2014) and amphibia, and some legisla-

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Table 1 The definition of 'Animal' in New Zealand's Animal Welfare Act (New Zealand Government 1999).

Animal
(a) Means any live member of the Animal Kingdom that is:
(i) A mammal; or
(ii) A bird; or
(iii) A reptile; or
(iv) An amphibian; or
(v) A fish (bony or cartilaginous); or
(vi) Any octopus, squid, crab, lobster, or crayfish (including freshwater crayfish); or
(vii) Any other member of the Animal Kingdom which is declared from time to time by the Governor-General, by Order in Council, to be an animal for the purposes of the Act; and
(b) Includes any mammalian foetus, or any avian or reptilian pre-hatched young, that is in the last half of its period of gestation or development; and
(c) Includes any marsupial pouch young; but
(d) Does not include:
(i) A human being; or
(ii) Except, as provided in paragraph above, any animal in the pre-natal, pre-hatched, larval, or other such developmental stage

Table 2 Definitions (from Oxford Dictionaries 2018) of four different diplomatic approaches to negotiating change.

Compromise: An agreement or settlement of a dispute that is reached by each side making concessions
Realism: The attitude or practice of accepting a situation as it is and being prepared to deal with it accordingly
Gradualism: A policy of gradual reform rather than sudden change or revolution
Pragmatism: An approach that evaluates theories or beliefs in terms of the success of their practical application

tion protects fish and amphibia once they can feed independently (UK Parliament 1986).

To reiterate, in deciding which species are to be protected as sentient, and from what stage in individual animals' development, there cannot be a definitive dividing line between 'haves' and 'have nots.' So, these decisions are again of degree: is there sufficient evidence to 'move the line' further?

Asking for change

Having established that much or most practical decision-making about welfare in the 'real world' must take into account the continuous nature of variation in welfare, it is possible to turn to the main question of the article: whether advocates should push for small or large welfare improvements in practice. Obviously, there is no single answer to this question: answers will depend on circumstances. Some of the considerations in those different circumstances will be explored under the four headings of compromise, realism, gradualism and pragmatism (Table 2).

Compromise

As commented earlier, it is often possible to identify mutual benefits for humans and animals (Appleby & Mitchell 2018). In that case, consensus may be reached between stakeholders on how to achieve those benefits. However, a major aspect of circumstances in which welfare advocacy occurs, and in which it can be difficult to achieve improvements in animal welfare, is conflict between such improvements and human interests, for example, financial cost. Such circumstances are often confrontational, and a common argument used by those with financial or other interests in resisting change is the 'slippery slope', expressed in ideas like 'Give them an inch and they'll take a yard' and 'We know your real agenda.' This was discussed by Norwood and Lusk (2009) regarding farm animals:

> Many industry groups quickly dismiss animal rights arguments on the basis that their ultimate goal is not improved animal welfare but to impose veganism for everyone. This is the slippery slope argument. If we take one step down the road of animal welfare concessions we may slip into veganism

This idea is sometimes referred to as 'the camel's nose.' This is reputed to be an Arabian proverb — 'If the camel gets its nose in the tent, its body will follow' — and is used to warn that permitting some small, undesirable change will allow gradual and unavoidable worsening. As with 'slippery slope,' there is often lack of clarity (perhaps deliberate) on whether the threat is just of general worsening (more of the same) or of a whole, undesirable end-state (the camel's body).

In these circumstances, it may be as well to ask for large changes, partly because, if *any* change is likely to be seen as radical, there may be just as much chance (even if not very much) of getting large changes as small ones, and 'If you don't ask, you don't get.' This approach is taken by many welfare non-governmental organisations (NGOs), sometimes instinctively, sometimes tactically, sometimes on the explicit basis that it is their role to be aspirational, for example, that they should press not just for improvements in

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animal treatment but also for the earliest possible implementation dates. Plous (1991; p 194) commented that:

> Animal rights activists are commonly portrayed as wanting to eliminate all animal research, valuing animal welfare more than human welfare, maintaining a vegetarian diet, and eschewing leather products. Thus far, however, no serious attempt has been made to assess the accuracy of this portrait

But that paper and others (Herzog 1993; Knight *et al* 2009) do indicate that animal activists are not only distinct from other people in their attitudes to animal use, but more polarised in their views of particular animal uses and treatments.

