

The Ethics and Politics of Drones in Animal Activism

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Abstract: *This paper considers the use of drones in animal advocacy and aims to provide a moral and political justification for their use. We focus on animal protection groups who fly drones over farms to take pictures and videos of the way animals are used in agriculture and who then share these images publicly with a view to changing either consumer behaviour, the laws which regulate animal agriculture, or both. We identify unique moral issues associated with drone use and provide an argument to support their use in animal protection, in the ways spearheaded by Will Potter and other animal advocates worldwide. We then analyse privacy issues associated with drone use and consider whether the potential harms outweigh the benefits. We conclude that while privacy concerns are legitimate, they do not outweigh the public good generated by drones. Moreover, animal advocates can easily manage those concerns. Finally, we illustrate our argument in practice with a recent case study from Australia.*

Keywords: *drones, animals, ethics, politics, activism, technology*

1. Introduction

In 2014, Will Potter, a leading US animal advocate, crowd-funded \$30,000 in five days to purchase a drone. The drone was used to capture images inside highly inaccessible factory farms. Potter has since screened that footage on a nationally broadcast television program in the United States called ‘Truth and Power.’ That program forms part of a broader campaign to shed light on unseen animal suffering and to challenge the so-called ‘ag-gag’ laws standing in the way of greater transparency in animal agriculture – ‘ag-gag’ laws are those intended to restrict or ‘gag’ animal activists who capture and disseminate footage of agricultural animal facilities. Potter’s online ‘Drone on the Farm’ updates highlight the lawsuits he has fought in the US states of Idaho and Utah, in which he challenges these laws as unconstitutional.

‘Drone’ is a broadly used term for an unpowered aerial vehicle, or UAV. Drones can also be referred to as remotely piloted aircraft (RPA) or unpowered aerial system (UAS). They take a variety of forms, ranging from aircraft the size of a helicopter, to bee-sized devices that can enter buildings. Drones have been used for some years by the military and are now becoming affordable and available for civilian use. Drone use in agriculture is also increasing – both with livestock and with crop farming, so it is technology familiar to farmers. Because of their ongoing use in the military, much of the available literature concerns the use of drones in the military and increasingly for commercial use (see Luppacini and So’s 2016 survey of the literature). Worryingly, Luppacini and So note that in this literature, ethics was afforded the least attention (113). They point to a ‘risk that continued progress in commercial drone use could be jeopardized if innovation stalls because social and ethical concerns are not addressed’ (110). No less can be said of moral progress in our treatment of sentient animals. In considering the ethical and political dimension of drone use in animal activism, this paper thus contributes to our understanding of how choice of technology influences society, and we hope, of how society influences the use of new technologies (see Bijker and Law; Rao et al.).

Our interest is in animal advocate groups who fly drones over farms to take pictures and videos of the way animals are used in agriculture. They do this to gather up-to-date pictures of farming practices, including evidence of existing laws being violated as well as evidence of routine, legal farming practices that the community might find distressing or problematic (see

Brown). Footage used to further the interests of animals is then typically shared publicly with a view to changing consumer behaviour; challenging common cultural mindsets that harm animals; changing the laws which regulate animal agriculture; providing evidence to the courts of ineffective regulation; or all of the above.

Animal advocates have recently started using drones in addition to, and in preference to, other ways of gathering images. This change has occurred for several reasons. First, the range and extent of footage that can be captured by an unpiloted aerial vehicle is unique. Second, drones can cover a lot more distance than a person holding a camera. They are harder to detect and catch than a group of people on foot inside a farm. Further, in many jurisdictions using a drone in some circumstances is not illegal. Their use may therefore pose less legal risk to advocates and secures evidence which may be more readily admissible in court because it has not been illegally obtained.

