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Enacting public understandings: the case of farm animal welfare

Adrian Evans and Mara Miele

Abstract

This paper draws on the results of 48 focus group discussions carried out across 7 European study countries to shed light on the public understanding of farm animal welfare; however the account that we provide does not follow typical social-scientific conventions. We do not try to ‘capture’ public opinion on this issue, as a survey might seek to do by fixing, stabilising and ‘representing’ its subject matter, nor do we attempt to produce an entirely ‘coherent’ version of what the public understands by farm animal welfare. Instead, we adopt a performative approach (see Mol, 2002; Law, 2004; Callon et al, 2009). This enables us both to explore the ways in which lay knowledges are grounded in everyday socio-material practices (such as shopping for food, cooking and eating) and to critically reflect upon how our scholarly attempts to engage with these lay understandings actively intervene with them and help to generate new hybrid knowledges that are partly public and partly academic. More specifically, we identify three distinct acts of knowledge production that *took place* within the focus group discussions and we dedicate a considerable amount of time and attention to describing the contexts in which and through which each act of knowledge production was choreographed (Cussins, 1996; Thomson, 2005). We then outline what specific versions of farm animal welfare were being enacted within these particular discussions and through these particular contexts. Whilst this method reveals certain overlaps and consistencies between the different ‘knowledge acts’ or ‘ways of knowing’ farm animal welfare, it also reveals some startling contradictions and non-coherencies.

Key words: Public Understanding of Science, Farm Animal Welfare, Performative Methods, Situated Knowledges

1. Introduction

Over the course of the twentieth century there have been profound changes in animal farming across Europe. Driven by economic and technological rationalities animal production has increased and has been concentrated into ever larger production units (Hendrickson and Miele, 2009). These changes have in turn created new and potentially more severe risks to animal health and welfare (Blokhuis et al, 2003; Fraser, 2008). Recently, however, (prompted in part by a seemingly never-ending stream of bio-security and food safety scares) farm animal welfare issues have gained more prominence in the European Union's political agenda. Furthermore, a growth in public concern about farm animal welfare and food safety/quality has led to the emergence of niche markets for animal friendly products (e.g. organic, freedom food, free range etc.) especially in the UK (see Miele et al, 2005, Miele and Bock, 2007). These emerging markets for animal friendly products have been largely celebrated by NGOs¹ and policy makers (European Union Action Plan on Animal Welfare 2006-2010, European Union Animal Welfare Strategy, 2012-2015 and follow up 2016-2020, see Europa 2011; 2012) as an opportunity for improving animal welfare via 'a consumer pull' and as a starting point for a new form of governance of animal welfare in Europe. Here the assumption is that the existing regulation of animal farming practices² could be coupled with the regulation of claims about the 'animal friendliness' of foods, to reward the most committed producers/retailers (Miele and Lever, 2013; Miele, 2011) by creating a standard of animal welfare that could help to discriminate between products on the

¹ See for example Compassion in World Farming, http://www.ciwf.org.uk/about_us/default.aspx

² See for example the bans on the most contested areas of animal production, such as; battery cages for laying hens (European Union Council Directive 1999/74/EC stipulates the minimum standards for keeping egg laying hens, which effectively bans conventional battery cages in the EU from 1 January 2012 after a 13-year phase-out); veal crates or individual pens for calves (Council Directive 2008/119/EC prohibits the use of confined individual pens for calves after the age of eight weeks); individual sow pens (In 2001 the EU agreed the Pigs Directive (2008/120/EC), laying down minimum standards for the protection of pigs, one of the results of which was the banning of sow stalls from 1st January 2013).

European market (see Blokhuis et al., 2013). These developments for improving animal welfare via a market mechanism have also led to new research in animal science on how to measure the welfare of farmed animals in order to communicate to consumers (or to make visible in the marketplace) the welfare status of animals that are reared for food production. This new focus on ‘measures’ of welfare has in turn led to new controversies and ethical questioning within animal welfare science (see Dawkins, 2012; Buller, 2014, 2015, Blokhuis et al., 2013) concerning how we should define, measure and monitor farm animal welfare. Furthermore, it has meant that debates about what constitutes farm animal welfare are not just confined within technical and expert arenas but are being opened up to broader public scrutiny and consultation (see Fraser, 2008). This has in turn highlighted important commonalities but also significant differences between ‘expert’ and ‘non-expert’ understandings of, and concerns about, farm animal welfare and it has raised some broader questions about the nature and status of different forms of knowledge and the alternative modes of governance which they feed into (Evans and Miele, 2012; Miele and Evans, 2010; Miele et al., 2011.).

It is from within this context that this paper is written. In particular, we seek to contribute to debates in ‘Geographies of Scientific Knowledge’ concerning the nature and value of lay knowledges (Davies, 2006a; 2006b; Whatmore and Landström, 2011) and the possibility of achieving meaningful citizen participation in both scientific knowledge making and in political debates concerning technological issues (see for example Ottinger, 2010 and 2013; Michael, 2002; Petts and Brooks, 2006).³ In the paper we ask: Is animal welfare a concept that can be defined either by experts or stakeholders in a stable and fixed way or is it always destined to be a dynamic and

³ This debate, pioneered by Dewey (1927), has been enriched by a variety of new contributions. For recent reviews, see (Marres, 2005; Lezaun and Soneryd, 2007; Fisher, 2000).

contested issue? We argue that the public understanding of farm animal welfare is complex and genuinely multiple as it is generated in and through an array of different practices, each with their own pre-occupations and tacit ethical imperatives (such as shopping, eating, cooking, pet care, care of self etc., see Miele and Evans, 2010; Evans and Miele, 2012). Furthermore, in line with Callon et al. (2009), Callon and Rabeharisoa (2003) and Rabeharisoa et al., (2014) we contend that this complexity should be acknowledged and embraced as a way of enhancing democratic debate by challenging the frequently premature scientific-technical desire to close down the definition, scope and framing of a given issue (see also Strathern, 2004; Wynne, 1992). Furthermore, we contend that the complexity and elusiveness of public concerns about farm animal welfare have significant implications for the governance of this issue (Miele and Bock, 2007), especially for those governance mechanisms which are reliant on consumer choice and based on assurance standards (such as ‘free-range’ or ‘cruelty-free’ upon which the product labels are based). Specifically, we discuss the implications of this issue for understanding the emergence/promotion of a number of farming innovations proposed in the last decade that try to address a diversified range of consumer concerns for farm animal welfare.