An example of apparent success in campaigning for large rather than small change is the recent and projected increase in the USA of non-cage systems for laying hens. Welfare NGOs have pressed for this (Humane Society of the United States undated), but it might still be expected that producers would make the smaller change from conventional to furnished cages. In the European Union, legislation has phased out conventional cages, allowing either furnished cages or non-cage systems (Commission of the European Communities 1999), and many producers and countries favour the former. In the USA, the main pressure has been from retailers rather than legislators (Wong 2017), who clearly judge that consumers, in common with NGOs (Humane Society of the United States undated), no longer want eggs from cages, even furnished cages.

More commonly, though, advocates asking for large changes do not get all they want. Nevertheless, asking for large changes may increase the chance of getting at least some change if confrontation declines or is resolved (perhaps mediated by other stakeholders) and negotiation is productive.

However, that is affected by willingness to compromise.

Sometimes advocates are amenable to compromise, either because they recognise the variable nature of the inputs and outcomes under discussion, or because they are able to take the long view and hope for or expect further change in future (see *Gradualism*).

However, advocates are sometimes strongly resistant to compromise. This may be because they have strong views on the values of inputs and outcomes needed for satisfactory welfare, or on the importance of faster change. An example of this was the occasion when the UK's Farm Animal Welfare Council (1991) was unable to produce unanimous recommendations on the welfare of laying hens in colony systems. Five members (out of 23) entered a dissenting view calling for greater provision of space and facilities and a faster ban on beak-trimming than the majority report required (Harrison 1991). These five included four members of animal welfare or conservation NGOs (Farm Animal Welfare Council 1991) — which is not to say that the lack of unanimity or compromise was only due to them.

Indeed, some developments that are presented by animal-using industries as improvements in welfare actually involve little or no improvement, perhaps just re-labelling of existing industry practice, and are dismissed by advocates as tokenism or 'greenwashing.' This was the complaint of Compassion Over Killing against the label Animal Care Certified (Rodriguez 2011, see *Changes of degree and of category*). Such objections may be justified (but see *Gradualism*). Some advocates go further, contending that accepting a small improvement (which may arguably not be worthwhile in itself) may reduce the chance of real change, and possibly perpetuate the harm done to animals. Francione (in Francione & Garner 2010) argues that incremental improvements should not be accepted in a system that needs larger change. This logic suggests that giving chickens more space and facilities in cages does more harm than good by perpetuating the use of cages and indeed the commercial keeping of chickens (Appleby 2014).

Willingness or ability to compromise may be affected by ethical approach. It has been suggested that advocates emphasising animal welfare are more amenable to gradual change than those supporting animal rights, who tend to see decisions more as categorical than of degree (Sandøe *et al* 2003). The latter are therefore more likely to demand all or nothing, an approach discussed in the next section.

Realism

An important question about Francione's rejection of incremental change in a system that he believes needs larger change, and similar absolutism by other proponents of all or nothing, is whether this has actually achieved anything for animals. Sometimes 'The best is the enemy of the good.' Chickens are still farmed for eggs, and most are still kept in cages, and it is arguable that if more pressure had been put on improving their welfare rather than ending their use, more chickens would by now have had significantly better lives. (Although it is also arguable that radical voices contribute to the pressure for moderate change, even if their specific demands are not met: see *Pragmatism*).

Ryder (2000; p 202) discusses the formation of animal rights groups in the 1980s in the USA, including People for the Ethical Treatment of Animals. He quotes Henry Spira, a pragmatic activist, as commenting that "The war cry has been 'all or nothing' with the almost inevitable result being nothing."

So, a key component in achievement of positive change for animals is realism (Table 2). Much change has been achieved over recent decades, and advocates have contributed to this change, more often by being realistic about what is achievable, and compromising where necessary, than by being idealistic.

