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To Turn: California's Proposition 2 and the Ethics of Animal Mobility in Agriculture

On November 4, 2008, residents of California were asked to make a decision on a fundamental issue. Proposition 2, officially entitled "Standards for Confining Farm Animals," had qualified for the November election via the state's referendum process, a process which allows members of the public to bypass the state legislature and submit a proposal directly to the will of the general population. As written on the election ballot, Proposition 2 "[r]equires that calves raised for veal, egg-laying hens and pregnant pigs be confined only in ways that allow these animals to lie down, stand up, fully extend their limbs and turn around freely" (State of California, 2008). In comparison to most other ballot initiatives, the text of the proposition was sparsely worded. In essence, the proposition's supporters sought to redress animal welfare concerns created by different types of animal enclosure — namely, the use of veal crates, sow gestation crates, and battery cages. In many respects, the sparse wording of the proposition paralleled the substantive nature of the initiative, which sought to address issues so basic in character that they are difficult to designate even when more specific wording is employed. Indeed, the nature of movement, let alone its ethical import, has been a subject that has perplexed thinkers for more than two millennia.[1]

Proposition 2 was not the first initiative of its kind. In the United States, similar initiatives had been passed in Florida, Arizona, Oregon, and Colorado since 2002. Those particular initiatives, however, only involved pregnant pigs or veal calves. The California initiative, by including pigs, calves, and hens, was more comprehensive than any of these prior enactments. As it turned out, since the veal and hog industry in California are virtually non-existent, the bulk of the debate and conflict regarding Proposition 2 centered around egg-laying hens.

The egg industry in California is one of the largest in the United States. According to the United States Department of Agriculture's 2009 *Chickens and Eggs Summary*, there were 20,272,000 egg-laying hens in California in 2008, ranking the state as the fifth largest. On average, each hen layed 260 eggs, resulting in the production of 5,272,000,000 eggs (fifth largest state). Although California ranked high among all states, California egg production still only accounted for approximately 6% of the national total. According to

the USDA's latest agricultural census (2008), there were 5,098 farms with egg-producing hens in California. Most of these farms, however, were quite small (4,553 had fewer than 50 hens). Thus, as Sumner et al. stated with regard to the statistics found in the 2002 agricultural census, "… most of these farms are small operations with no significant statewide commercial presence" (20). Among the larger facilities, 15 farms had between 20,000-49,999 hens, 8 farms had between 50,000-99,999 hens, and 37 farms had 100,000 or more hens (USDA *Chicken and Eggs Summary* (2009). The lowest figure among the largest class, however, is not particularly indicative, for as Sumner et al. observe, several of the largest facilities contain millions of hens. Altogether, Sumner et al. estimated the value of California egg production to be $337 million in 2007.

Central to these economic developments is the widespread use of battery cages to house egg-laying hens. According to United Egg Producers (UEP), the primary trade organization for egg producers in the United States, 95% of commercial egg production is generated via cage systems. Though Hewson notes that the first battery cages in Britain were for single birds, modern cages hold multiple birds, typically 5 to 10 birds (Shields and Duncan, n.d.). Cage configurations vary, some measuring 12" x 18", while others are 16" x 20" or 24" x 20" (Bell). (The latter measurement refers to cage depth, and thus remains fairly constant among cage types. These cage depths accommodate the elongated body of hens, but not movement per se, as any lateral or circular movement is inhibited by the presence of other birds within the same cage.) While there has been growing concern about farm animal welfare in the EU (Horgan and Gavinelli), some of which has been codified in EU directives and awaits enactment at a later date (EFSA), there are no legal standards for cage systems in the United States. More generally, Mench has illustrated the disjointed character of farm animal welfare in the United States (variously involving government entities, producers, and retailers) and the potential complications that may emerge during the establishment of welfare guidelines. Nonetheless, in response to emerging public concerns, the UEP has developed guidelines to address welfare concerns. UEP now advises producers to provide each bird with 67-86 square inches of space (UEP). The larger value in this range covers an area slightly smaller than a standard sheet of copy paper. That said, the minimum number in this range (which converts to 432.3 cm^2) is the more critical value, since it designates a threshold of acceptability. These industry guidelines are clearly meant to alleviate public concerns, but it is not clear that they will do (or have done) so. In their study of the space needs of laying hens, Dawkins and Hardie found that the mean area covered by a standing hen was 475.3 cm^2. Other behaviors, such as ground

scratching, turning, wing stretching, feather ruffling, and preening, required more space. Wing flapping, the most extensive activity, required a mean area of 1876.3 cm^2. If accurate, these numbers suggest the UEP guidelines are not sufficient to meet the behavioral requirements of hens. In a document commissioned by the EU's European Food Safety Authority, it was noted that, "The evidence suggests that space allowances of 750cm^2 per bird have resulted in significant improvements in hen welfare, compared with the previous situation when birds were housed at 450cm2 per bird. However, even at these allowances, space is at a premium and some behaviors are prevented due to insufficient space" (70).

Although studies have examined the character of modern agriculture at the macro-level (e.g. Bonanno et al.; Goodman and Watts), Proposition 2 presents an ideal opportunity for exploring the impact of small-scale phenomena on agricultural industries. In contrast to the focus on the concentration or globalization of agriculture, Proposition 2 offered a setting in which to investigate and better understand the significance of bodily movement. In recent decades, the body has become a topic of increasing interest in social theory. This research is difficult to summarize, for there are many strands to this research trend. Shilling, however, has identified several primary sources, including examinations of consumer culture, the emergence of social movements/theories concerned with bodily experience or ecological harmonization, feminist research stemming from prevailing ideas on gender, research on governments' incorporation of bodily processes into policy, growing interest in the impact of diverse technologies, and a desire to settle academic disciplinary debates. Within geography, a more explicitly spatial discipline, this interest in the body is exemplified by Harvey's examination of the body within commodity chains, Thrift's exploration of techniques designed to slow the body, Longhurst's consideration of the pregnant body in public space, and Davies' study of organ transplantation.