Not everyone agrees that drones only represent improvement in their ability to gather images. Roger Clarke, a consultant and academic specialising in information systems, cautions that the 'single perspective' and 'limited context' of drones are not as effective as humans in information capture (290). These concerns are no trivial matter when drones are used to glean information about the treatment of animals. The size and shape of the drone in use, together with the operator's willingness to contravene laws about where they might fly, will certainly restrict their ability to capture the full picture of what is occurring. For example, a drone which can only monitor animals outside will not help us to understand the treatment of animals on the same property when they are indoors. The use of drones needs to be part of a more comprehensive approach to be helpful. Nevertheless, the new opportunities afforded by drones are clearly appreciated by the advocates who are seeking to experiment with them further. Given that drones are being used by animal advocates, our aim in this paper is to investigate whether the potential benefits they bring are outweighed by the potential harms.

For the animal agriculture sector, drone technology represents a serious invasion of privacy. This is partly because drones are not as targeted as other ways of capturing information and cover far greater distances than is possible in person. They therefore create a much more comprehensive digital record, and one which is arguably more open to misinterpretation. And,

as Rao, Gopi and Maione note (87), it can be difficult to tell that information has been taken and shared. Each of these issues relate to concerns that farmers have with unauthorised photos or videos of their operations.

Keeping these objections in mind, we will now make an argument that justifies the use of drones by animal advocates, in cases where that use is for the purpose of social or legal change, by exposing otherwise invisible agricultural practices. In the process we will weigh the potential benefits that are likely to be secured against the potential harms that drone use may cause, especially those posed by invading the privacy of farmers involved in animal agriculture.

2. Justifying Drone Use

In brief, we argue that the benefits secured by drone footage outweigh the risks of invading privacy because:

- 1) Animals are sentient and therefore a legitimate object of moral concern and their treatment a legitimate subject of government regulation.
- 2) There is evidence that the public is concerned about animal welfare.
- 3) This means the public has a legitimate claim to knowledge about how animals are treated on farms, in order to make informed contributions to public policy concerning how animal agriculture is regulated.
- 4) Accurate and comprehensive information about animal welfare on farms is not currently available solely through other means, and moreover:
- 5) We find a structural lack of transparency in animal welfare on farms, due to the financial incentive for farmers to conceal information, as well as the compromised relationship of state-sanctioned animal welfare authorities and industry. This means animal advocates cannot hope to improve public knowledge of farm animal welfare through other means alone.

We will now argue these points in more detail.

2.1 *Animals are Morally Significant*

The first important point to note is that animals are a legitimate object of moral concern. There are different kinds of arguments we can make here for animal rights, or for taking the interests of animals equally into consideration, which have been well documented over the past forty years (see Singer; Regan; Pluhar). In addition to the more progressive arguments for moral significance made by philosophers, animals are also afforded moral status within mainstream anthropocentric moral frameworks (see Garner, 'The Politics of Animal Rights' and *A Theory of Justice*; Scruton). The kind of activity we are talking about – using drones to survey farms – is directed squarely at improving the lives of animals used in farming. Using drones to do this would not be legitimate if those animals did not have interests worth protecting with rights or if those interests were so inconsequential that any human interest in private enterprise, or preferences for animal protein would necessarily outweigh an animal's interest in basic welfare. This is manifestly not the case. As philosopher Colin McGinn acknowledged in a review of Singer's *Animal Liberation*, the legitimization of animal interests is essentially a 'won argument' (14).

2.2 *Public Concern Justifies Public Knowledge*

Animal welfare is also politically significant. Not only are animals themselves an appropriate source of moral concern, the treatment of animals in the agriculture sector has been persistently shown to be a source of mainstream concern. Noting the complexity of the word 'public' (and the 'sub-publics' it encompasses), Peter Chen analyses the deeply diverse, volatile and behaviourally inconsistent attitudes towards animals held by Australians. Chen concludes that despite these complexities and the difficulty of measuring across them, there is an observable shift in Australian publics towards increased concern for animal welfare (84). While current protections for animals are far from comprehensive, they are widespread and public agitation has led to the scale and depth of welfare regulations already in place, however inconsistent they are with each other and with practice.

