



Animal welfare with and without consciousness

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Consciousness and animal welfare science

- Animal welfare matters to people because of the belief that animals are conscious and can suffer
- But consciousness is not amenable to the normal methods of scientific investigation
- Therefore animal welfare cannot be investigated by the normal methods of science
- So there cannot be a science of animal welfare
- Is there a way out of this impasse?

Four possible approaches

- 1. There is no problem with animal consciousness
- 2. There is a problem but we have solved it
- 3. There is a problem and we haven't solved it yet but we soon will
- 4. There is a problem but it does not matter

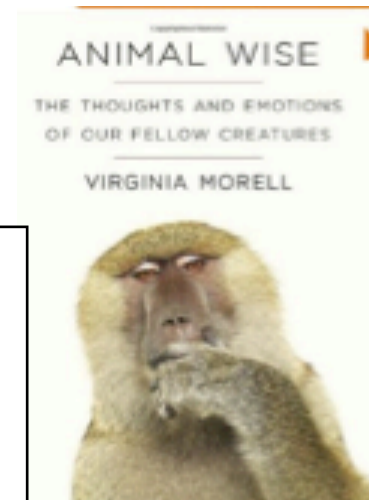
Solution 1: There is no problem



VIRGINIA MORELL, 2013

“Animals have minds. They have brains, and use them, as we do: for experiencing the world, for thinking and feeling, and for solving the problems of life every creature faces.”

Virginia Morell (2013) *Animal Wise*, p.1.



But 'No problem' brings its own problems



- If we 'just know' that animals are conscious, do we 'just know' that robots are too?
- Doesn't this devalue real animals?

“This \$100 Lifelike Robotic Companion for Seniors.....”

Picture credit: Companion Pet Cats

2. There is a problem but we have solved it



After 2,500 Studies, It's Time to Declare Animal Sentience Proven (Op-Ed)

- Marc Bekoff 1 Sept 06 2013 4.27 pm ET

“I don’t offer any specific geographic location because, with very few exceptions people worldwide – including researchers – accept that animals are sentient beings.

One notable exception is Oxford University’s Marian Dawkins who continues to claim that we still don’t know if animals are conscious.....I call this Dawkins’ Dangerous Idea.”

The dangerous idea

NB I did not say animals are not sentient; I said we don't have scientific evidence for sentience

We don't understand consciousness in humans and know even less about it in non-humans

- Pretending that consciousness is not a problem will make people think that animal welfare scientists don't need to be taken seriously
- Animal interests best served by acknowledging what we know and what we don't know

Flirting with consciousness

Using words that in normal speech imply consciousness ('emotion', 'mood', 'fear', 'anxiety', 'pessimism' etc.) but then claiming that in a scientific context, they don't necessarily imply it

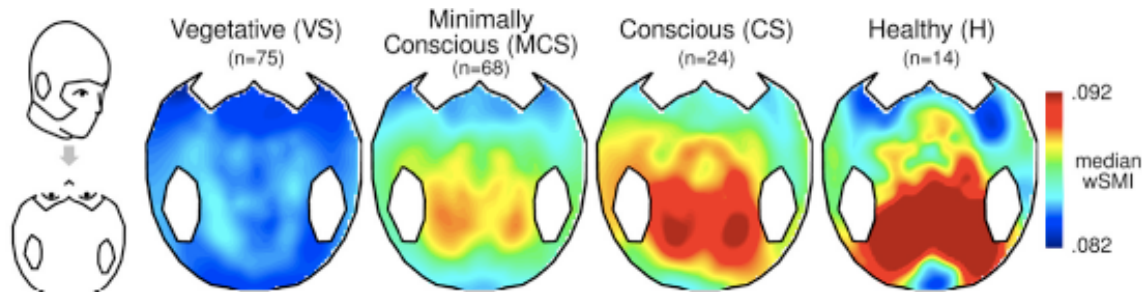
- May be good for getting grants and discussions with the public but the ambiguity confuses even the users.
- Blurs important distinctions (LeDoux, 2014)

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Claiming to have solved/flirting with the hard problem

