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The UK's Animal Welfare (Sentience) Bill Excludes the Vast Majority of Animals: Why We Must Expand Our Moral Circle to Include Invertebrates

The great 13th-century Persian poet Sa‘dī ([1257] 1902, 12655) wrote:

“How sweet are the words of the noble Firdausi, upon whose grave be the mercy of the Benignant One!— ‘Crush not yonder [ant] as it draggeth along its grain; for it too liveth, and its life is sweet to it.’ A shadow must there be, and a stone upon that heart, that could wish to sorrow the heart even of an [ant]!”

Eight hundred years later, UK animal welfare legislation still hasn't caught up with the inclusive moral vision of these noble medieval poets.

Article 13 of the Lisbon Treaty explicitly recognises animals as sentient beings, enshrining - more theoretically than practically - the recognition of animal sentience in EU law. Even prior to Brexit, however, the UK did not apply this recognition to invertebrate animals, which constitute approximately 99.9998% of all animals on our planet (Bar-On, Phillips and Milo, 2018). This amounts to a gargantuan number of individual lives: Bar-On et al.'s (*ibid.*) major study estimated that there are around a *sextillion* (one thousand trillion or 10^{21}) invertebrate animals on Earth at any given moment. According to another estimate, there may be as many as *ten sextillion* individual invertebrate animals (Ray, 2017). Our planet is teeming with neglected, mistreated and suffering life. There is no clearer example of the inconstancy of prevailing human “ethics” than the fact that it spares no thought for the well-being of the vast majority of non-human animals.

In addition to allowing the continued infliction of immense violence and suffering against countless vertebrate animals, the government's Animal Welfare (Sentience) Bill, now in its report stage in the House of Lords, also excludes *all invertebrate animals* – as well as the vast majority of vertebrate aquatic animals - from even the slightest ethical consideration. In other words, the Animal Welfare (Sentience) Bill provides no protection and gives no moral consideration to at least around 99.9998% of non-human animals!

This is convenient from the tyrannical standpoint of the Earth's dominator species, which tends to empathise more readily with those more like itself. Invertebrate animals are the ultimate “Others” whose feelings are not taken into account and who are therefore nullified/rendered non-existent in prevailing human systems of “morality”, according to which might is usually right. The idea that we have a moral obligation to treat crustaceans, insects and other invertebrate fellow Earthlings with compassion is still commonly met with dismissal and derision.

So was the idea that horses deserve moral consideration when Richard Martin, the MP for Galway, introduced the Ill Treatment of Horses Bill in 1821. The idea of outlawing cruelty to horses was met with laughter in the House of Commons, his fellow MPs remarking that such a bill would, absurdly, lead to legislation against cruelty to dogs and cats (Legge and Brooman, 2000)! It has always taken moral courage to advocate ethical consistency by expanding the circle of compassion to include the excluded and nullified beings. Society's moral circle has been expanding for millennia, leading to increasing compassion for non-human animals and increasing legal protections for them. There is no valid reason to suppose that this process cannot continue now and in the future. Many people already seek humane ways of dealing with insects, for example (e.g. Dowling, 2021).

Currently, however, even the very few invertebrate animals - such as octopuses - who have long been granted the status of “honorary vertebrates” (Barnes, 2021) in laws on animal experimentation on account of their particularly high cognitive abilities, are omitted from the proposed legislation, which is to say that these sensitive beings are still being relegated to the status of *things* as far as the government’s proposed legislation is concerned.

Minds without Spines

As the philosopher of science and bioethics Irina Mikhalevich (2018) has also pointed out, human moral judgment and treatment of “minds without spines” are inconsistent with the extensive evidence about invertebrate sentience (see Animal Ethics, n.d.), and are distorted by false human beliefs and cognitive biases against the inclusion of invertebrates into the circle of moral consideration.

In *Measure for Measure* William Shakespeare ([1603] 1803, 396) wrote: “The poor beetle, that we tread upon, / In corporal sufferance finds a pang as great /As when a giant dies”. In fact, the renowned evolutionary biologist Richard Dawkins (2017) has even posited that, since pain exists to warn the animal to avoid damaging situations, less intelligent animals may have evolved to feel more intense pain than humans because it would have adaptive value as a survival advantage that may help to compensate for their lack of higher intelligence.