Indeed, sometimes advocates have pressed for, and contributed to the achievement of, changes that can be described as too large, that were perhaps too idealistic, with their consequences insufficiently considered. Grandin (2008; p xi) comments on such a change, for which NGOs including The Humane Society for the United States campaigned:

> Well-intentioned legislation may have bad consequences. A prime example of this is the US law banning horse slaughter for human consumption, without appropriate and sufficient back-up scenarios for these animals. The closure of two of the three US horse slaughter plants has

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> resulted in unwanted horses being transported even further distances to either Canada or Mexico for slaughter. Live horses are also being shipped to Japan. There are fates worse than slaughter: (i) longer transport times; (ii) transport under substandard conditions; (iii) neglect and starvation; and (iv) being ridden and worked until totally debilitated. Abolition of long-distance transport of slaughter animals must happen in a well thought out and realistic manner

One possible explanation for such mistakes is an unrealistic concept of welfare in which the continuum argued for here is seen as a unitary scale, with any increase being beneficial and larger changes being better by definition. The more widely agreed concept of welfare as multi-dimensional (Weary & Robbins 2019; this issue; see *Improvement of welfare*) prompts the realistic understanding that large changes, for example, introducing fully extensive systems, are sometimes worse for at least some aspects of welfare.

A realistic manner of improving animal welfare often includes incremental change.

Gradualism

As welfare is a continuous variable, so improvement in welfare may sometimes be incremental. Achieving a small change in legislation or practice may establish the principle, which may then allow further progress: 'A journey of a thousand miles begins with a single step.'

Where this is the aim, it could in fact be argued that welfare proponents do want a 'slippery slope' to operate, with each change making further change more achievable. However, this does not mean that agriculture groups resisting change are right to claim, as suggested above (Norwood & Lusk 2009), that the "goal is not improved animal welfare but to impose veganism for everyone." Some advocates of incremental change may have an end-point in view that could be regarded as extreme and/or categorically different from the initial change, but there is no evidence to indicate that many or all do so. Nor would the existence of some advocates wanting large change be a valid argument against small change: while opponents of change might fear the creation of precedent, that is no justification for maintaining the *status quo* if current practice is unacceptably bad for animal welfare.

Similar approaches apply internationally, with proponents of welfare improvement keen that countries should follow good examples set by others, while opponents of change are concerned about such creation of precedent in decision-making. When the European Directive phasing out conventional cages for laying hens was passed (Commission of the European Communities 1999), the International Egg Commission, representing 33 countries, resolved to raise funding of $1 million for action to overturn the ban, partly because "a domino effect is feared by the US, Canada and Australia" (Farrant 1999; p 1).

One practical situation in which welfare advocates must choose between smaller and larger change is when an organisation creates humane standards for farm animal husbandry. These may be strict or lenient (Animal Welfare Institute 2017b). While stricter standards might be intuitively preferable, leniency may have certain advantages such as attracting more participants and helping more animals. Furthermore, advocates may acknowledge that a programme with less than ideal standards is a step in the right direction, as long as a future increase in stringency towards the ideal is possible. Indeed, higher standards may be achieved in stages than in a single step: that is the rationale of Global Animal Partnership's (2018) '5-Step® Animal Welfare Program.'

A positive acceptance of this gradualism (Table 2) by organisations creating farm animal standards is that many of them describe those standards not as one-off, final outputs, but as 'living documents', subject to periodic review and updating and therefore potentially strengthening. For example, Humane Farm Animal Care (2014; p ii) says that:

> Leading animal scientists, veterinarians, and producers work with Humane Farm Animal Care to develop the Animal Care Standards for humane farming and continue to work with Humane Farm Animal Care to continually review new information pertaining to improving the lives of farm animals

However, it is important to recognise that not all small changes do lead gradually to further change. Worse, it is sometimes the case that making small improvements in welfare, in a practice that can be considered intrinsically wrong (for example, improving ventilation during long-distance transport of animals for slaughter), may actually help to perpetuate the practice, and distract from the important aim of ending it completely (cf Francione, in Francione & Garner 2010). Those small improvements may produce only 'local optima,' reducing rather than increasing the chance of achieving 'global optima' (Svanberg 1993) of significant and perhaps urgent change.