Research on animal geographies, which was kicked off in a substantial way by Wolch and Emel, has tied into body politics in several ways. In some cases, there is an attempt to illustrate how animals fit within a given culture, for example in Tuan's elucidation of human domination in pet-keeping, Yarwood and Evan's account of rare livestock breeds in the UK, or, more relevantly, Hovorka's description of the changing position of chickens in Africa as a result of their commodification and ability to fit more easily into urban spaces. In part, such portrayals throw animals into the mix of social constituents. At a more fundamental level, there is fervent interest in animal agency, something that Philo and Wilbert describe in part by reference to "the beastly places made by animals themselves, whether wholly independent of humans or when transgressing, even

resisting, human spatial orderings" (24). Spatial features are at the forefront of this definition, and this contention is supported by work that illustrates animal agency in different geographic realms — rural (Lulka, 2004), urban/suburban (Wolch) and domestic (Power). That these illustrations of animal agency are transgressions speaks to a certain outwardness of animality, one that is indicative of the long-held interest in movement, and one that is particularly relevant to the constraints imposed on animals in modern agriculture. Though the power of nonhumans is by no means unlimited, these animal infiltrations disabuse us of the notion that animals are mere automatons or cultural creations.

Johnston, utilizing a phenomenological approach, has advocated the use of "dwelling" to further understanding of animals (641). While the term can suggest a sense of rootedness, in her depiction it indicates otherwise, for it describes "a complex and swirling movement" that is typical of any milieu. Borrowing from Tim Ingold's work, she contends this notion of dwelling is not simply intended to convey beings' connections with their surroundings, but also that "the very generation of life forms, and the forms of life, are made possible through this milieu" (Ibid.). This is particularly significant when we consider the vacuous environment of egg-laying hens and the inability of hens to move away from it and engage elsewhere.

Others, often following the work of Latour (1993, 2005), characterize animal agency in non-cognitive terms; that is, one without intentionality. In these theorizations, the materiality of nonhuman animals has been accentuated. In some cases, animal materiality has an agential impact on systems of production and consumption (Mansfield; Stassart and Whatmore), but does not necessarily benefit the animals in themselves. They are grist for the mill, one might say, as the substance and metabolism of the nonhuman body is enrolled into economic systems. The impact of this agential materiality has also been flipped the other way, where potential detriments to humans are made evident. In the local (or national) contexts of agricultural production, Hinchliffe's study of prions, cattle, and the production of "Mad Cow" disease and Donaldson and Wood's study of Foot and Mouth Disease are indicative. Braun's consideration of avian influenza's global reach is particularly relevant, for this epidemiological threat posed by the winged agency of migratory birds was alluded to by opponents of Proposition 2, who suggested that non-caged production might lead to new channels of disease transmission. It is important to recognize, however, that animal

agency is not inherently directed against humanity, but rather is reflective of pervasive opportunism in animal life (Lulka, 2009).

The extent of autonomy that nonhuman animals possess, though never absolute, varies considerably in these studies, bringing to the fore the importance of spatial contexts. The agency of nonhuman animals is modulated (and in some cases ended) in different ways by their surroundings, with humans having a greater or lesser role in determining their distribution and opportunities. Whatmore's work on hybrid geographies is a guiding work for this train of thought. Perhaps the best example of how hybrid relations play out spatially in an agricultural context was put forth by Holloway in his examination of milking technology. Holloway examines dairy cows' usage of self-milking technology and the impact that particular material relationship has on the spatial life of those animals. In that instance, technology seemed to alter the temporal flow of the cows' daily life and expand the spatial options available to them.[2]

These various issues are highly relevant to the case of Proposition 2. The materiality of bodies (particularly chicken bodies), their commodification within economic systems, their potential ability to acquire and transmit diseases, and their relations to a specific technological system all come into play. Though all of these relations apply, Proposition 2 foregrounds the technological aspects that were explicitly developed to control the movements of agricultural animals. In this coming together of machines and bodies, ethical concerns rose to prominence. The present study seeks to illustrate the importance of these small-scale dynamics, but also to extend them to show their wider significance.

With this goal in mind, this paper examines the opposing perspectives on Proposition 2 in order to gain better understanding of the impact of animal movement in modern agriculture. The primary data used for this exploration was gathered from interviews with representatives of organizations that had stated their support or opposition to Proposition 2. Organization names were gathered from the Yes on 2 and No on 2 websites, each of which listed groups that supported their respective position with regard to Proposition 2. Each side included a wide array of organizations, forming broad coalitions that spoke to the potentially large ramifications of the proposition. In selecting which organizations to contact from each coalition, an effort was made to speak with diverse organizations that were somewhat representative of the respective coalitions as a whole. Some of the organizations contacted were widely-recognized organizations, whereas others were fairly unknown to the general public. Organizations contacted included animal welfare/rights groups, scientific organizations,

environmental organizations, agricultural organizations (representing either industry interests or small farmers), veterinary organizations, consumer organizations, religious organizations, and labor organizations. This diversity is indicative of the contemporary political process and modern society in general, wherein functions are fragmented along a number of lines and individuals fill vastly different roles. It is also consequential, since it means that each individual's knowledge, and indeed their social and ethical responsibilities, tends to be quite limited in scope. These facts are critical when considering interviewee comments. For one, some interviewees were less familiar with agriculture and/or animals, and thus the validity of their stance may be questioned. Nonetheless, their comments (some of which are included below) are important because they affected the political context. Secondly, a few interviewees explicitly noted that some concerns were outside the scope of their organization's charge. This meant that their stance on Proposition 2 did not negate the fact that there might be other valid issues to consider. Indeed, even among groups who shared the same stance on the proposition, it was not uncommon for representatives to state how their position was based on criteria that other groups in their coalition did not utilize.