Throughout the paper we draw on the results of 48 focus group discussions carried out across 7 European study countries to develop our contentions about the nature of lay understandings of farm animal welfare and to critically reflect upon our academic attempts to engage with them. By adopting a performative approach to knowledge production we are able to view lay knowledges about farm animal welfare as multiple and dynamic rather than singular and static. In particular, we are able to show that lay knowledges about farm animal welfare are complex, not necessarily coherent and prone to contradiction and paradox (see Law, 2004). Crucially, we

contend that variations and inconsistencies within lay understandings cannot simply be attributed to ‘segmentary’ differences between different social or lifestyle groups (although these are undoubtedly important) but that variations also occur across different contexts of knowledge production, in other words it is entirely possible and indeed likely that an individual’s lay understandings of farm animal welfare might be self-contradictory when generated through different lived practices or when re-evoked through different academic methods. This in turn leads us to reject any simplistic or artificially ‘pure’ representation of ‘the public understanding of farm animal welfare’ and instead we identify *three acts of knowledge production* that took place within each focus group. Secondly, by adopting a performative approach we are able to explore the ways in which lay knowledges about farm animal welfare are grounded in everyday social material practices, such as shopping for food and eating. Finally, we are able to critically reflect upon our own academic ways of knowing or engaging with public understandings and we are able to take stock of the ways in which our own academic tools, apparatuses, methods, modes of questioning and conversational rouses add to rather than simply reflect what we seek to analyse (Law, 2004).

In the remainder of the paper we develop these arguments in more detail. We begin by explaining the background to this research, in particular we briefly outline the Welfare Quality® approach to farm animal welfare and we explain the methods that we adopted when undertaking the focus group research. Secondly, we outline our performative approach to engaging with lay knowledges. Thirdly, we recount in detail three separate acts of knowledge production that occurred within the focus group

exercises.⁴ Finally, we conclude by summarising our key findings and by considering the broader implications of adopting this performative approach in our research.

2. Research context and methodology

This paper draws on work conducted for the EU-funded ‘Welfare Quality®’ project, which was set up by a Europe-wide consortium of animal welfare and social scientists. The primary goals of this project were to develop a new scientifically valid and *publically endorsed* standard for farm animal welfare and to develop a set of methods for assessing the welfare of animals on farms and at slaughter (see Blokhuis et al, 2003). In the project a variety of different quantitative and qualitative methods were used in order to gain a better understanding of consumers’ views and perceptions of farm animal welfare and in order to gauge public reaction to the proposed scientific monitoring scheme. One of the key methods employed to assess the public understanding of farm animal welfare consisted of 48 focus groups carried out in 7 European countries (France, Italy, The Netherlands, Norway, Sweden, Hungary and the UK)⁵. Six focus groups were undertaken in each country and each focus group consisted of people from similar socio-cultural or lifestyle backgrounds (‘urban mothers’, ‘rural women’, ‘empty nesters’, ‘seniors’, ‘young singles’ and ‘vegetarian and politically active consumers’)⁶.

⁴ For a full presentation of the results of this research see Evans and Miele (2007) and Evans and Miele (2008).

⁵ The reasons for selecting these groups are presented in detail in Evans and Miele (2007 and 2008). In relation to the selection of countries, we aimed for a geographical spread from the North (NO-SW), the South (IT-FR), the West (UK-NL) and the East (HU) of Europe. The main constraint to the inclusion of a higher number of Eastern or Southern European countries was due to the scarcity or even absence of animal-welfare-friendly labelled products in these countries.

⁶ With regards to socio-demographic criteria, we focused on a key range of variables that we believed could influence food practices and animal welfare concerns. These included gender, age, urban/rural living, whether there were children in the household and the extent of previous engagement with food ethics/politics. The focus groups were then set up to capture a variety of these attributes. Four of the groups were mixed genders and two (rural women and urban mothers) were female only, reflecting the continuing importance of women in household food provisioning.

National teams from each country also had the option of conducting an additional country-specific focus group, to study a group of particular interest (e.g. hunters in Norway or gourmets in Italy)⁷. During the focus groups a number of different practical tasks were undertaken, such as handling and commenting on products, sticking post-it notes on charts and reacting to pre-prepared scientific documents. We also attempted to approach the issue of farm animal welfare through a variety of different practical contexts, such as shopping for food, cooking, eating etc., as well as through more traditional methods, such as asking general, de-contextualised, questions about participants' views. These methods helped us to trace the heterogeneous sites of engagement of members of the public with issues of animal welfare, from the intimacies of family meals, the budgetary and sensorial concerns of food shopping and cooking to more academic/ abstract discussions concerning human to nonhuman animal relations. Another key objective of the focus groups was to provide animal scientists working on the Welfare Quality® project with a list of consumers' farm animal welfare priorities and to identify any 'gaps' between the public understanding of farm animal welfare and the scientific definition of farm animal welfare, as contained within the proposed Welfare Quality® monitoring scheme.