In a study published in the *Proceedings of the National Academy of Sciences of the United States*, Barron and Klein (2016) concluded that “the insect brain also supports a capacity for subjective experience”. Furthermore, researchers have found that insects can experience not only acute but chronic pain as well (Daley, 2019), prompting *Newsweek* to point out in the title of its article about the study that “Injuring a Fly May Condemn It to a Lifetime of Pain, Scientists Find” (Osborne, 2019).

It has also been discovered that insects are capable of performing fairly complex cognitive tasks. Ants, for example, can even recognise themselves in a mirror (Cammaerts, 2020), and bumblebees can learn to use tools (American Association for the Advancement of Science, 2017). Yet, in the immortal words of the moral philosopher Jeremy Bentham from his book *An Introduction to the Principles of Morals and Legislation* published in 1789, “the question is not, Can they reason?, nor Can they talk? but, Can they suffer? Why should the law refuse its protection to any sensitive being?” (Bentham, [1789] 1948, 310-11).

In his 1872 book *The Expression of Emotions in Man and Animals*, Charles Darwin ([1872] 1965, 349) wrote that insects “express anger, terror, jealousy and love”. More recently, the leading neuroscientist Antonio Damasio (2016) has stated that “feeling implies the presence of a mind and a mental experience, [or] consciousness (...). I have every reason to believe that invertebrates not only have emotions but also the possibility of feeling those emotions”. Indeed, eminent scientists have explicitly concluded that excluding small-brained invertebrates such as insects from bioethics is not justified by the available scientific evidence but is rather a product of bias (Baracchi and Baciadonna, 2020).

There is evidence to suggest that sentience is such an ancient phenomenon in the evolution of life that it extends beyond cephalopod animals such as octopuses, beyond crustaceans such as crabs and lobsters, and beyond social insects such as ants and bees, which have been found to have emotions as well (Benson, 2016). Other invertebrates such as other insects, snails, nematodes, and even the tiny mites – who possess a central nervous system and a brain (Colloff, 2010) – may also be capable of experiencing pain and suffering. Responses to noxious signals generated by neurons and neuronal

circuits have been identified in nematodes and in fruit flies as well (Tobin and Bargmann, 2004). Unsurprisingly considering its potential utility in the pursuit of self-preservation, anxiety appears to be one of the most primitive and ancient of emotions. Indeed, there is evidence that it is shared by invertebrates as diverse as crayfishes (Fossat et al., 2014) and fruit flies (Asian Scientist Newsroom, 2016).

Developing a Consistent Ethics of Nonviolence

A consistent ethics of nonviolence would be informed by the amount of total suffering on Earth today, the vast majority of which – as the aforementioned extensive evidence points out - is happening to sentient, feeling invertebrate beings. The consequence of ignoring the sentience of beings that have experiences - including invertebrate animals - is the infliction of an unfathomably vast amount of suffering.

Even in cases of invertebrate animals where there may be a lack of evidence to support the conclusion that they are sentient, the precautionary principle still needs to be applied, especially considering the unfathomable vastness of their numbers (see Birch, 2017). In other words, we are obligated to give them the benefit of the doubt. That is the morally decent thing to do. Gambling with the possibility of inflicting avoidable suffering on hundreds of quintillions - and over time, sextillions of individual beings - is a moral disaster.

Several countries have made initial institutional steps to move beyond vertebrate chauvinism. New Zealand introduced some basic protections for cephalopods and some crustaceans 22 years ago (Animal Welfare Act 1999). Switzerland, Norway, Austria, some Australian states and territories, as well as some regions of Italy and Germany have since followed suit (Crustacean Compassion, 2018) with legislation offering some very basic protections - such as against being boiled or frozen alive - to some decapods (an order of crustaceans which includes crabs, lobsters and prawns) and cephalopods (including squids and octopuses). The UK has failed to provide even such minimal protections. Jason Schukraft (2019) has pointed out that if a ban on boiling crustaceans alive was introduced across the entire EU, “it would spare billions of animals from what appears to be an extremely painful death”.