The mainstream acknowledgement of animal sentience (see 2014 Human Research Data, cited in Chen, 46) and sustained public concern for the treatment of animals in agriculture point to a politically legitimate public interest in the welfare of farmed animals. Open access to information about how animals are treated is important, not only to protect the welfare of animals per se, but also to reflect the interest that citizens of Australia and other liberal democracies have expressed through their efforts to ensure this welfare is regulated (see O’Sullivan; Chen). By gesturing towards evidence of flaws, animal advocates can question the efficacy of regulations that are in place and thereby help to execute this important work by employing drone technologies.

Finally, we note that consumers in Australia, and in other comparable jurisdictions around the world, are legally entitled to know that what information they have about the products they buy is not false, misleading or deceptive. The Australian Consumer Law (ACL), a national law for fair trading and consumer protection, ‘allows the Commonwealth Minister to prescribe information standards about the information required to be provided by suppliers of consumer goods and services’ (Commonwealth of Australia). However, the general protections against misleading and deceptive conduct about products offered by consumer protection laws are not always straightforward. As Parker, Scrinis and Carey have argued, the labelling of free range eggs has created ‘years of consumer confusion’ with stocking ranging from 1,500 birds per hectare, to 10,000 per hectare. When consumers purchase a carton of eggs labelled ‘free to roam’¹ they are entitled to know whether the hens who laid the eggs were free to roam as claimed on the box. Currently they may not be sure what being ‘free to roam’ actually means in physical terms. Under the ACL, a new information standard has recently been introduced which requires eggs labelled as ‘free range’ to have been ‘laid by hens that had meaningful and regular access to an outdoor range during daylight hours during the laying cycle; [who] were able to roam and forage on the outdoor range; and [who] were subject to a stocking density of 10,000 hens or less per hectare.’ The stocking density must also be prominently displayed on the packaging of any eggs labelled as ‘free range’ (*Australian Consumer Law (Free Range Egg Labelling) Information Standard 2017*). While the newly mandated minimum stocking density is perhaps not

in keeping with the full range of diverse consumer expectations around hen welfare, the impact of more detailed information required on egg carton labels is yet to be seen.

Animal sentience, public concern and consumer rights provide three compelling reasons for increasing public understanding of animal agriculture. This means the public has a legitimate interest in – and claim to – knowledge about how animals are treated on farms, in order to make informed contributions to public policy concerning how animal agriculture is regulated, as well as their own consumption habits.

2.3 There is an Information Deficit

While animals are morally significant, and people want to regulate and understand their use, they would not be able to do this if they relied on the information available through industry and government sources. The people who have easy access to agricultural premises have a vested interest in concealing the full picture of what takes place on the farm. Contemporary factory farms are designed specifically to operate largely automatically, with limited need for human labour. That said, builders, vets and transport workers will occasionally have access to these facilities. In many cases they have acted as whistle-blowers, reporting evidence of cruelty to animal protection organisations. But such access is rare and whistleblowing is an inherently risky practice. Farmers have no reason to disclose. They may claim that information is concealed on competitive grounds, but there are also shared commercial advantages in not informing the public about the unpleasant reality of modern animal husbandry and slaughter.

Moreover, the current mechanisms in place for the state to monitor the treatment of animals on farms are substantially compromised. The state, which regulates farming, has the authority to access farms around Australia, with some limitations on those powers according to the particular state or territory. But this role is often outsourced to state departments with a possible conflict of interest due to the co-location of animal welfare alongside the agriculture portfolio (for a detailed discussion of this see Goodfellow). Alternatively, this responsibility falls to under-resourced non-government organisations (NGOs), who rely on donations and corporate sponsorship to fund their work. For example, in 2017, the Royal Society for the

Prevention of Cruelty to Animals (RSPCA) in New South Wales (NSW) received \$1,096,691 in government subsidies. The remainder of the organisation's \$7,254,944 income was generated via donations, bequests dividends, sales and alike (RSPCA NSW, 12). The ongoing need of such NGOs to appeal to both public sentiment and industry sponsors provides a strong disincentive for them to obtain and disseminate unflattering footage of controversial or distressing farming practices.