- May look as though you are helping animals through giving them the benefit of the doubt
- However, leads the unconvinced to think you haven't understood the problem or are basing welfare claims on unscientific evidence
- Which means that animal welfare will be taken less seriously
- Which is not helping animals

Solution 3: There is a problem but we will solve it in the future



Suggestions include using brain imaging to study

- people in a vegetative state (JD Sitt *et al.* 2014 *Brain* 137:2258-70)
- people coming round from anaesthesia (G Mashour & M Alkire 2013 *PNAS* 110:10357-64)
- specific kinds of cortical activity as indicating consciousness (S Dehaene *et al.* 2014 *Current Opinion in Neurobiology* 25: 75-84)

New technology to find the Neural Correlates of Consciousness

But we need a science of animal welfare now

Solution 4: The problem exists but it doesn't matter

- Consciousness remains the 'hard problem' for which we do not (as yet) have a solution
- A scientific approach to animal welfare is needed now
- We therefore need a science of animal welfare that is not based on first solving the hardest problem in biology
- Animal welfare science that can embrace but does not *depend* on consciousness

Animal welfare without consciousness needs

- 1. A definition of welfare that does not include consciousness but does not preclude it either
- 2. A definition that includes what a wide range of people mean by 'welfare'
- 3. Empirical evidence about what does and does not improve animal welfare
- 3. Positive steps to establish the economic and social case for good welfare by linking it to other priorities (food safety, disease reduction, reduced medication, sustainability etc) (Equivalent to 'natural capital' arguments in conservation)

Defining good welfare without consciousness

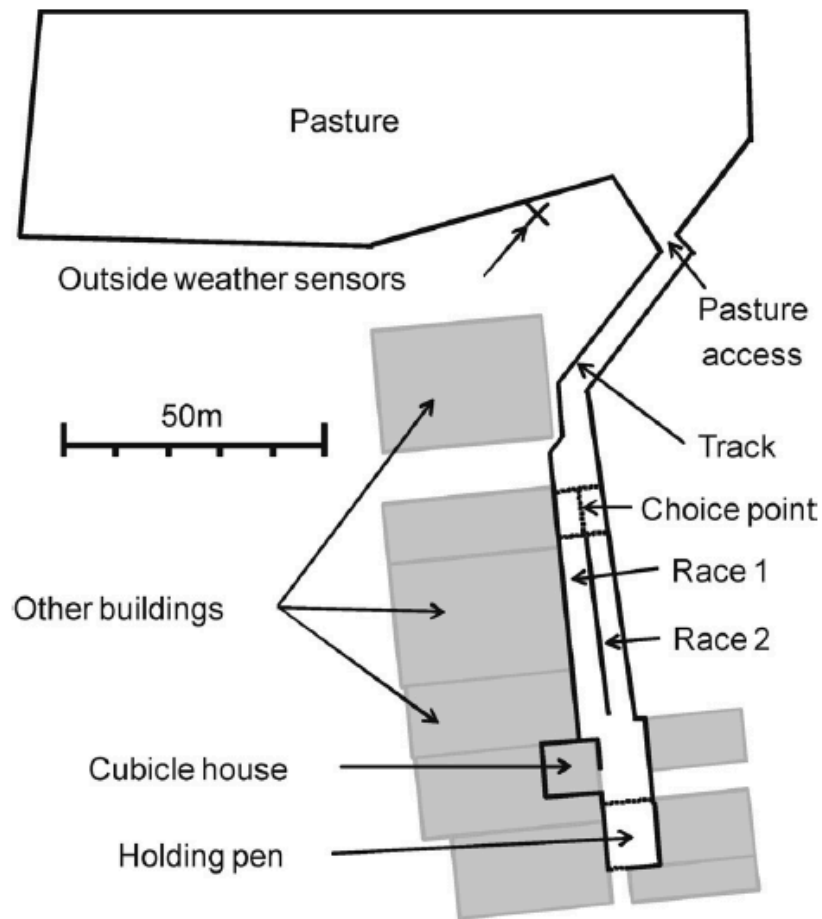
1. The animal has what it ***needs*** to remain healthy (food, water, shelter etc.)
- 2 The animal has what it ***wants***