Researchers have long ago found strong evidence that crustaceans feel pain (Sample, 2007). Already in 1982 it was discovered that the injection of morphine-HCL in the crustacean mantis shrimp *Squilla mantis* produces dose-dependent pain relief (Maldonado and Miraldo, 1982). The weight of evidence that decapod crustaceans are sentient has continued to increase since then, and it is compelling (Crustacean Compassion, n.d. - a).

Eleven years ago, the EU recognised the sentience of cephalopod invertebrates (including squids, octopuses, cuttlefishes and nautiluses) in its Directive 2010/63/EU concerning the treatment of animals:

“In addition to vertebrate animals including cyclostomes, cephalopods should also be included in the scope of this Directive, as there is scientific evidence of their ability to experience pain, suffering, distress and lasting harm.”

The EU Directive no longer applies to the UK, yet the science has not changed: these animals did not lose their sentience due to Brexit. The UK government claimed that Brexit would lead to better treatment of animals, but it is now falling behind EU standards of animal protection, which are themselves devastatingly weak in many respects. The legal situation is also deeply contradictory

because the Animal (Scientific Procedures) Act – which was passed in 1986 - continues to provide some protection to cephalopods, whose sentience the draft legislation does not recognise.

Yet, despite the aforementioned research and some very basic and poorly enforced protections related to animal experimentation in the UK for the few “honorary vertebrates”, these same animals can be treated with unmitigated cruelty as long as it is in the service of some other purpose. Lobsters, for example, are routinely boiled alive or simply dismembered while still alive (Crustacean Compassion, 2021). These kinds of methods were identified as inhumane by the European Union’s Scientific Panel on Animal Health and Welfare already in 2005 (AHAW, 2005).

The law also permits other kinds of extreme cruelty. In 2015, a London supermarket was found to be selling live crabs wrapped in plastic, immobilised and slowly suffocating (Icard-Stoll, 2018). Amazon has been selling live lobsters for delivery to customers through the post (Barnes, 2018). The wretched creatures can spend up to a week in the post before being delivered to their killers.

The laws are extraordinarily unjust and inhumane as well as legally inconsistent. Fundamental inconsistencies are actually routine in UK “animal welfare” legislation: vertebrate aquatic animals, for example, have long been recognised as sentient in UK law, yet *billions* of them are subjected to extreme violence and torment by UK fishing fleets, even without any regulations to reduce the suffering of wild-caught vertebrate aquatic animals during capture and “processing” (Wildlife and Countryside Link and the UK Centre for Animal Law, 2018). The report brought together through the Wildlife and Countryside Link and the UK Centre for Animal Law (*ibid.*, 20) remarked that vertebrate aquatic animals are “pursued to exhaustion by nets; crushed under the weight of other fish in trawl nets; raised from deep water and suffer decompression effects e.g. burst swim bladders; snared in gill nets; confined in constricted seine nets; caught on hooks. In many types of fishing, the duration of capture can be very long, lasting hours or even days. Fish often die or are fatally injured during this process. Once landed, most fish are either left to asphyxiate, or die during further processing, which may include gutting, filleting and/or freezing while alive and conscious”.

Such practices were unaffected by Britain’s EU membership, although they radically contravened the Lisbon Treaty’s agreement that “the Union and the Member States shall, since animals are sentient beings, pay full regard to the welfare requirements of animals”. When the first principle is actually human selfishness, loftier principles and declarations are marginalised or altogether discarded. In fact, wherever animals are treated as goods or commodities, their interests are violated.

For those who care about animals there are many reasons to be alarmed about the draft legislation. For example, Michael Radford (2021), Reader in Animal Welfare Law and UK Constitutional Law at the University of Aberdeen, has pointed to a series of problems regarding the proposed Animal Sentience Committee and its proposed unambitious character and marginal role, which indicate that it is likely to loiter in passivity and powerlessness.