As noted above, often the only way illegal farming activities are discovered is via parties contracting to the business, such as plumbers or transport workers. Yet the limited number of people working in these establishments makes whistleblowing less likely. Former chief executive officer of the Humane Society of the United States, Wayne Pacelle, authored an historical survey of the progress made in animal welfare which shows that animal advocates need to be 'working through multiple channels' because there is no 'one simple formula for change, no one strategy to drive reform' (73). This highlights the role played by animal advocates using drones to obtain photo and video footage not available by any other means. This role is important to note, because if there were less harmful means of providing the public with accurate and objective information of farming practices, the need for the morally risky and potentially illegal use of drones would be more difficult to justify.

We therefore find a structural lack of transparency in animal welfare on farms, due to the financial incentive for farmers to conceal information and the compromised relationship of state-sanctioned animal welfare authorities and industry, which arguably creates a need for animal advocates to use drones in their work. It is much more difficult for animal advocates to improve public knowledge of farm animal welfare through other means.

An argument can also be made that the democratic interest in making informed contributions to public policy justifies illegal behaviour by animal advocates who commit trespass in order to advance a morally grounded policy agenda (see McCausland et al.). Moreover, strong community responses to exposés such as the Australian Broadcasting Corporation's (ABC) reporting of the plight of cattle exported live from Australia to Indonesia (see *Four Corners* 2011) and the recent 60 Minutes report on this issue (2018), attest to the community interest in enhanced animal-related knowledge. For the same reason we believe that

animal advocates may use drones to obtain and distribute information to the public about animal welfare on farms.

On these grounds we argue that using drones in animal protection is justified. However, the criticisms of drone use must be addressed and weighed against these benefits. So, depending on how we understand the nature of moral obligation generally, this argument will only hold if the use of drones benefits the greater good, while not violating any rights in the process. We will now consider whether these potential harms outweigh the potential benefits of using drones for animal protection purposes.

3. Drone Harms

Farmers whose land is surveilled by drones report both immediate economic (commercial loss) and social (reputational or psychological damage) harm. The noise made by drones is unpleasant and may affect the tenants of farming property. Significantly, the noise drones make can also affect the animals themselves. A spokesperson from the British Country Land and Business Association (CLA) noted in 2016 that ‘drones have been flown in close proximity to livestock. Animals can be easily frightened by drones, which can cause injury to them and others’ (Sawer). His argument builds on concerns raised by a University of Minnesota study, indicating that ‘bears show a physiological but limited behavioral response to unmanned aerial vehicles’ (Ditmer et al.). The farming industry has likewise expressed concern about the lack of control over how drone-captured imagery and footage may be presented and interpreted. At Australia’s 2014 BeefEx lot feeding conference, Trent Thorne, an agribusiness lawyer, suggested farming operations could be misrepresented by ‘selective editing and sensational reporting’ (Cawood) – a concern, however, which should almost certainly not be limited to images captured by drones. However, the most frequently cited concern is the threat drones pose to farmer privacy and much of the ostensible damage can be understood in these terms.

In cases where animal advocates have used drones, farmers have immediately responded strongly on privacy grounds. In newspaper reports they have described the work by animal advocates variously as ‘another attack on [farmers’] peace of mind and an invasion of their

privacy' (Cubby): 'I just say to the general public, would they want this sort of machine hovering over their backyard or their house or whatever infringing on their privacy on the suspicion that you might be kicking your dog in the back yard'; and 'I find it extremely intrusive, I don't believe these people should have the right to do what they've just done' (Murphy, 'Animal Liberation Activists').