This definition does not deny consciousness in animals but it does not depend on it

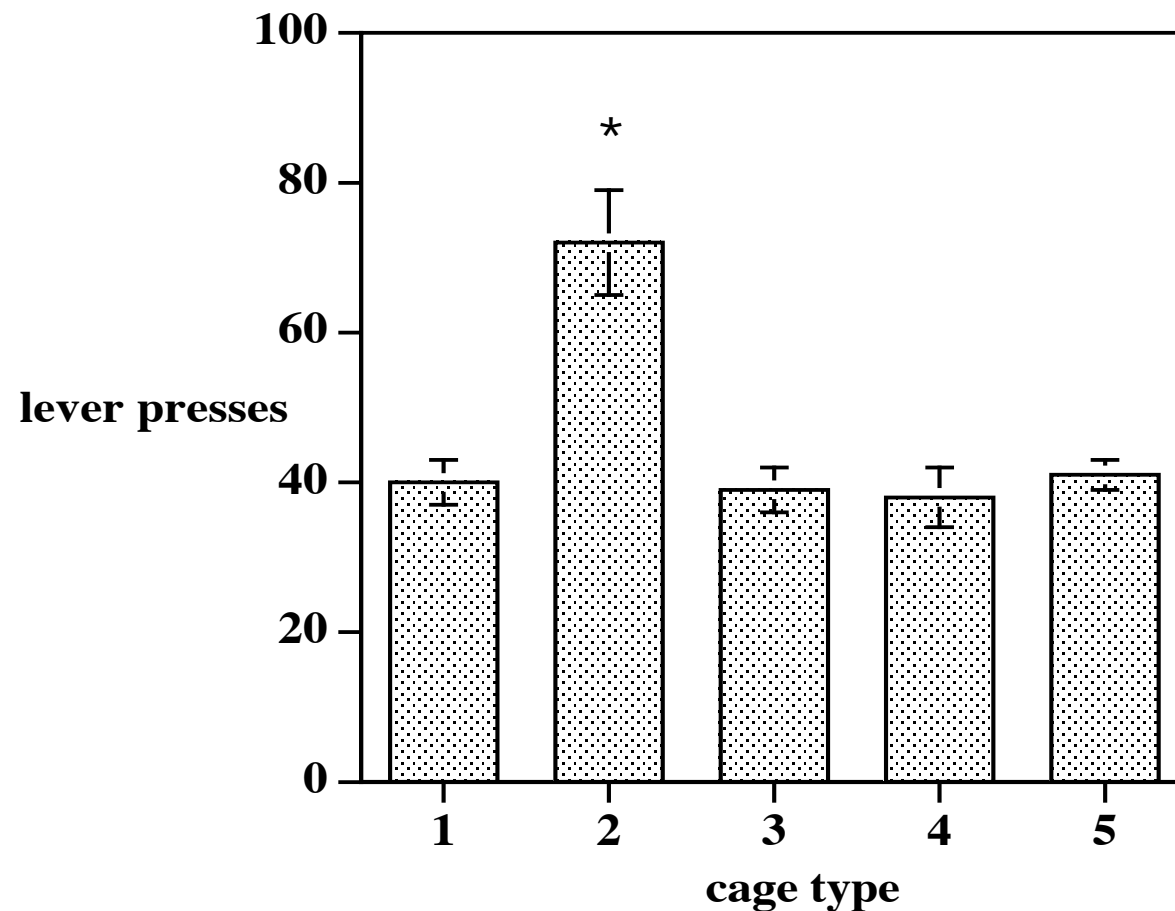
Animal health is important whether or not you believe animals are conscious.