In this paper we draw on the research outlined above in order to examine three separate acts of knowledge creation that occurred within each focus group. In other

⁷ Each focus group contained people from similar backgrounds to ensure that there would be some commonalities to form the basis of discussions. We were primarily interested in exploring the range of possible sets of ideas and opinions existing around issues of farm animal welfare rather than making generalisations about the views of certain groups. The focus groups were carried out by different national teams (see acknowledgments). Each focus group was transcribed in full and then translated into English. The methodology employed during the focus groups and the criteria used to select participants are outlined in detail in Evans and Miele (2007; 2008). The specific differences between groups (i.e. empty nesters and vegetarians, have been addressed in Miele and Evans, 2010 and Evans and Miele, 2012.

words, we re-visit the focus group exercises and we focus on what actually happened on the ground, in the midst of things, as public understandings were being expressed and produced and we attend to both the materiality and the performativity of the research methods that we used (see also Lezaun, 2007 and Grandclement & Gaglio, 2010).

Our aim is to emphasise the role of the methods in generating realities (Law and Urry, 2004), in this case different public understandings of farm animal welfare but also to show that this approach enabled us to capture some of the key features of those ‘fuzzy’ (less clearly defined or definable but nevertheless valuable and potentially innovative/disruptive) areas of consumer aspirations and concerns that have been taken on by the animal food industry in recent years in order to promote food innovations that could be perceived as more ‘animal friendly’ by the public. However, before we go on to explore these three acts of knowledge production in more detail, we will use the next section of the paper to draw on a range of academic literatures to further develop our theoretical contentions regarding the performativity of both public understandings and our academic attempts to chart them⁸.

⁸ Whilst the data in this project was collected over 10 years ago we still believe that it is relevant for the particular aims of this paper. Crucially, these results are still relevant nowadays as they reveal some long term trends in rising concerns for the welfare of farm animals among European citizens, as the recent Eurobarometer 2016 data has shown. Moreover, these data clearly uncover those issues and areas of public concerns that have been taken by the food and farming industry as priority areas of intervention for products and practice innovation in the last ten/ fifteen years. However we would like to stress that here our intervention is more methodological and theoretical, it is about emphasising the value of adopting a performative approach to lay understandings of farm animal welfare to point out that it might vary not only in relation to geography/ nationality or in relation to socio-demographic variables, but also in relation to more micro and practice-based frames and contexts of everyday life.

3. A performative approach to lay and academic knowledges

The notion of ‘performativity’ has an interesting history. The concept initially emerged in the work of speech act theorists such as Austin (1962) and Seale (1969) to highlight the ways in which language is not just a passive reflection of the world but rather an active force within it. When we make a promise, reveal a secret, swear an oath of allegiance or declare ‘I do’ at the end of a wedding ceremony, we are not describing the world but rather we are ‘doing things with words’. In these cases language works to culminate a set of social-material circumstances; it adds to an assemblage and is actively involved within it as part of a material-semiotic chain. Indeed, Deleuze and Guattari (1988) argue that the main function of language does not lie in its ability to transmit information or even in its use as a vehicle of communication but rather in its capacity to interact with, to order and even to transform material networks. They believe that language is best viewed as an active participant in practices rather than as a hollow reflection or representation of them.

More recently, the notion of performativity has been embraced by sociologists and geographers in their attempts both to understand the complex interconnections between materialities and meanings in everyday social practices and in their attempts to critically reflect upon knowledge making practices within natural sciences (see for example Latour, 1988); within medical practices (see Mol, 2002); within economics (McKenzie, 2006; Svetlova, 2012) and within sociology (Osborne and Rose, 1999, Law and Urry, 2004). For example, authors such as Mol (2002) and Law (2004) have used the notion of ‘performativity’ to signal the ways in which both medical and social scientific discourses and methods can help to produce the very realities they seek to describe. As Law (2004, 143) states: “*Method is not, I have argued, a more or less successful set of procedures for reporting on a given reality. Rather it is performative,*

it helps to produce realities.” The concept of performativity has also helped to form the cornerstone of actor-network or ‘material-semiotic’ approaches to social life (Latour, 2005) and to non-representational approaches within human geography (Thrift, 2007).

Part of the power of the concept of performativity is that it manages to avoid some of the pitfalls inherent in adopting either of the polar opposites of social constructivism or naïve realism. In particular, the notion of performativity challenges any simplistic notion that our scientific tools, apparatuses and ways of thinking can give us unmediated or direct access to an external reality that stands unaffected by our attempts to gain knowledge. But equally, the notion of performativity challenges the idea that reality is socially constructed. Instead, and to quote Lien and Law (2011, p68) a performative approach “argues that social structures are being generated at the same time and in the same moment as scientific (or other) forms of classification or knowledge: that the social and the natural classifications are being enacted together in material practices.”

These theoretical debates have very important implications for our current subject of enquiry. Firstly, they imply that academic attempts (like the focus group research described in this paper) to chart lay knowledges, will, to at least some extent, intervene with the very things they are trying to measure. In the remaining sections of the paper we will try to attend to the performative nature of knowledge production by highlighting the ways in which the different tools, prompts, devices and questions that we used in each ‘knowledge act’ both enabled us to ‘attune’ to different aspects of the public understanding of farm animal welfare and worked to ‘perform’ new knowledges that might never have existed or been brought to light outside of these settings. For example, we will show how the mix of ‘attunement’ and ‘intervention’ is very different between knowledge act 1, in which commonly encountered food items were used as prompts for

discussion and knowledge act 3, in which a less familiar scientific text was used as a prompt⁹.