So, while incremental change is to be welcomed in some circumstances, in others step-change is needed. This applies to choice between husbandry systems or between other markedly different practices, where one system limits progress towards the ideal while another has significantly greater potential. For example, all husbandry systems for laying hens have both potential advantages and disadvantages for welfare. Yet many of the disadvantages of cages are integral, while many or all the disadvantages of non-cage systems can potentially be overcome, so they are not an unanswerable excuse for retaining cages (Humane Society of the United States undated). Where this is a categorical choice to be made between systems or practices, an important factor to take into account is the question of which option has greatest welfare potential.

Nevertheless, gradualism is an important principle for welfare improvement overall. Small changes accumulate, not only within individual factors, systems and categories of animal use, but also across the board. A review of the history and possible consequences of the European Union ban on conventional cages for laying hens, one of the greatest ever steps forward for animal welfare, concluded (Appleby 2003) that:

> Most of the above history shows that piecemeal change is both worthwhile in itself and finally accumulates into wholesale change. This applies, for example, to labelling. Much of the discussion about labelling refers to giving

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> consumers choice. With regard to welfare, choice is not the important issue: it is desirable to improve the welfare of all hens, not just a small, labelled proportion of them. Yet the fact that some people buy Free Range eggs and Freedom Foods demonstrates that a significant proportion will 'put their money where their mouth is' and has led the way for more widespread change

Pragmatism

The emphasis in this article has so far been largely on conflict between welfare improvements and human interests, but in recent years decision-making about animal welfare has rarely been just two-sided: within at least democratic countries, decision-making — such as the passing of legislation — has increasingly involved all relevant stakeholders, such as producers, retailers and users of animals or animal products, animal welfare scientists, veterinarians, legislators, NGOs, media and other people active on welfare issues. Thus, most progress on animal welfare is now made by multi-stakeholder dialogue. An excellent example is the recommendations made by the Farm Animal Welfare Committee (the disagreement within FAWC outlined above was rare), whose members include veterinarians, scientists, activists, farmers and others. Furthermore, despite the advantages of transparency in other contexts, such dialogue is often most productive 'behind closed doors,' because, then, participants are better able to negotiate, including compromise, without public comment by their own constituency or others. In fact, an invaluable middle ground between secrecy and transparency is provided by the Chatham House Rule, which is now widely used for such dialogue (Chatham House undated):

> When a meeting, or part thereof, is held under the Chatham House Rule, participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed

Within such dialogue, the usual principles of diplomacy will apply. For example, this may include advocates pressing for large change, and not indicating willingness to compromise until necessary, but nevertheless accepting compromise rather than sticking to all-or-nothing. This may be characterised as pragmatism (Table 2), which is more than realism: being realistic not just in what is achievable but also in how to achieve it. Diplomacy includes recognition that 'Politics is the art of the possible.'

In my experience, animal welfare campaigners sometimes lack such diplomatic skill. For example, they sometimes prepare for negotiations by discussing 'What are our red lines?' (eg World Society for the Protection of Animals, personal observation 2014). They may even begin by announcing those 'red lines,' but even if they do not make them known to the other participants, that way of thinking may be unproductive or even counterproductive to achieving change in the negotiations.

By contrast, one recent, positive development is use by welfare advocates of the word 'ask' as a noun, as in this quotation from Fishwick (2018):

> We came out with a Brexit report just over a year ago that had 52 asks for animal welfare

There is no obvious, suitable synonym (the near-synonym 'request' is weaker), and it is better than 'demands' for pragmatic, diplomatic negotiation.

Pragmatism is also key to achieving change in the context that there are often multiple voices to be heard on each 'side' on any one issue. Among advocates these include moderates willing to compromise, radicals demanding all-or-nothing, and sometimes extremists. And, it has to be recognised that while moderates may be most directly involved in achieving change, radicals and even extremists may contribute to the circumstances that allow them to do so: it may be the very existence and activities of radicals that persuade other stakeholders, including animal users, to accept inclusion of moderate advocates in dialogue. Colin Spedding (1996), chair of FAWC, pointed out that:

> It is very important to listen to moderate views and not, as so often happens, brush them aside. Ignoring moderates can generate extremists

There is also, of course, variation among animal users, including moderates who are willing to accept change and conservatives who are not. And it also has to be recognised that even though it is primarily the moderates of all sides who are 'inside the tent' of multi-stakeholder dialogue, the existence of both radical advocates and conservative users 'outside,' neither wanting compromise, may encourage discussion among pragmatists and increase the chance of moderates making progress, through compromise or even consensus.