In addition, a small number of interviews were conducted with individuals/ representatives who did not take an official stance on the proposition. These persons were contacted because they possessed some expertise that was relevant to the initiative. Altogether, 38 interviews were conducted. Twenty interviews were conducted with representatives whose organization supported Proposition 2. Fifteen interviews were conducted with representatives whose organization opposed Proposition 2.[3] Three interviews were conducted with individuals/representatives who did not take an official stance on the ballot initiative. All interviews were conducted prior to the November election.

In the next section, the opposing attitudes toward Proposition 2 are put forth with an eye toward highlighting perceptions of the essential nature of farm animals, the perceived importance of space and movement, and the ethical character of human relations with farm animals. With regard to the initiative's supporters, this section illustrates the motivations for proposing this initiative. With regard to the initiative's opponents, counterarguments are noted that contest the pervasive perceptions of modern agriculture, farmers, and the proposition's notion of welfare itself. In the following section, the different conceptions of animal welfare put forth by the opposing factions are examined. What becomes clear is that both factions' conceptions of welfare

must address unpleasant realities. Ultimately, in deciding between conceptions of welfare, ideas regarding the fundamental character of life — the "acceptable" risks involved and the qualities that constitute a good life – come to the fore.

Animal Turning. Emblematic of the centrality of movement in this debate is an animated internet video produced in support of the proposition, wherein caged farm animals are juxtaposed with a dancing pig that encourages viewers to vote for Proposition 2.[4] The pig dances (and sings) joyously to the funky beat of Stevie Wonder's "Superstitious," the lyrics having been reworded to convey messages about the living conditions of farm animals and the nature of modern agribusiness (Figure 1). The choice of song seems hardly coincidental, for the lively tempo is highly energized and starkly contrasts with the monotonous image of industrial farms.

Figure 1

The importance of animal movement, and the role that agricultural industries played in the restriction of that movement, was expressed in a number of ways by proponents of the initiative. One supporter of the proposition stated it most simply in saying, "It's part of our basic instinct. Animals were born just like we were to move." Another supporter stated in more philosophical terms that, "The animals evolved their physiology, their chemistry, their brain patterns, their everything, you know … it's kind of geared toward a certain way of being in the world." Yet another supporter tied the connection between an animal's constitution and its being into a tighter nexus by saying that, "Chickens like human beings have muscles, and muscles are made to move. Muscles that don't move atrophy, whether it's a human being, a chicken, a cow, a pig, it doesn't matter. Chickens

evolved in nature with muscles, and they evolved with muscles specific to the kind of being they are, which is a chicken." In this view, it is not simply that animals, for example chickens, have muscles (which are a signifier of movement in their own right, for their essence is isomorphic with the process of contraction and relaxation), but that the muscles are also indicative of the specific nature of an animal. There is, in this description at least, a monistic quality to the character of being.

Indeed, systems that restrain the movement of hens percolate into the structure of the animals. One of the acknowledged drawbacks of conventional egg production is an increase in occurrences of osteoporosis and bone breakage. While the weakening of bones is partially related to the high rate of egg laying (which places more stress on the nutritive resources of the hens), it also emerges from a lack of movement. Movement is not simply an epiphenomenal dalliance, but rather one of the means by which bones are strengthened. Cage structures thus play a pivotal role in creating brittle beings. This is particularly notable, since bones form the scaffolding for the rest of the animal's mass.

For some supporters, their stance on the issue was rooted in traditional, mainstream religious principles. For example, one interviewee stated that, "In general that has been our position … that the welfare of the animal that we'll eventually slaughter for our food needs still requires a life of some type of comfort, and the confined cage that industrial agriculture uses currently just to stack as many animals together as possible, we just don't think that's proper care of animals or creation." Of note here as well is the explicit acknowledgment that such animals will be killed and consumed by humans. Although some groups in this coalition would like to see society transition toward a vegetarian diet, many of the organizations did not have that objective. This is noteworthy, since some of the proposition's opponents saw the initiative as an initial step in undermining animal agriculture as a whole. In actuality, the coalition in support of the proposition was broad and did not conform to this blanket claim.

More commonly, supporters of the proposition relied upon evolutionary or humanistic grounds to base their opinions. For example, one interviewee stated that, "We've known since Darwin that other animals have the same behavioral needs that human beings have. They have a need to socialize. They have a need to engage in their natural behaviors…," and continued on to note that, "of course they can't when they're crammed into crates or crammed six or seven into a cage, a hundred thousand hens in a shed." Another supporter indicated a similar reference point when noting these

animals' transition into modern life, stating "[a]nd even though they were domesticated, […] they were out most of their lives the last 20,000 years, they were not in factory farms. So they've sort of evolved and all geared up for movement, grazing, reproduction, raising young, and sort of just being out there as animals, not in a captive state." Furthermore, there is an apparent sense that the evolved capacities of agricultural animals are at least somewhat resistant to the confining practices of modern agricultural systems. As one supporter noted:

> […] we've had hundreds of […] former battery cage hens here at our sanctuary, no matter what kinds of abusive conditions these birds come from, if they survive the ordeal, they begin to recover their natural inborn impulses — to dust bathe, to sun bathe, to perch, to spend a great deal of their day running from one place to another, and of course spreading their wings. But again, these birds are foragers.

The interviewee further noted chickens' evolved penchant for scratching the ground for food, a behavior unavailable to battery hens. Thus, there is a conception that agricultural animals formerly lived a broad diverse life, one that was not limited to sustenance, but in many cases involved aspects of socialization. This is so even of birds, who are frequently attributed a lower cognitive standing. Indeed, as one opponent of the proposition (who was not directly involved in agriculture) noted, "They're chickens. They're not too bright." Lingis, for one, has suggested otherwise in his examination of avian intelligence, but nevertheless this is a prevailing attitude among the public that supporters of Proposition 2 had to counter.