'Privacy' is a wide-ranging concept. Its scope includes the value of: keeping secrets; reproductive autonomy; government surveillance; social media settings; voting without government interference; and keeping the colour of one's underwear to oneself. With very significant harms in its purview, the accusation of violating someone's privacy has a lot of traction in public discourse. Indeed, the risk to privacy posed by new technologies was the subject of an extensive review by the Australian Law Reform Commission (ALRC) in 2014. This review draws (in part) on the work of legal scholar Daniel Solove, who has argued that 'Privacy seems to be about everything, and therefore it appears to be nothing' (479). While some theorists, such as Ruth Gavison and Adam Moore, argue that control over accessibility – both physical and personal – ties privacy rights together, they also note that privacy promotes interests as diverse as liberty, autonomy and selfhood, as well as benefitting human relations and furthering the existence of a free and democratic society. Another influential account of privacy rights made by Judith Jarvis Thomson identifies privacy rights as strictly derivative of other more fundamental rights, namely those to bodily security and private property.

In an attempt to apply some more rigour to the concept of privacy, Solove (490ff) has developed a useful taxonomy of privacy-harming activities and groups them into four basic categories:

1. Information collection: the very act of obtaining information can be harmful in a way we describe as a privacy violation. This includes surveillance from afar, and the act of interrogating subjects.
2. Information processing: once information has been collected, there are also risks that it will be then handled in a way that causes harm. This may arise from the effects of aggregating data; in linking information to specific individuals; in handling information

insecurely, risking further dissemination (see below); in the secondary use of data for purposes other than what it was collected for; and in excluding individuals from knowledge of how their data is shared and used.

3. Information dissemination: related to the processing of information is how it is – or could be – disseminated. Confidentiality can be breached; the disclosure of (true) information can affect how others judge an individual; relatedly, information can be ‘amplified’ or made more accessible in a way that causes harm and in addition to the harm of truthful information, further harm can occur with the dissemination of distorted, untruthful or misleading information. In addition, the exposure of a person’s body or bodily functions (including emotional expression) can cause harm.

4. Invasion: Solove identifies invasion into personal affairs as a separate category of harm caused by privacy violations. In this category he sees intrusion as an act that can ‘disturb one’s tranquillity or solitude’ and the wrong of decisional interference, such as undue governmental influence on decision making.

This laundry list of harms that can be understood as privacy violations unsurprisingly has numerous overlaps. Indeed, Solove notes that what they have in common may be understood well in the Wittgensteinian sense of a ‘family resemblance’ (486). For example, arguably intrusion is akin to the potential damage caused by information collection, and dissemination and decisional interference are two more ways in which data can be used. Nevertheless, this more granular account of what can go wrong brings to the surface the different ways in which privacy violations do cause harm, thereby allowing a more nuanced analysis of what may be occurring, including the significance of the potential harm caused. This allows us to determine whether the harms are outweighed by the benefits. Of the harms described by Solove, we contend that only some of these will be inevitable where drones are used on farms, and only a small number of other harms will be a possibility. We also support Solove’s notion that none of these ‘violations’ is inherently problematic; he cites Anita Allen’s observation that sometimes people ought to be held account for their private actions.

3.1 *Surveillance*

Surveillance, we argue, is an unavoidable effect of drone use. The privacy of farm owners therefore will be violated when animal advocates fly drones over farms. When farm owners live on that property, and their living quarters are also surveilled, this creates the potential for a different kind of harm. To violate personal privacy is much more of a concern to us, than capturing footage of farm operations that, as sites of economic production, are obliged to comply to business regulations. This is why the harm inflicted by surveillance varies according to circumstance.

The question of power informs our measure of harm. It is one thing to violate the privacy of an agri-business that is potentially operating outside an agreed code of practice, particularly when that business claims to be meeting the public expectations inherent to these regulations. It is another thing entirely for social justice movements, such as those led by animal advocates, to violate the privacy of an individual farmer or a farming family.