Secondly, adopting a performative approach draws attention to the radically situated, or ‘worldly’ nature of public concerns for animal welfare. Just as academic forms of knowing are refigured as tools rather than mirrors within a performative approach, so lay understandings must also be viewed as radically context specific, emerging from and realised within a specific context for a specific purpose, such as shopping for food or preparing a meal. Throughout our research and analysis we tried to attend to and explore the worldliness of lay understandings of farm animal welfare. In the coming sections, we will show how the knowledges and opinions generated in different ‘knowledge acts’ still *in part* bear the marks of their worldly origins, in terms of what is said (and not said), the manner in which it is said and the types of implicit and explicit points of reference that are evoked. In short, we will illustrate the ‘worldliness’ of public understandings of farm animal welfare.

To summarise, over the course of the next three sections, rather than simply presenting the results from our focus group research as a coherent whole, as if they had something to say about the public understanding of farm animal welfare in general, we will instead identify three distinct acts of knowledge production that *took place* within our focus groups. Furthermore, we will dedicate a considerable amount of time and attention to understanding how each act of knowledge production was choreographed (Cussins, 1996) and we will examine the geographical, social, material and conversational contexts through which the discussions about farm animal welfare emerged. We will then seek to outline what specific versions of farm animal welfare

⁹By the concept of ‘attunement’ we wish to imply that something physical, external and dynamic does exist independently from our attempts to know and that it is possible to gain access to (or at least resonance with) this exterior. However, no knowledge acts can ever achieve pure attunement as they also always intervene and shape that which they seek to explore.

were being enacted within these particular discussions and through these particular contexts. Whilst this method will reveal certain overlaps and consistencies between the different 'knowledge acts', it will also reveal some startling contradictions and non-coherencies. In short, we will be able to preserve and illustrate some of the complexity of lay understandings of farm animal welfare.

4. Knowledge act one: Consuming welfare

INSERT FIGURE 1



Figure 1: Participants inspecting products during the focus groups

4.1 Setting the scene

It is 5.30 in the afternoon on a summer's day in late June and we are seated around a large central table in an airy seminar room at Cardiff University. A video recorder with a wide angle lens is perched fairly discreetly at the opposite end of the room and two audio recorders lie at either end of the table. On top of the table are a range of different food products including items such as Tesco's free range chicken thighs, Farmhouse Freedom eggs, Tideford organic rice pudding and Tahira halal grill steaks (for a description of all the products used see Evans and Miele, 2008). The participants reach for different products, carefully inspect them and begin to talk amongst themselves. Our group consists of two 'facilitators' (the current authors of this paper) and five 'participants', all of whom had been selected in accordance with previously agreed criteria.

The session has already been running for around half an hour, the participants have introduced themselves to each other and we have spent the vast majority of time discussing their everyday food practices in very general terms, covering topics such as what they like to eat, how often they eat out and where they usually buy their meat and dairy products. These topics of conversation had been prompted by us (the facilitators), partly to place the participants at ease but mainly to set up a practical lived context (i.e. that of everyday food practices) *through* which we could approach issues of farm animal welfare. This context was then further re-enforced through the use of a range of readily available food products, all of which staked some sort of claim to possessing higher animal welfare standards, and all of which were currently laid out on the table for the participants to get to grips with. This particular scene would be repeated with 6/7 different socio-cultural groups and across six other European countries (48 times in total).

4.2 What version of farm animal welfare is being enacted?

Firstly, from the focus group discussions it was clear that during this particular exercise a version of farm animal welfare was being produced that was closer *to the fork than the farm*. In part this can be accounted for by the way in which this particular knowledge gathering/producing exercise was set up (i.e. how our methods of data collection ‘intervened’ with the views of our research subjects, see section 3 above) but in part it also reflects the nature of human-farm animal relationships in many contemporary European countries and the fact that food consumers have become increasingly separated and detached from systems of food production (see Serpell, 1996; Evans and Miele, 2012). This has significant implications for the ways in which farm animal welfare is understood in the public domain, as it becomes deeply

intertwined with and indeed experienced through the medium of other sets of practices with potentially very different, sometimes tacit and deeply ingrained, (ethical) imperatives; such as shopping (and, for example, the need to get by on a budget) or eating (and, for example, the need to consume or provide healthy, tasty, or even uplifting food). As one focus group participant stated:

“Animal welfare is a fundamental start to obtaining a positive contribution of meat to our health. Pushing this issue from a human perspective, if the animal is well you eat something that has been well created and your body assimilates it well.” (UK participant).

Secondly, this particular exercise, due in part to our use of material food prompts, enabled us to gain insights into some of the more practical-material-aesthetic dimensions of food-related animal welfare knowledges that, despite their great importance, seldom receive academic attention (see Glennie and Thrift, 1992; Gronow and Warde, 2001; Miele and Evans, 2010). In particular, the exercise enabled us to gain insights into a hidden landscape of practical, ethico-aesthetic knowledges, which informed the participants’ food choices (see Evans and Miele 2008; Miele and Evans 2010). For example, participants made connections between the taste, texture, appearance, smell and cooking properties (especially shrinkage) of animal foods and their perceived animal welfare status. As another participant stated:

“In my opinion you see immediately an organically produced meat and a traditional one..., this organic one here is red, of a natural red; this other which is not organic has a colour that you see it was treated with some colourings...” (Italian participant).