From a humanistic perspective, several supporters compared the animals' situation to human experiences that commonly evoke notions of constraint and crowding. For instance, one proponent contended that, "On some level, it's like […] going to prison. Being in a cell that is supposed to house one or two people and […] instead […] maybe having about 50." Other comparisons included the effects of a long plane or car ride, during which the body is relatively immobilized. In relation to muscles and atrophy, another related it to the example of astronauts in space. Such comments would undoubtedly be considered as anthropomorphic by some, but these particular comparisons largely related to the physicality of the animals — for which there is more scientific basis for comparison — rather than the cognitive aspects of nonhuman animals. More to the point, these humanistic perspectives were generally grounded in an evolutionary perspective (rather than a humanitarian perspective), whereby continuities between species were paramount.

The consequences of production for animals were perceived to be many, but essentially unified by their source in spatial constraint. Again, in relation to the prison metaphor, one supporter noted that, "Each one of them is pushing and fighting for its own space. And this is what happens when […] in our prisons […] there's overcrowding, it creates animosity, some anger, some frustration and fights and so forth." Another supporter from a religious organization emphasized the physical, in stating that "I think the idea of having an animal confined beyond an ability to exercise, it deforms their limbs, […] they become lethargic, they're in pain, at least serious discomfort, and it isn't just the too small cage for one animal, it is the too many animals in one cage. That means they have to be debeaked so they won't kill each other. And that's just gross. I mean that's just really vile." Another supporter conceptualized the effect of spatial constraints in almost the exact opposite fashion: "And just think of waking up every morning and there you are, there you are, you're just there. You can't move. You can't do anything. The seconds are just ticking by. Think of it. Nothing. Nothing." And again, this notion of poverty was compounded by the same speaker in comparing the animals' former lives to their new world: "They spend a huge amount of their time scratching the earth, scratching the soil. They explore, they have an active life embedded in them. And here these birds are being forced to live in a dark, putrid… not just living in a cage, but in a universe of cages."

Despite these strong assertions that an animal's ability to move should be a necessary component of agricultural systems, there was ambivalence among the Yes on 2 coalition about the initiative. For some, there was concern that the proposition, initially entitled the "Prevention of Farm Animal Cruelty Act," would lead to a misconception among the public, whereby, if enacted, the public might be led to believe that farm practices would henceforth be humane in all facets. As such, one representative noted, "Reduce cruelty, yes. Prevention of cruelty, no. Cruelty is not going to be prevented at all by the passage of this law. Not at all. Even if it's fully enacted." Or as another interviewee stated in relation to cage-free production, "Not that cage-free is necessarily humane. And that's something we are very cautious about. We don't say that letting them out [is] humane ….] It just means less cruel. And that's an important distinction." It should be noted here (and this will be reiterated below) that the sparsely-written proposition does not mandate cage-free production. Most obviously, among the harms that would still persist, debeaking of birds or the forced molting of birds is problematic to many.[5] Another interviewee also noted that the proposition did not deal at all with the means of transporting animals or the methods of slaughter. In response to these perceived

shortcomings, one representative commented that, "The idea that somebody would say 'well, I'm going to allow animals to be crammed into cages and crates now in order to have a stronger talking point, I think is really […] as wrong-headed as one could possibly be," and another contended that "It would be hard to imagine [legislation] more modest. And we agree. It's very modest. Giving animals enough room to stand up, to lie down, turn around and extend their limbs is hardly radical." In short, these comments suggest some level of realism among this coalition and that there wasn't complete unanimity among animal welfare/rights organizations.

The No on 2 coalition, of course, differed in its estimation of the proposition. Although the coalition objected to the initiative on economic grounds, it also rejected the proposition on welfare grounds. These assertions came in both general form and highly specific articulations. In their respective ways, these contestations spoke to different spatialities that embodied certain assurances in response to various risks. Here, three lines of argumentation are mentioned, the last of which appears to possess the most validity.

According to one line of reasoning, the living conditions of animals are already satisfactory. As one opponent put it, "Animals are already able to freely turn around and extend their wings and move about […]. They may touch another animal, but the way that the legislation is written, it has to be […] most of the time, which I assume of going to be over 50% of the time." Along the same line, the density of cage-systems was seen to conform to natural inclinations, for as the same interviewee noted, "Most of the time, if you watch their behavior, they actually like to spend time together, and close to each other and touching each other. So, that's why I believe the legislation is poorly written, cause it doesn't take into any consideration the animal's or bird's natural herding or flocking instincts." The practice of debeaking hens, nonetheless, seems to contradict this harmonious depiction of a managed flock. The point here, however, is not to dispute these contentions (though they seem more relevant to broiler facilities wherein birds are raised in open barns). Rather, it is simply to note that such comments seem spurious by virtue of the fact that if caged hens already had enough room to move around, the initiative would present no alteration to existing conditions of production (and thus no harm to the producers).

The second argument sought to substantiate the shared purpose of humans and animals within a farm setting. For instance, one proposition opponent asserted in direct opposition to the claims above that, "Farmers are truly the original animal welfarists, because if they didn't keep their animals as healthy as possible, then those farmers were

out of business, because somebody else out there was better than them." In this telling, since the animal is a product which sustains a farmer's livelihood, it is commonsensical that farmers will take good care of their animals. This perspective taps into a tradition, one almost akin to a mythology due to its deep roots. Research has shown that many farmers do indeed form bonds with their animals. Bock et al. illustrate that this bonding is a complicated process affected by several factors, including the frequency of contact with animals, an animal's position on a farm (breeding animal vs. fattening animal), and species type. Notably, with regard to the latter variable, they observed that relations with poultry (layers and broilers) were the most detached due in large part to the number of birds in a typical "flock" and the housing technology used to manage them, both of which tended to de-individualize the birds in comparison to other livestock. An alternative view on this matter was noted by one Proposition 2 opponent in saying that "It all comes down to the actual management, the animal husbandry. And so it doesn't really matter what kind of system you have, if you have good animal husbandry, and the care of the pigs is top priority, then everything will be fine. You'll be able to produce pigs." In this estimation, the external trappings of agricultural systems are deemed largely irrelevant, while the intent and knowledge of the producer assures a desired outcome. The impacts and limitations imposed by technology on both the producer and farm animal are downplayed in relation to human agency and foresight.