Navigating such ethical complexities is part and parcel of the contemporary monitorial democracy in which we live. Monitorial democracy, as it is understood by Michael Schudson, deals with the complicated relationship between the media, other forms of communication, and representative power, which is the hallmark of democracy. The issues of objectivity and transparency, central to Schudson's seminal work and to our concerns, are tied up with the changing roles of the citizens that make up a democracy (see Schudson's retrospective review, 5). Schudson's monitorial democracy has been elaborated by John Keane, as way of understanding the scrutiny of power that takes place through the varied groupings of people that influence public policy. As Keane points out, in government circles this process is sometimes included in moves towards participatory governance, but monitorial democracy also includes public protests, such as those organised by animal advocates. Some citizens are more active than others. In Mark Deuze's analysis of Schudson's work, where he argues monitorial citizens can be understood in terms of their attitude toward public information, he shows how we pay attention to the information that matter to us personally. However, as Silvio Waisbord points out, in his survey of Schudson's thinking, 'The system of monitoring is not a leveled field' (1233). For example, the recorded opinions of a citizen jury can carry more weight than the placards of

those participating in a vigil. All the same, even while there is no ideal egalitarian outcome in this form of democracy, and powerful interests prevail, as Keane argues, the ‘dynamic’ created by this diversity ensures a responsiveness to different opinions (22). Keane makes it very clear that these opinionated ‘publics’ are, by their very nature, different from any private or secret veillance. We argue that animal advocates’ use of drones indicates that they are actively participating in the monitorial democracies in which they live and that the power expressed through this participation is variable.

The public nature of drone surveillance is different from the more harmful effect of continual surveillance and of continually being watched. In addition to making people feel extremely uncomfortable, constant surveillance can act as a tool of social control. People are inhibited and engage in self-censorship when they know they are being watched, and this restricts their liberty. This is often described as the ‘chilling’ effect of surveillance (see for example, Clarke 288; Finn and Wright 186).

More than that, the awareness of the possibility of surveillance can be just as inhibitory as actual surveillance (Moore). The harm of continual surveillance is most famously described in Michel Foucault’s reading of Jeremy Bentham’s ‘panopticon’ prison where power, through its potential surveillance of all that are subject to change, ‘makes itself everywhere present’ (205). This expression of power is particularly relevant for the sporadic use of drones by animal advocates. While drone use may be limited, the constant threat of being watched and recorded is unnerving and disturbs one’s peace of mind. In this instance we see the related harms of information collection and intrusion in Solove’s catalogue of harms.

But when we conjure up images of the harmful effects of surveillance as a tool of social control, our minds turn to North Korea, the former East Germany, George Orwell’s *Big Brother* and other examples of exaggerated and all-encompassing governmental surveillance. This is a key difference because such methods of surveillance represent a significant imbalance in power which does not fully apply in the case of animal advocates monitoring the activities of farmers. We recognise that the small groups of animal advocates using drones for this purpose represent a growing political force, and this may felt as surveillance by individual farmers. However, we note that farmers, through their professional activities, are part of a public that has a more

significant influence, particularly when it comes to government decision making – we refer here to the ongoing bipartisan policy commitments that subsidize and support animal agriculture. Finn and Wright in their discussion of the harms of surveillance also point to the question of power imbalance. They consider the argument that surveillance technologies used by the state ‘reinforce existing social positions’ and ‘enable a privileged mobility for some individuals’ (for example in airport security systems) – issues which are not in play in the use of surveillance of commercial activity by animal advocates.

It is precisely in this vein that Clarke, following Steve Mann, uses the term ‘sousveillance’ from the French ‘sous’ for ‘under’, to describe ‘the use of veillance techniques and technologies by the less powerful, usually individuals, against the more powerful, usually organisations’ (288). Mann’s term ‘sousveillance’ was developed to describe the emancipatory importance of individuals being able to observe the organisational observer (333). Clarke applies this term to drone use and argues that drones provide a form of democratisation to those without formal power. He further notes that ‘where surveillance is empowered, sousveillance is constrained’ (300). While we appreciate that animal justice movements have some informal power, it is our view that the animal advocates’ use of drones is a justified form of a democratic sousveillance that cannot rightfully be constrained.