Finally, the types of animal-welfare knowledges generated through this exercise illustrated the ingrained connections between public perceptions about what constitutes

farm animal welfare and the current landscape of animal-welfare friendly products (see also Miele et al, 2005, Roe and Murdoch, 2006). For example, in the UK and the Netherlands welfare-friendliness appeared to be indelibly associated with organic brands and many focus group participants uncritically equated ‘organic’ with ‘welfare-friendly’. Participants from Sweden also associated the organic label ‘KRAV’ with high animal welfare and participants from Italy associated organic labelled goods and local products with high welfare. In contrast, in France welfare-friendliness was frequently associated with notions of product quality and with certain quality brands such as ‘Label Rouge’. This is hardly surprising, as many of the labels on these types of quality products seamlessly mix and intertwine the rhetoric of food quality with the rhetoric of animal-friendliness¹⁰.

5. Knowledge act two: ‘Blue sky’ welfare

INSERT FIGURE 2

¹⁰ When we describe the views of participants from different countries we are only pointing to differences *within* specific ‘knowledge acts’. We are not attempting to make *general* claims about the farm animal welfare views of different national and social groups. For example, within knowledge act 1, participants from different countries drew on their country-specific experiences of the market availability of welfare-friendly foods when expressing their views about farm animal welfare, but there is no guarantee that these types of national differences would be significant in all other knowledge acts. More detailed discussion about the different emphasis on single welfare issues among the groups has been discussed in Miele and Evans, 2010 and Evans and Miele, 2012).



Figure 2: Post-it note exercise – what is a good life for farm animals?

5.1 Setting the scene

We are now over an hour into the focus group and the participants are just beginning to take their seats after a well-earned coffee break. Their next task will be to jot down some ideas on the yellow post-it note stickers, which lie on the desks in front of them. We have asked them to work alone for a short time to consider what farm animal welfare might mean for them and what a good life for farm animals might involve. Later we will ask them to share their ideas with the group as a whole, to post their notes on a large whiteboard at the front of the room and to work together as a group to produce a combined list of farm animal welfare definitions/concerns. Post-it notes, of course, provide a very limited canvas on which to express one's ideas and indeed this is part of their purpose; they force the author to be succinct. In this particular task however they functioned primarily as a prompt for discussion and participants were frequently asked to elaborate on what they had written and why they believed that a particular aspect of farm animal welfare was important.

5.2 What version of farm animal welfare is being enacted?

As one can see from the description above, this particular scene, or act of knowledge production, differs substantially from the one outlined in the previous section. Indeed, it approaches the issue of the public understanding of farm animal welfare from quite a different direction. Rather than situating participants within everyday practices of food shopping and eating (in effect asking them temporarily to assume the identity of consumers) it asks them to indulge in ‘blue-sky’ thinking and to speculate more abstractly about what might constitute a good life for farm animals. In other words, we wanted our participants to adopt the identity of ‘concerned citizens’, although, as we shall see shortly, things are far more complex than this categorisation affords.

Table 1 summarises some of the key issues that were raised during the post-it note exercise. We have also provided figures to illustrate the number of focus groups in which a given issue was discussed or pinned to the board during this particular exercise.

INSERT TABLE 1

Table 1: The farm animal welfare concerns that were raised during the post-it note exercise¹¹

	Total N=42	FR N=6	NE N=6	HU N=6	IT N=6	NO N=6	SW N=6	UK N=6
<i>Feed</i>								
Quality of feed	37	5	6	6	6	5	6	3
Appropriate/natural diet	31	6	5	3	6	4	2	5
<i>Environment</i>								
Amount of space	36	6	6	5	6	4	6	3
Outdoor access	30	6	6	1	5	4	4	4
Natural environment	16	1	2	1	4	1	3	4
Not intensive/factory farming	13	2	4	1	2	2	2	0
<i>Health</i>								
Good veterinary care	23	3	2	5	4	2	3	4
Good animal health	13	3	2	2	3	0	2	1
<i>Behaviour</i>								
Can express natural behaviours	17	3	3	0	6	2	1	2
Keep babies with mothers	10	3	1	0	1	2	2	1
<i>Affect/emotion</i>								
Avoid stress	19	5	4	1	2	1	4	2
Avoid pain and suffering	13	2	2	2	3	1	3	0
Pleasure/happiness	6	0	0	0	2	3	1	0
<i>Human-animal relationships</i>								
Farmer care/responsibility	29	2	6	6	4	4	5	2
Shown love or affection	10	0	1	2	2	2	3	0
<i>Welfare off-farm</i>								
Slaughter Issues	36	5	5	5	6	5	5	5
Transport Issues	35	5	5	4	5	5	6	5

¹¹ N=6 for each country as we excluded the additional country-specific focus groups that were conducted in some but not all countries. The figures must be interpreted with a great deal of caution, in particular they should not be taken to indicate the importance of a given farm animal welfare issue in the population at large, rather they should be taken as being indicative of the types of issues which were discussed during this particular exercise in different countries.

We would like to make a series of observations in relation to the results depicted in table 1: To begin, it is important to note that the version of farm animal welfare that was being enacted through this specific post-it note exercise was conceptually and ideologically diverse and drew on diverse practical/experiential inspirations. This in part reflects the free-form nature of the exercise but it also reflects the number of different angles from which it is possible to approach the issue of farm animal welfare. Indeed from the exercise it was clear that participants had a range of different *subject matters* in mind when considering what farm animal welfare might be: some were focused on the animals themselves (their health, behaviour and emotions); others saw the issue in terms of the provision of resources and environments that were likely to ensure a good standard of living (outdoor access, natural environments); whereas others focused on aspects of human-animal relationships and in particular the role of farmers as animal carers; still others viewed animal welfare in terms that inextricably connected it to food safety and quality and, of course, the vast majority viewed welfare as a combination of some or all of the above factors.