These contentions face their own difficulties. Not surprisingly, the prevalence of debeaking and forced molting in the egg industry were not mentioned by advocates for the perpetuation of the current system of production. Such highly artificial practices are difficult to square with conceptions of welfare. Putting these specific matters aside, whatever the legitimacy of management practices may be, the industries under attack by Proposition 2 had to contend with a wider climate of distrust and disaffection with modern agriculture among the public. As many interviewees (and previous researchers) have noted, the majority of the public in developed countries have become disconnected from the process of food production, and thus from living farm animals. On the one hand, this has permitted many people to ignore systemic abuses in the food production system. On the other hand, this "ignorance" seems to foster the emergence of moral outrage, episodic as it may be, when abuses are made public. This outrage has cast doubt upon modern agriculture and is clearly a point of dismay among many working within agriculture. For example, a couple of proposition opponents objected to the Yes on 2 coalition's use of film footage relating to the well-publicized abuse of cattle

at a slaughter facility in Chino, CA. As they rightly noted, those abuses had nothing to do with the practices addressed by Proposition 2. As yet other proposition opponents admitted, agricultural industries have been slow to respond to the challenges posed by activists, and thus they are partly to blame for their own precarious situation. Public "ignorance" of agriculture is pertinent to Proposition 2 in yet another way, however, namely when it comes to the public's understanding of the rationale embedded in everyday agricultural production techniques. As one proposition proponent stated, "I actually think it's been a problem for the other side when [the public] say 'well [proposition supporters] want them to be able to turn around' and, you know, people can't really understand why wouldn't [egg producers] let them."

The third line of reasoning against Proposition 2 pointed specifically to the science of animal husbandry. Science, in this context, is not referring to a tradition as much as a series of novel developments. Indeed, the modern egg industry is a relatively recent creation, initially emerging during the 1930s and 1940s, with California eventually serving as a model for other regions by the 1950s (Bell, 1993). Since that point in time, numerous technologies relating to the feeding and nutrition of hens, antibiotics, the air quality in production facilities, and the cleanliness of eggs (not to mention production rates) have been developed and refined. Although some of these advancements have been developed in response to problems generated by the production system itself, these innovations form an intricate system of production that stands in stark contrast to the modest language of Proposition 2 and some alternate means of production. Thus, one opponent of the initiative stated that, "The cage system of developing, or producing eggs, has been developed over years as a safe and healthful means for producing eggs in California," and another stated that the proposition "makes absolutely no animal husbandry sense the way it's written right now."

Coinciding with these notions of a scientifically-based industry was the contention that farm animals are multifaceted entities who have many needs. Although such contentions might seem to bolster the position of the Yes on 2 coalition, as multiple facets suggest a broader view of animals, this fact was taken to reject Proposition 2 based on its current articulation. As the representative for an animal welfare organization that came out in opposition to Proposition 2 stated:

> These organisms are just that. They're organisms. There's an array of different functions and activities and environmental considerations. And the thing that [...] I think is so very poor about this situation is that they're focusing exclusively on just the confinement element and they need to be

> able to do these two or three things and that somehow that is going to be the best thing for them. And I just don't think that they have any science to prove that those two things alone will get them where they claim they want to go.

This vision, though alluding to the diverse needs of hens, hints at a more mechanized view of the animal held by the industry. Another interviewee, whose organization took no official position on Proposition 2, put this concern in more precise terms by listing different measures of animal welfare:

> One way is to measure behavior, and try to mimic natural behaviors of animals, such as in the wild. Another way of measuring it is through physiological measurements, such as stress hormones and blood levels. And a third way of measuring it is the effects on animal health, such as disease and injury… Traditionally, veterinarians […], because of our training and background, have been used to looking at health as being the most important factor. I think now we are also […] becoming acquainted with the behavioral aspects as well. So, [it] ends up being a balancing act, because [there are] tradeoffs. If you improve behavior, you may negatively affect health and vice versa. Improve health, you may negatively affect the behavior factor. So different people weigh those different measurements differently and consequently come to a different conclusion.

These general concerns were a slight jab at the proposition's proponents, who were seen as emphasizing behavioral concerns to the exclusion of other variables. This weighing of factors is clearly displayed in the divergent perspectives regarding Proposition 2.

Several negative outcomes were seen to emerge from the proposition. A looser form of management was equated with greater risk to farm animals; for instance, "The ability to monitor all of that in freer environments and to protect animals from heat and cold and changes in the weather and water dish contamination and their own feces and all of that, it is much more difficult. So there are real tradeoffs." Or another, "it's been shown over time that there's less cannibalism with caged birds as opposed to free-roaming birds. And with caged birds, the eggs aren't laid into feces or on the ground. They're laid into a clean environment." In line with these contentions, a recent study commissioned by UEP and conducted by experts in animal sciences found that there

were more advantages (and fewer disadvantages) associated with cage systems as compared to non-cage systems (Armstrong et al.). The study has a tenuous relation with Proposition 2, since it was not conducted in response to the initiative, nor does the initiative mandate a cage-free or free-range style of egg production. Interestingly, however, several of the interviewees that were in opposition to the sparsely-written initiative spoke as if the proposition would require free-range production.