So, *Asking for change* ends by concluding that compromise, realism, gradualism and pragmatism are all important in achieving improvements in animal welfare, while noting that other tactics also contribute in particular circumstances.

Passionate moderation

Does a call for compromise sound weak, in the face of worldwide problems for animal welfare, many of which are huge and provoke strong emotions in many welfare advocates? Perhaps, but as experience shows that moderation often achieves more change than radicalism, I argue that moderation can and should also be pursued with passion.

The discussion above has also emphasised that it is often necessary to take a more radical stance, at least initially, in negotiations with other stakeholders, to achieve moderate change. Furthermore, there are particular circumstances in which maintaining a stronger stance, that may be characterised as radical, may be judged essential to attain acceptable animal welfare. Those circumstances mostly occur when a practice or system (such as long-distance transport for slaughter, or close confinement) causes severe problems for animal welfare that cannot be significantly reduced by small improvements, and indeed small improvements towards a 'local optimum' may actually decrease the chance of a larger change. Such circumstances are complex and deciding appropriate strategies to address them will also be complex. For example, while non-cage systems for laying hens have greater welfare potential than cages, they also have welfare problems that are difficult to overcome (Appleby *et al* 2004), so advocating the phasing out of cages is complex. Welfare advocates must live with this complexity.

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To reiterate the need for diplomacy, even when moderation is appropriate this does not necessarily mean that negotiators should announce their moderation. It is rarely strategic to express willingness to compromise early in negotiations. Nevertheless, acceptance of compromise when necessary has demonstrably achieved more progress for animal welfare than adamant refusal to do so. It is also true that individuals and groups who are known for moderation are more likely to be able to participate in dialogue and negotiations about change than those seen as more radical. It remains true that, as discussed in the previous section and the previous paragraph, radical approaches may still contribute to the process. As such, this article does not recommend that all advocates should be moderate. What it does is urge a positive response to the statement at the start of the *Introduction* — that everyone involved in science relevant to animal welfare is also involved in application of that science — and to emphasise the need to make that application as effective as possible.

To end with another major example of the importance of compromise, the European Union's Treaty of Amsterdam (EUR-Lex 1997) was ground-breaking in ensuring "improved protection and respect for the welfare of animals as sentient beings." In an analysis of the Treaty for the UN's Food and Agriculture Organisation, Vapnek and Chapman (2010; p 22) comment that:

> The protocol specifies that 'the Community and the Member States shall pay full regard to the welfare requirements of animals, while respecting the legislative or administrative provisions and customs of the Member States relating in particular to religious rites, cultural traditions and regional heritage'. The last clause is a subject of debate among animal welfare advocates, who feel that it leaves too large a loophole for … member states. Others, however, acknowledge that no animal welfare provision might have been included at all without such a compromise allowing member states flexibility with respect to issues of culture or religion and animal welfare

Animal welfare implications

Achieving improvements in animal welfare involves influencing the behaviour of people who impact animals. It is sometimes, and perhaps increasingly, possible to identify and enable mutual benefit between humans and animals, and work by consensus. However, where improving animal welfare conflicts with human interests, such as financial cost, diplomacy is required. It is sometimes appropriate to press for a large change, either because that increases the chance of achieving a moderate change, or because a small improvement towards a 'local optimum' may actually decrease the chance of a larger change seen as urgent. Nevertheless, overall, moderation achieves more change than radicalism. Compromise, realism, gradualism and pragmatism are all important diplomatic approaches to achieve improvements in animal welfare, while other tactics also contribute in particular circumstances. Moderation in animal welfare advocacy does not indicate lack of concern or commitment: it can and should be pursued with passion to address the many severe welfare problems that remain to be addressed, for vast numbers of animals worldwide.

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