Looking at table 1, one can also see that ideas of ‘the natural’ (and in particular natural environments) featured prominently within participants’ understandings. This privileging of natural environments as a route to improving welfare stands in contrast to current mainstream scientific understandings of farm animal welfare, which tend to prioritise issues of health, behaviour and, to a lesser extent, emotions over purely resource or environment-based understandings of welfare (although, see Turner and Edwards, 2004 for an exception and Fraser, 2008 for a discussion). Part of the reason that participants believed in the importance of natural environments for achieving

higher levels of farm animal welfare can be attributed to the presence of products such as organic and free-range, both of which emphasise the importance of naturalness.

This particular exercise also brought out some interesting national differences in participants' responses. For example, focus group participants from Italy, Norway and Sweden were more willing to talk about farm animal welfare in terms of fostering positive emotions in animals and even in terms of the importance of showing love and affection to animals than participants from other countries. Participants from Hungary placed more emphasis on veterinary and farmer care in achieving good animal welfare and seemed to be less tied to naturalism discourses. Participants from the Netherlands were particularly vocal in their critique of intensive animal farming systems. Indeed all these country specific frames of concerns echoed the main themes addressed by the national animal welfare/ animal rights NGOs (see Evans et al., 2010)¹².

Finally, we would contend that whilst this exercise (this particular enactment of what farm animal welfare might be) was conducted in an ostensibly abstract or 'blue-sky' fashion, the discussions that it fostered still bore the marks of the everyday lived practices through which lay knowledges are generated. For example, although the types of lay knowledges revealed through this enactment differ significantly from those revealed in act 1, it is clear that everyday eating and shopping practices were still helping to inform certain features of participants' understandings. This is most clearly illustrated by the fact that animal feed and in particular the quality of animal feed (and not just the amount) was one of the most frequently mentioned issues across all

¹² In this paper we have tended to focus attention on national differences rather than socio-demographic and lifestyle differences. We address socio-demographic differences in detail in Evans and Miele (2007, 2008) Miele and Evans, 2010 and Evans and Miele, 2012. Speaking generally, our research did indicate fewer variations across social-groups than compared with national differences. Probably due to the importance of national scale variations, such as the nature of the market for animal friendly goods and the nature of NGO debates. More importantly, what this paper seeks to achieve, is it introduce a new level of variation in knowing at the micro scale of everyday lived practices, local socio-material knowledges and specific academic framings.

countries and socio-cultural groups. Similarly, many participants felt that animal feed should be natural and appropriate for a given species; in particular they did not think that it was appropriate to feed cows with meat and bone meal from other cows, which is hardly surprising in the wake of the BSE crisis. As we have previously contended members of the public seem to be closer to the fork than the farm and the very fact that animal foods are ingested, literally taken into the body, helped to prioritise issues of food safety and quality within participants' perceptions of what constituted farm animal welfare; even beyond the direct context of food consumption.

6. Knowledge act three: Responding to animal welfare science

INSERT FIGURE 3



Figure 3: A scientist measuring a welfare criteria for the assessment scheme

INSERT TABLE 2

Table 2: Extract from the handout that was used to inform focus group participants about the Welfare Quality® approach to farm animal welfare

ANIMAL WELFARE: TEN AREAS OF CONCERN	
Animal scientists working on the Welfare Quality project have identified ten key areas of welfare concern to use as a starting point for assessing the welfare of cattle, pigs and chickens on farms, during transport and at slaughter. Researchers are also in the process of developing a range of welfare measures that can be used to assess each of these concerns. The ten concerns are as follows:	
1. Hunger, thirst or malnutrition	- This occurs when animals are denied a sufficient and appropriate diet or a sufficient and accessible water supply and can lead to dehydration, poor body condition and death. Malnutrition may also arise when diets are sufficient in volume but deficient in key nutrients.
2. Physical comfort and security	- Animals can become uncomfortable and have problems lying down, getting up, walking and standing. This can occur when they are kept in inappropriately designed housing (e.g. insufficient space, poor ventilation, unsuitable flooring and bedding) or when they are transported in poorly designed or poorly ventilated vehicles.
3. Health: injuries	- Animals can suffer physical injuries, such as skin lesions, bruises and broken bones due to factors such as: poor bedding conditions, uneven or slippery flooring, enclosures with sharp edges and environments that promote aggressive behaviours between animals.
4. Health: disease	- Animals can suffer a range of diseases (e.g. inflammation of the udder in cows or heart disease in broiler chickens). Poor hygiene, irregular monitoring and unnecessary delays in treatment can amplify these problems.
5. Pain (not related to injuries or disease)	- In addition to suffering pain from injuries and disease, animals can experience intense or prolonged pain due to inappropriate management, handling, slaughter, or surgical procedures (e.g. castration, dehorning) and as a result of intense aggressive encounters.
6. Normal/natural social behaviours	- Animals can be denied the opportunity to express natural, non-harmful, social behaviours, such as grooming themselves and each other and huddling for warmth. Separating females from their offspring and preventing sexual behaviour are specific examples of this.
7. Normal/natural other behaviours	- Animals can be denied the possibility of expressing other intuitively desirable natural behaviours, such as exploration, foraging, running, flying and play. The denial of these possibilities might lead to abnormal and/or harmful behaviours such as tongue rolling in cattle and feather pecking in chickens.
8. Human-animal relationship	- Poor interactions with people can be reflected in increased avoidance distances and fearful or aggressive animal behaviours. This can occur due to inappropriate handling techniques (e.g. slapping, kicking and the use of electric prods), or when farmers, animal transporters or slaughterhouse staff are either insufficiently skilled or possess unsympathetic or non-compassionate attitudes towards animals.
9. Negative emotions (apart from pain)	- Animals can experience emotions such as fear, distress, frustration or depression when they are kept in inappropriate physical or social environments (e.g. where there is mixing of unfamiliar groups of animals, or when there is not enough space to avoid aggressive interactions). These emotions can be reflected in behaviours such as panic, flight, social withdrawal and aggression and in behavioural disorders.
10. Positive emotions	- Animals can also experience positive emotions such as comfort, satisfaction and excitement when they are healthy and kept in good physical and social environments. Positive emotions are difficult to assess but may be reflected in certain behaviours, such as: play, group activity, 'choice' of partner animals within a group, exploration, grooming, and by certain vocalizations.