These perspectives manifested themselves in depictions of farm life that would be somewhat chaotic if Proposition 2 passed. For example, one opponent stated:

> It's not only that the birds could be exposed to more diseases by having open access to other birds, […] wild birds, that you know, you as a consumer would be more at risk to obtain [….] [T]hese bacteria are everywhere. We can't control them. You know, you would be more exposed. But the methods that we use now help to reduce the bacterial numbers that could be present.

Or, as another representative stated in relation to the natural behavior of hens:

> These are the animals that, you know, invented the pecking order. They […] can be aggressive. So, putting them in uncontrolled or less-controlled environments […] that exposes them […] may be natural behavior, but it's not particularly attractive natural behavior. Not particularly productive natural behavior. That just takes away from animal welfare.

These assertions about the drawbacks of Proposition 2 are riddled with misconceptions about undesired biological movements perceived by the initiative's opponents. Such attitudes stood in direct opposition to the perceived anthropomorphic and unscientific perspectives of the initiative's supporters. Indeed, as one opponent stated, "I think there's a bit of a Pollyanna view being pushed by the other side that […] we need to just have a bunch of chickens running around on a grassy field after throwing some grain for them, as opposed to what really needs to be done to keep birds safe and produce eggs economically for the public." Again, the distance between most citizens and farm animals was used as means to alter the tenor of the political debate.

Given the numerous risks and uncertainties identified by opponents of Proposition 2, it is not surprising that the egg industry has sought to instantiate a different dynamic. The machinery of modern agriculture is brought to bear upon different facets of animal life,

breaking linkages with other entities, in order to ward off potential dangers. As one representative characterized this dynamic:

> The proposition calls for basically banning an animal husbandry style that has been scientifically proven to improve bird health, and done correctly it is very safe for the birds. We use cage systems. They're lighting controlled. Their feed is controlled. Their water's controlled. And basically what the proposition is requesting is an elimination of that, that method. And basically […] open type of housing that would potentially expose the birds to diseases that can be carried by wild birds, such as avian influenza, Newcastle disease, and it could be devastating for the industry.

What is clear in this depiction is that the temporality and spatiality of egg production stand in marked contrast to the wider earthly context of production and the risks it presents. Inputs – light, feed, water — are implemented to judiciously perpetuate the existence of the animal, if not entirely for the animal's sake, then for production's sake, which for some is essentially seen as the same thing. That conflation is evident in the interviewee's final sentence, where the emphasis shifts from avian health to the health of the egg industry. All in all, this depiction differs substantially from the descriptions of animal agriculture put forth by proponents of the proposition.

Realism and Welfare. This manifestation of divergent perspectives on actual conditions has a direct bearing on conceptions of farm animal welfare. As is clear, both factions have stated that their position is in greater conformity to concerns about animal welfare. This might be expected if we were to fall into either one of two traps. First, we may suppose that proponents of Proposition 2 have grounded their opinions in fantasy, wherein they know not what they speak of. Second, we may suppose that the opponents of Proposition 2 are simply lying in order to deflect public disapproval and secure greater economic profits. Although there are strong grounds for believing that economic imperatives are paramount (and that representations will be shaded to minimize this brutal reality in the public eye), this mode of critique misses some important fundamental issues. (Interestingly, some opponents of Proposition 2 conveyed the opinion that organizations in support of the initiative were primarily interested in generating revenue via donations by creating conflict.) For this reason, it is preferable to take opponents' words at face value to see where they lead. For the

remainder of this paper, the connection between realism and welfare is explored to better understand the fundamental problematic.

Because the assumptions of realism address fundamental issues, realism's impact is potentially broad. The result has been a partitioning of the term to make it relevant to more specific domains of thought and action. Here, to limit the scope, I point briefly to three aspects. First, with scientific realism, there is the belief that science indicates the real true nature of things, perception being essentially unmediated by language or other distortions (Giere). Though no one has a monopoly on knowledge in this scientific perspective, differential access to scientific resources can create asymmetries (and thus differential credibility). Secondly, and clearly clouding this matter, Humphries notes that the objectives of realism are idealist in their own way. I will not say that that means realism is incorrect, but I will suggest that it does mean that scientific realism contains a normative aspect that aligns uneasily with its narrow empirical aspect. Thirdly, in a more political environment, realism may designate a degree of resignation, a deference to one's limitations, and a necessary hindrance to idealism, since idealism may lead one into catastrophic endeavors (see Richardson; Wolfowitz). I point to each of these aspects below.

From various comments, it is evident that opponents of Proposition 2 believed that the initiative's supporters did not have an accurate view of the matter at hand. One interviewee, for instance, was highly skeptical of several welfare organizations' credentials in view of the fact that they did not actually care for any real animals. In contrast, the one animal welfare organization contacted that was in opposition to the proposition defined itself as a more hands-on organization than other animal welfare organizations. As noted above, Pollyanna imaginings were deemed an essential aspect of proposition proponents. Some acknowledged that the supporters were well-intentioned, but they also contended that they were nonetheless misinformed. These assertions reflected the perspective of scientific realism. Despite reasonable suspicions about their motivations, there is reason to suspect that people working daily within agricultural industries have an intricate knowledge of farm animals and are aware of minute proclivities that are unknown even to animal advocates. Indeed, it might be unreasonable to expect otherwise. Yet, this privileging of proximity oversimplifies the issue. To magnify minutiae into a monopoly does seem to be a distortion of reality. By and large, the proponents contacted were not prone to generalizations or grand visions. Rather, more than a few were explicitly skeptical about the changes Proposition 2 might bring about, being aware that the initiative might simply cause a geographic shift in egg production or that harmful practices would persist even if spatial constraints were

relaxed. Additionally, many referenced scientific findings on confined animal feeding operations (CAFOs) and aspects of evolutionary theory. Thus, a simple, dichotomous breakdown of realism is unhelpful here, for the realities of life can be illuminated from, and assessed from, a number of different angles.