3.2 Other Privacy Violations

The other harms identified by Solove that may be incurred by flying drones over farms include identification, disclosure, increased accessibility and intrusion. It is our view that these harms can and should be avoided – especially where they entail distinctly personal (as opposed to commercial) harm. Likewise, animal activists should seek to avoid harms outside of privacy incursions – not least to the animals themselves, as noted above.

Importantly, we claim that to achieve the significant benefits that animal advocacy certainly brings, it is typically not necessary to publicly identify individual farms or their workers, or to widely share even very damaging information about individual farms and people. We support the role of activists in bringing about societal change: new and improved laws and a

changed consumer mindset that will ultimately bring about the end of the animal agriculture industries. But this does not need to be achieved by bringing personal and financial harm to workers in the industry one at a time.

However, protecting the identity of individuals as well as their psychological tranquillity may not be avoidable where farms are small and overlap with personal property and privately owned concerns – where information about individuals can be accessed and publicised. Here animal protection groups should exercise extreme caution.

In addition to personal harms, Richard Posner has argued that privacy benefits society as much as it does individuals, and maintains that corporations, too, have privacy rights, the violation of which leads to social harm. Posner's argument for 'entrepreneurial or productive secrecy' (249) would most likely find support from the farmers and the industry bodies that support them. He privileges corporate privacy over private privacy because 'discreditable facts' are more likely to be concealed (248). This position does not seem to be wholly supported by evidence gained by animal advocates to date. It seems to us that the principle of economic interests serving a greater social good becomes complicated when put together with the moral rights advanced by animal advocates.

It is also important to note that drone use by animal advocates must minimise other avoidable harms. Drones can crash on top of people, into power lines, interfere with civil aviation and cause plenty of other harms if they are not used carefully (Rao et al. 86). Minimisation of these risks is essential to legitimise drone use by animal activists, no less than by commercial drone operators.

One final harm to consider concerns a key question in the philosophy of technology, namely the extent to which making use of a new technology shapes the response to this use, including its deployment and its social reception. Luppicini and So in their discussion of the literature on commercial drone use likewise note that 'new sources of ethical information and knowledge' can occur when a person and a drone interact to cause new conflicts and violence (114). Animal advocacy group PETA employs drones in defence of animals who are hunted, an action discussed at length by Kirk. At the end of his account of what happens 'in the field' and

the response to PETA's drone use on YouTube, he describes hunters newly on the lookout for the PETA drone and musing about whether to purchase their own – prompting activists to plan their response. Kirk writes, 'In the end, maybe all PETA had done was to give its enemies an idea, and a few years down the road, we'll see a full-blown unmanned aerial war over the sacred hunting grounds of America, where the deer and the pheasant are only collateral damage.' A new and aggressive response by farmers to the new technology, and the harm this would entail, cannot be ruled out.

Yet when we weigh the immediate benefits against these other harms, we find that the potential for benefit outweighs the potential for harm. Disseminating images captured by drones increases information available to the public and can lead to very positive changes in a particular farm's treatment of many animals. The harms caused by sporadic sousveillance, which may result in embarrassment and potential commercial loss; the small risk of unsafe use by activists; and the as-yet largely unrealised risk of an escalated conflict between activists and farmers are not significant enough to warrant protection by rights, nor to outweigh the benefits both to animals and to people as consumers and citizens. After all, the lives of animals living in factory farms might be of such poor quality that on balance it would be better that they had never been born. If the task here is to weigh harms, then the harm associated with others knowing what you are up to and the avoidable risk of unsafe use must outweigh the harm of severe confinement as experienced by most agricultural animals.