A High-Tech “Peaceable Kingdom”

Tragically, the proposed legislation fails to show vision and real commitment to the well-being of animals. If we are to be consistent in pursuing harm reduction, we must strive to avoid doing things that inflict – or even *may* inflict – pain and suffering on them. Apropos invertebrates this also entails a clear rejection of brutal practices such as insect farming and silk production, since silkworms are boiled alive inside their cocoons so that humans can extract silk from them. It is feared that insect farms may soon be *killing more than 50 trillion insects a year* (Sebo and Schukraft, 2021).

A deeper commitment to compassionate treatment also requires of us to consider ways in which we may be able to aid defenceless invertebrate creatures. Seemingly more intractable problems present a longer-term challenge. However, rapid scientific and technological change is helping to enable increasingly radical developments to become feasible in the future, such as eliminating animal predation through genetic engineering based on the emerging gene drive technology, as the transhumanist philosopher David Pearce (n.d. - a) and the MIT biologist Kevin Esvelt (2019) have argued.

There is a need for meticulous research into the many complexities of how to reduce the amount of invertebrate suffering. Yet the contours of the way forward are becoming clearer thanks to the aforementioned technological advancements, as well as other helpful insights. As Brian Tomasik (2015) has pointed out, it is quite clear that the humane, carefully planned and controlled reduction in the numbers of invertebrates would be a particularly effective way of reducing their suffering. Effective methods of freeing them from their sore travails could therefore include the spreading of ecosystems that produce less animal suffering (Tomasik, *ibid.*), developing and promoting painless, humane forms of cross-species fertility regulation (Pearce, n.d. - b), sterilisation and euthanasia (Tomasik, 2018) specifically for the purpose of reducing suffering, while banning cruel methods such as the use of neurotoxins which cause prolonged dying. A number of possible large-scale interventions that could vastly reduce suffering are already well-established and have been proven to be very effective at controlling population numbers (Waldhorn, 2019).

The development and implementation of advanced suffering-reducing approaches to dealing with invertebrate beings may not even be particularly expensive. However, we must pursue harm reduction because behaving ethically towards countless other sentient creatures is the right thing to do – even when it is very difficult.

One of the major tasks ahead for effective altruists is to attain far greater and more detailed understanding of the best strategies for humane interventions into highly complex ecosystems and animal population dynamics with the aim of minimising both individual and total suffering. Benevolent actions can lead to extremely negative unintended consequences, which is why there is a need for meticulous thinking and research about possible interventions and their effects.

Another major investment in the development of a truly compassionate civilisation would be the introduction of humane education in schools, teaching children the value of justice, kindness and care towards all sentient, feeling beings. There is some evidence that cultivating children's kindness to animals also has a significant generalising positive effect, increasing the likelihood of more compassionate interpersonal attitudes and more amiable relationships with their peers (Unti and DeRosa, 2003). Teaching children kindness to animals can help them to become kinder, more peaceable humans.

There is broad public support for expanding animal protection beyond the scope of the proposed legislation. Despite receiving relatively little publicity, Crustacean Compassion's petition to include decapod crustaceans in animal protection laws has received over 57,000 signatures (Crustacean Compassion, n.d. - b). Many eminent experts and public figures, as well as 42 animal rights and welfare organisations, the RSPCA and the British Veterinary Association, have joined this call.

Despite its fundamentally limited and impoverished approach focused on regulating rather than overcoming speciesist violence, exploitation and neglect, the current legislative process presents a

historic opportunity to secure significant improvements to the Animal Welfare (Sentience) Bill. Crucially, this needs to include extending the recognition of sentience and of our attendant ethical obligations beyond only vertebrate animals. Expanding our moral circle to encompass all of our sentient, suffering fellow creatures – regardless of their size, their species and of whether they have spines – would help to prevent and mitigate vast amounts of suffering and harm, while simultaneously helping to culturally elevate humanity. It would help us to move towards a more ethically evolved society, a new culture of peace and nonviolence in which unbounded compassion and kindness would be our guiding lights.

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