How can it be that these two factions came to diametrically opposed conclusions on the very same point? Indeed, as it turns out, it appears as though each side is speaking past each other. To best understand this, it is helpful to look at Tom Regan's conception of "harm." Regan would more than likely side with the proponents of Proposition 2, but his depiction of harm is neutral enough that it actually sheds light on both sides of the debate. For Regan, harm is not a unified thing, but rather something which has two faces. On the one hand, harm involves suffering that emanates from the infliction of pain. It may be fairly said that throughout its history the animal rights movement has primarily focused on this aspect of harm. Among others, Singer's *Animal Liberation* predominantly emphasizes the intensity and diversity of pain inflicted within laboratories and on farms. The aforementioned criticisms of debeaking and forced moulting are indicative. On the other hand, Regan also characterizes harm as deprivation. Deprivation can take many forms, and is dependent upon the type of organism involved. Such harm does not necessarily include any infliction of pain or any visible manifestations of suffering. What is evident in the debate surrounding Proposition 2 is that each faction has emphasized different aspects of Regan's harm. It must also be noted that each faction is potentially challenged by the entirety of Regan's concept.

Along with Regan's work, it is helpful to recall the so-called Brambell Report of 1965, which identified five basic freedoms. These freedoms were the 1) freedom from thirst, and hunger, and malnutrition, 2) freedom from discomfort due to inadequate environments, 3) freedom from pain, injury, and disease, 4) freedom from fear and distress, and 5) freedom to express one's natural behavior.

In their representation of Proposition 2, opponents actually emphasized the suffering (as a form of harm) that animals would endure if the initiative were passed. These included hardship inflicted by diseases (for example, by wild migratory birds) and parasites, potential exposure to predators (in a free-range setting), general decline in welfare due to farmers' diminished capacity to inspect animals and less precise management of dietary intake, and increased pecking and cannibalism among farm

animals. Some of these risks might require an extraordinary event (such as the transmission of avian influenza into California), while others involve mundane risks that are ubiquitous. In cataloging potentially dire consequences of Proposition 2, these worries reflected the political aspect of realism, which calls for caution and warns against hubris (even though Proposition 2 implies a diminished role for technology). Such political realism portrayed ethical ideals, not technology, as unleashing crises. The harms that they emphasized align with the negative rights identified in the Brambell Report, but did not include the last right of freedom of expression. Indeed, the technology used to raise hens (and other animals) is infused by a logic of negation manifested simultaneously in forms of separation which nonetheless permitted limited, yet essential contacts.

This emphasis led some proposition opponents into an interesting posture, whereby they needed to buffer animals from their surroundings. This spate of concerns has direct ramifications upon the movement of animals, a property which can bring them into direct contact with these material risks. Protection and welfare thus becomes a matter of locking animals in place for their own security. Essentially, this was indicated in the opponent's statement about cages and hens, in that, "They're lighting controlled. Their feed is controlled. Their water's controlled." In its own way, this is a utopian vision, one that parallels, yet runs counter to, the "Pollyanna" imaginings of the initiative's supporters. It is utopian not simply because the animals are buffered from many potential harms (a real yet idealistic socio-natural formation), but also because the evacuation of risk amounts to the instantiation of nothingness. In substantially reducing certain types of risk, producers are creating places that are reminiscent of nowhere. Here is evident the idealistic aspect of realism. Thus arises the criticism that the egg industry has created a "universe of cages." It is thus that proponents of the proposition compared CAFOs to prisons. This managerial stance potentially produces effects on humans as well. As Bock et al. note, "In some housing systems the animals remain more visible as (individual) animals than in others because the farmers can see them moving, playing and interacting with other animals" (119). Thus, the technology that houses animals may lead to further abstraction of the animal, which in turn may foster more exacting management techniques.

Although the concerns of proposition opponents should not be disregarded, the response of producers (and industry generally) has generated problems of its own. Clearly, the diminishment of risk not only alleviates some potential hardships, it also generates a condition of deprivation. Such deprivation is not a concern for some, but it is for others. As the language of Proposition 2 indicates, it is not debeaking and forced

moulting (i.e., forms of induced suffering) that are addressed in this initiative, but rather the diminishment of capacities – specifically movement – that is confronted. Thus, for proponents, the emphasis is upon the other side of Regan's definition of harm (and the positive right to expression in the Brambell Report). Certainly, forms of suffering were noted by proponents, and indeed mention of disease (namely, salmonella) was mentioned. Nonetheless, it may be argued that these were secondary, not simply by virtue of their absence in the initiative, but also because of their perceived origination in relation to space and movement. In other words, the necessity of debeaking and the prevalence of salmonella are perceived to be a direct consequence of the animals' inability to move about. Movement not only has value in its own right, but is also the means by which other problems can be diminished or avoided. One might say (ironically given the circumstances) that, by enabling movement, proponents hoped to kill two birds with one stone.

That said, proponents of the proposition must face some fundamental questions as well. Although the ascription of a Pollyanna attitude to proponents seems unjustified, it may be accurate to claim that all of the ramifications of the proposition have not been thought through. Indeed, some negative outcomes are likely to develop as a result of the structural changes mandated by the initiative. A less controlled environment is likely to generate some hardship, whether it stems from bacteria, competition among the livestock themselves, or from predators (though, again, Proposition 2 does not require free-range production or access to the outdoors). Although these are domesticated animals, that does not mean they are docile or tame, and thus it is unclear as to how red in tooth and claw supporters are willing to allow intraspecies' and interspecies' relations on the farm to become. In this vein, Alrøe et al. note that organic farming may present a distinctive set of welfare issues. These uncertainties get to basic ideas about nature and the character of life. Clearly, this does present some problem for proposition supporters. As Lassen et al. note, tail docking of pigs is objectionable to some, as it speaks to violent human intervention in nonhuman lives, but the retention of tails may lead to tail biting among pigs and consequent infections. With regard to poultry, Elson has contended that free-range production may produce net negative outcomes in terms of mortality. To be clear, EFSA equivocally notes, "It is difficult to make general conclusions concerning the studies undertaken to assess the influence of keeping systems on laying hen mortality. Thus, as no study compares all the cages and NC systems under the same conditions, it is very hard to give a hierarchy, in terms of mortality, among all the existing systems" (43). Nonetheless, the fact there is