6.1 Setting the scene

Immediately after finishing the post-it note exercise, we move on to what we hope will be one of the most insightful exercises of the whole session. We have left the post-it notes in position on their board at the front of the room as a reminder of the version of farm animal welfare that the participants had arrived at together as a group. We hoped that this would in some ways help to equip them for the task ahead. We then provide each member of the group with a handout explaining some of the basics behind the ‘Welfare Quality’ approach to farm animal welfare (see table 2). These handouts were the result of an extended dialogue between us and the animal scientists who were in charge of developing the monitoring scheme (Miele et al, 2011). After going through the document with the focus group participants, we ask them about their overall impression of the list of ten concerns and we try to probe which categories they thought were the most important. Crucially, we also ask our participants whether the list developed by the scientists adequately covers all the issues that they had already discussed during the previous post-it note exercise.

6.2 What version of farm animal welfare is being enacted?

As one can see from the description above this particular exercise and this particular act of knowledge creation is very different from the two which have come before. Whilst in previous parts of the focus group we have figured our participants in the roles of ‘consumers’ and for want of a better word ‘concerned-citizens’ we are now asking them to perform a much more specialised role, namely that of ‘lay critics of science’. Indeed, we are hoping that their differently embedded takes on these issues will be able to supplement scientific understandings and we are even hoping to constructively

mobilise their unfamiliarity with animal welfare science as a means of questioning its basic assumptions and challenging what it takes for granted (e.g. how it defines its scope and its ethical, methodological and technical presuppositions). The apparatus and socio-material-linguistic assemblage that we have constructed in order to achieve this has now taken us very far away from the popular understandings that we have been so eager to engage with and, yet, ironically, it is these very popular understandings that we hope will re-emerge during the performance to disrupt the heavily ‘domesticated knowledges’¹³ apparent within animal welfare science.

The exercise generated some interesting results. In general participants across all study countries reacted very positively to the scientists’ list of animal welfare concerns. This was particularly true in Italy, where participants believed that all the areas of concern listed were important. Many Italian participants were also strongly in favour of the last five concerns, which they felt went beyond the basic requirements of avoiding animal suffering to address issues of how to achieve positive aspects of animal welfare and wellbeing.

“The ten categories selected ...represent what we have said but in a deeper way”

(Italian participant)

Participants from the UK also believed that the list of concerns was fairly comprehensive, although some commented that it failed to address certain issues around genetic modification and animal slaughter. Similarly, participants from Sweden felt that the list was ‘good and comprehensive’. In contrast, certain participants from France were only really supportive of the first five areas of concern, as these were

¹³ Callon and Rabeharisoa, (2003) propose the term “research in the wild” to name new forms of techno-science-society interactions, in which non-scientists work with scientists to produce and disseminate knowledge. Here we use ‘domesticated’ knowledges to address the fact that the concepts and knowledge of animal welfare produced by the scientists in this phase of the project was confined to ‘experts’ only.

deemed to be appropriate and realistic (these are the concerns that deal with the animal's basic needs), while they were far more sceptical with regards to the final five concerns, which they believed to be unrealistic and too utopian for farm animals, given the current constraints of industrialised animal farming.

The responses generated in this discussion raise some very important issues regarding the ways in which members of the public treat scientific forms of knowledge and they highlight some of the potential problems involved in attempting to foster science-society dialogues. Despite our best efforts to represent the scientific list of animal welfare concerns in a non-technical fashion and despite our efforts to ensure that participants had sufficient time to develop their own ideas about what constituted farm animal welfare immediately prior to undertaking the task, there was still a great deal of unquestioning deference towards experts' opinions on this issue. Indeed, the vast majority of focus group participants failed to spot some of the important differences between the version of farm animal welfare that they had produced during their post-it notes exercise and the version of farm animal welfare that was contained within the animal welfare scientists' list of ten concerns. For example, as we outlined in the previous section, two of the most widespread farm animal welfare concerns identified by focus group participants included the importance of providing natural, outdoor environments and the importance of providing appropriate/natural food. Neither of these issues was *directly* addressed within the scientific list of concerns that we provided to the participants and yet in the vast majority of cases these differences were not even remarked upon. This again underlines the radical importance of context in generating lay knowledges and the vital need to attend to contexts when attempting to facilitate science-science dialogues.

7. Conclusions: Ways of knowing farm animal welfare

Throughout this paper we attempted to produce a performative account of the public understanding of farm animal welfare. In line with this approach, we outlined three separate acts of knowledge production that took place within the focus groups. In the first act of knowledge production, the focus group participants were located within the milieu of food consumption. This enabled us to begin to understand how a concern for farm animals emerges in this context and to explore some of the linkages between everyday practices of eating and shopping (and the pre-existing landscape of currently available welfare-friendly foods) and certain aspects of the popular understanding of farm animal welfare. Here animal welfare was closely aligned with issues of taste and food safety (such as the quality and safety of animal feeds, the use of GMOs and the over-use of antibiotics).