What animals want are a good indication that health is at risk

We can ask dairy cows whether they want to graze outside



We can ask rats whether they want social contact by making them press a lever many times to be with other rats



Maximum number of lever presses to cages:

1=standard cage

2= three rats

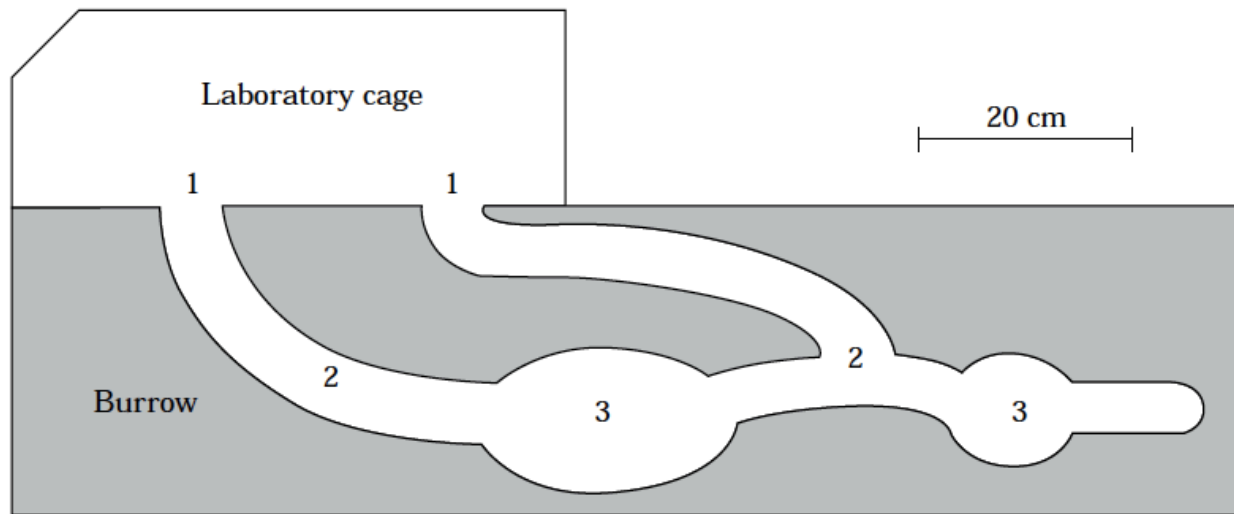
3=large cage

4= pillars

5=novel objects



We can ask gerbils if they want to dig tunnels



Gerbils given artificial preformed tunnels showed less digging behaviour

Tunnels are important but the gerbils do not necessarily want to do the digging themselves.

Wiedenmayer, C. 1997 *Animal Behaviour* 53: 461-470.

Consciousness is not necessary for many existing definitions of welfare

The Five Freedoms

Needs (for health)

1. Freedom from hunger and thirst
2. Freedom from discomfort
3. Freedom from pain, injury and disease

Wants

4. Freedom to express natural behaviour (what the animal is presumed to want to do)
5. Freedom from fear and distress (what the animal wants to avoid or escape from)

Good animal welfare ticks many boxes

- ☑ Lower mortality (less waste/more to sell)
- ☑ Lower levels of blemishes and injury (higher quality product)
- ☑ Lower disease levels (higher quality product)
- ☑ Lower risk human infection
- ☑ Less medication
- Carries across cultures
- More likely to be adopted by producers

Animal welfare without consciousness

- Is possible and necessary
- Does not need to have solved the 'hard problem' of consciousness (and should not pretend to have done so)
- Can investigate welfare objectively
- Can convince the unconvinced by linking animal welfare to other priorities (food safety, disease reduction, reduced medication, sustainability etc)
- Provides the best (i.e. most likely to succeed) basis for the ethical treatment of animals

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These ideas are expanded in papers available on my website
<http://users.ox.ac.uk/~snikwad/>

Dawkins, M.S. (2017) Animal welfare with and without consciousness. Thomas Henry Huxley Review. *Journal of Zoology* 301: 1-10

Dawkins, M.S. (2016) Animal welfare and efficient farming: is conflict inevitable? *Animal Production Science* 57: 201-208.

Dawkins, M.S. (2015) Animal welfare and the paradox of animal consciousness. *Advances in the Study of Behaviour* 47: 5-37

Also summarized in:

Dawkins, M.S. (2012) *Why Animals Matter: Animal Consciousness, Animal Welfare and Human Well-Being*. Oxford University Press