uncertainty warrants caution. Such realizations about the potentially untoward nature of nature are reflected in Bracke and Hopster's definition of animal welfare. While forcefully stating that natural behavior should be included in conceptions of animal welfare, they also stated that natural behaviors that produce harm should not be included in evaluations of animal welfare. In short, policies and practices should account for nature, but should not be beholden to nature.

Although it may be fair to say that the full repercussions of Proposition 2 have not been thought out (as many opponents contend), it is also evident that proponents did not necessarily feel that this was their responsibility. Faced with a perceived injustice, proponents felt compelled to banish a set of practices, largely irrespective of the consequences. Short of catastrophe, in the political process a solution falls largely upon the practitioners and is not the responsibility of the initiative's supporters. This approach also reflects the philosophical hierarchy noted above, wherein the propensity for movement is seen as one of the fundamental attributes of life, one that supersedes and indeed encompasses other bodily concerns. Perhaps this even includes the paradoxical notion that an untimely death may be part of a good life. In this sense, the two coalitions were perhaps unknowingly drawing a distinction between quality and quantity. Further, it may be argued that the opponents of Proposition 2 are more exacting, expecting a solution to be harm-free in all respects. Again, to expect that any structural arrangement will institute perfect conformity with welfare would be utopian. During interviews, proponents did not suggest that life on a farm would become bucolic, but rather simply that a structural inequality would be struck down.

This emphasis was inverted by proposition opponents, who accentuated the dire consequences of the legislation. Faced with the possible enactment of Proposition 2, opponents highlighted what would go wrong instead of emphasizing the justness of current agricultural practices. Frequent recourse to the risks and problems associated with free-range production are indicative of this emphasis. Recourse to free-range production established an either/or dichotomy, in which the secure world of modern food production was contrasted with the disordered world of extensive production. In effect, from this perspective Proposition 2 would leave agricultural industries helpless in the face of numerous uncertainties. A certain rigidity or impotence would overtake those individuals and companies involved in the task of animal management and food production. In brief, Proposition 2 would leave farmers with no option but to let the chips fall where they may.

Ultimately, however, this is the Achilles' heel of the argument against Proposition 2. As noted above, the language of the initiative is very sparse. It provides few details, few proscriptions, and few requirements. Reference to free-range production, or some similar arrangement, is to deny the possibility that other options are available; options that eliminate the constraints imposed by conventional production yet also avoid some of the potential hardships generated by a more extensive form of production. The proposition itself does not construct such a dichotomy, and in this sense is more realistic than the stark option put forth by proposition opponents. The general avoidance of other options is less an indication of a lack of alternatives than a general adherence to, and perhaps preference for, the status quo. To be more convincing, opponents need to delve more deeply into several alternative management regimes rather than articulating polar opposites.

Conclusion. As it turned out, the voters of California supported Proposition 2 by a wide margin, as 63.5% of the voters voted in support of the ballot initiative. A majority of voters in 47 counties supported the proposition, while voters in 11 counties rejected the proposition. Counties in opposition to the proposition had small, rural populations. These included 6 counties located in the San Joaquin Valley region, 3 counties located north of Sacramento, and 2 counties situated in the northeast corner of the state. This voting pattern likely represents long-standing cultural and economic divisions within the state.

It may be tempting to surmise that voters were convinced by the arguments put forth by advocates of the state measure. Political advertisements in support of Proposition 2, however, were very general in nature, never really addressing the specifics of production. This may have been due to financial constraints, or the limited window of 30-second television spots, but it may also have been because it was deemed unnecessary. The pervasiveness of the yes vote didn't emerge out of a series of analytical decisions, but rather from a more fundamental sense that formed connections with farm animals and current ideas about what constitutes a good life. Indeed, though scientific arguments were promulgated by many supporters, the legislation itself was not scientific. A metaphysic ultimately stood at the foreground in this election process. This is only reaffirmed by the fact that the opposition's emphasis on disease and food safety issues never gained traction. Nor did it matter that the two major metropolitan newspapers came out in opposition to the proposition (*Los Angeles Times*; *San Francisco Chronicle*). This is not to denigrate the public's decision as unscientific or irrational, but

rather to note that the clearly pervasive mindset drew from other means of assessment; namely, a sense of their own bodies and the importance of movement. The opponents of Proposition 2 lost because they failed to carve out an argument within this wider mode of thought. Instead, their restricted conception of welfare was diametrically opposed to this perspective, thus leading the public to view their perspective as impoverished in itself. A simple proposition, with simple wording, was thus able to combat the minutiae of a selective science and find its way into California law.

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I am grateful to Free Range Studios for permission to use an image from their video production

Notes

1. Cf. Gill and Lennox.

2. One reviewer for this paper made the astute comment that self-milking technology does not eliminate all elements of human control from the production process.

3. An effort was made to contact an equal number of representatives from each side of the debate. Although many individuals on both sides were very receptive to discussion, it proved difficult to make contact with some organization representatives. As the respective number of interviewees suggests, this was more often the case with opponents of Proposition 2. The time constraints of the impending election added further complication to this process.

4. The video may be seen at http://www.youtube.com/watch?v=kKu6ry0kj1Y&feature=related.

5. Forced molting is a process wherein birds are not fed for a significant period of time so as to generate physiological changes that will subsequently increase their level of egg production.

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