4. Dora Creek Free Range Eggs: an Australian Case Study

Australia is home to numerous animal protection groups with various levels of political influence, membership, funds and with vastly different approaches to animal protection. As such, it hard to know how many groups are currently using, or intend to make use of, drones as an animal advocacy tool. One of the most famous cases, which we draw on for analysis in this paper, occurred in 2013, when on eight occasions Animal Liberation New South Wales (NSW) used a drone to capture aerial footage of one of two properties that produce Dora Creek free-range eggs. The farms are large, with 65,000 hens. The footage broadcast publicly only captured

images of a number of large sheds and their immediate surrounds (Murphy). The footage was apparently captured legally in airspace between 10 and 30 metres above the ground.² Animal Liberation's stated purpose was to determine whether the egg production at the farms was genuinely free-range. The question raised was a simple one: did the animals actually have time outside the sheds?

Animal Liberation NSW claimed that the footage demonstrates that the farmer was breaching the voluntary Primary Industry Standing Committee's Model Code of Practice as no birds were let out to roam freely. The code requires free-range hens have access to an outdoor range for a minimum of eight hours a day. The farmer denied the claim, saying that he was keeping the hens inside as they were being de-wormed (allowable under the code). The story was broken by the *Landline* program on ABC television. The farmer did not cooperate with the story or grant access to the shed. Animal Liberation NSW has lodged a formal complaint to the Australian Competition and Consumer Commission (Animal Liberation NSW) in relation to Dora Creek free-range egg farm. The outcome of that complaint is not yet known.

In the case of the Dora Creek free-range egg farm, it would seem that the community interest overwhelmingly outweighed any other concerns. There is no evidence that private information about the farmer and his family was collected, shared or broadcast and there is no evidence that the drone inhibited the farmer and his family's use of private dwellings adjacent to the animals. In addition, there is no evidence of animal welfare concerns that resulted from the use of the drones apart from the possibility that the hens were in fact not being dewormed. Moreover, there is good reason to believe that animal advocates are not randomly choosing farms to survey. Instead, they target their limited resources in cases where a complaint or suspicion has been raised.

Animal Liberation NSW's actions seem justified. Information about the hens' access to outdoor space would not have come to light had the drone footage not been available. We argue that there is a legitimate public interest in knowing whether free-range birds are spending time outside, particularly if consumers are paying a premium for their eggs. While the science of hen space use may be contested, establishing the facts of the matter so that consumers can make an informed choice would seem to be consistent with the democratic principles outlined here.

Animal Liberation NSW appears to have used the material responsibly without risk of individual harm, and reported the matter to a suitable authority.

5. Conclusion

We have argued in this paper that it is legitimate for animal advocates to use drones to achieve changes in animal welfare protection laws and to change the cultural mindset with respect to using animals. This is because animals are a legitimate source of moral and public concern and because information on animal welfare is typically not otherwise accessible. The benefits which drone use in activism can bring include a contribution to ending animal suffering and exploitation, as well as increased public participation in democratic law making. We also addressed the harms that may be incurred by drone use, and focussed on the harm done to people's privacy. We have established that the harms done by violating this privacy are diverse, and that while farmer privacy will inevitably be violated, the ostensible harm done by surveillance is negligible, given the imbalance in power of advocate to farmer. Other privacy harms, including unsettled peace of mind; the risk of unsafe use; and linking individual farmers to information are outweighed by both immediate benefits and the potential for a less harmful society in the longer term.

Notes

¹ 'Free to roam' is often used to describe the conditions of broiler chickens raised for their flesh. The term is also referenced as a label for egg-laying hens in the explanatory memorandum supporting the introduction of the new Information Standard (Australian Consumer Law (Free Range Egg Labelling) Information Standard 2017).

² It is worth noting that since 2013 the regulatory environment in Australia and elsewhere has been changing rapidly, and new restrictions have been developed in recent years on how, where, for what purpose and which kind of drones may be used. We cannot say whether the Dora Creek campaign would be legal today. If animal activists use drones to carry out illegal activities, their legitimacy will also depend on whether they can be justified as acts of civil disobedience.

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