In the second act of knowledge production, the public understanding of farm animal welfare was explored through a ‘blue sky’ or ‘free-response’ scenario. Within this particular enactment several different versions of what constitutes farm animal welfare emerged. One of the key features of this particular knowledge act concerned the importance that participants placed on natural and environmental considerations, such as the amount of space, access to outdoor environments and the animals’ ability to perform natural behaviours. When undertaking this exercise participants seemed primarily to adopt the identity of ‘concerned citizens’, rather than simply ‘food consumers’, however it is clear that food safety/quality concerns still influenced their understandings.

In the third act of knowledge production we explored how focus group participants responded to scientific understandings of farm animal welfare. This knowledge act highlighted some of the divergent outcomes that can arise when lay

understandings are confronted with highly-ordered scientific representations of a given phenomenon. The key point to note here was that very few participants were able to spot the differences between the versions of farm animal welfare that they generated in their post-it notes exercise (especially their assumed norms about existing animal welfare standards and their focus on naturalness, feed quality and outdoor access) and the scientific version of farm animal welfare that was now being presented to them. This highlights the radical importance of context both in elucidating lay knowledges and in fostering science society dialogues.

Taking these three knowledge acts together, one can clearly see that it is not possible to talk of ‘the public understanding of farm animal welfare’ as if it is a singular and stable entity. Instead, many benefits and fresh insights can be achieved by attempting to attend to the performativity, dynamism and diversity of public knowledges in the making. Indeed, we have shown that by setting up focus group research in a certain way and by analysing focus group discussions in a particular fashion, it is possible to gain important insights into the sets of everyday social material practices through which lay/experiential knowledges are generated and to explore the ways in which these knowledges differ from ‘credentialised’ knowledge (see Rabearisoa et al., 2013). Furthermore, this approach enabled us to ‘situate’ lay knowledges about farm animal welfare and to gain critical insights into their production, for example we began to untangle some of the interconnections between public perceptions of farm animal welfare and public understandings of the benefits and risks of animal foods to human health. Moreover, we would contend that by preserving some of the complexities of lay knowledges about farm animal welfare and by keeping the definition, scope and framing of farm animal welfare issues open – as matters that can potentially be enacted

and conceived in different ways by different groups enrolled in different sets of practices - we can enhance democratic debate about this issue (see Callon et al., 2009)¹⁴. In addition, we would contend that this research has some important implications for the governance of farm animal welfare. Callon and Rabehaisoa (2003) have argued that whether we consider the market (for animal friendly products) or the politics (of animal welfare) the same question emerges: what are the forms, modalities, and consequences of engaging lay people in the design of new economic goods or in the political decision-making process? Studies aimed at better understanding the mechanisms and reality of this engagement and subsequent co-production of knowledge are becoming available (Wynne, 1996 among others) and we hope that we have contributed to this debate. Recent academic literature has also highlighted the role of standards, for example Larry Busch has pointed out that '*standards are the recipes by which we create realities.*' (2001a and 2011b:2) and Ottinger has argued that 'As part of technical practice, standards coordinate the work of scientists and provide the means for distinguishing relevant from irrelevant and reliable from unreliable information; simultaneously, they express ethical positions and expert judgments not only on technical issues but on the political, social, and economic considerations intrinsically linked to them (Majone 1984; Irwin et al. 1997; Calow 1998; Abraham and Reed 2002).' (2010:249). The same author also pointed out that once standards are defined, the sociotechnical values, as well as the assumptions on which they are based (in this case the assumption about what the life of a farm animal is for) disappear into the background, and are made explicit again only when controversies arise (Ottinger, 2010 and 2013).

¹⁴ This avoids some of the pitfalls of inappropriately smoothing over differences and turning 'farm animal welfare' into a discrete and defined 'object' of governing (see Foucault, 1991 and Miele et al, 2005).

The level of welfare experienced by farm animals is increasingly communicated on the market and it is becoming a competitive issue for the largest companies worldwide (see Amos and Sullivan, 2017). As Callon and Rabehaisoa have pointed out, contemporary western economic markets share a common feature: *‘users or consumers who take an ever greater role in defining demand, that is, in the conception of the products being offered to them’* (2003: 194).

Therefore, it is no surprise that product labelling is increasingly becoming an important EU governance strategy, especially in relation to food issues. Underlying the worth of labelling as a mode of governance is the implicit assumption that it is possible to achieve a consensus around the definition of the particular issue that is to be assessed, monitored and ultimately labelled. This applies to the labelling of animal-friendly products, where there is an assumption that it is possible to pin down a relatively stable and universally applicable definition of farm animal welfare. However, as our research has shown, whilst there are commonalities and shared concerns about farm animal welfare across EU citizens from different countries and between non-experts and experts, there are also significant differences. Furthermore, the nature of animal welfare concerns can change depending on the site of engagement, for example when eating a meal, when shopping for food, when engaging in more abstract debates, or when reacting to expert opinions. All of these factors present a serious, but perhaps not insurmountable, challenge to the likely effectiveness of product labelling as a standalone method of farm animal welfare governance.

Our research also highlights significant differences between expert and lay concerns about farm animal welfare (for a discussion on this point see Miele et al., 2011). In particular, a number of animal welfare norms emerged from within these knowledge acts that are often neglected in scientific framings of farm animal welfare

(e.g. the value of living outdoors, the value of naturalness in life cycles, appropriate feeding, sexual reproduction, and the nature of human/animal relationships).

In contrast, animal welfare scientists, especially in the past, have tended to have a more restricted conception of what represents a good quality of life for farm animals, often limited to the satisfaction of basic requirements such as hunger and thirst, health, shelter and lack of pain and stress. If we are to ensure the democratic governance of farm animal welfare issues it is vital that these concerns for a ‘higher’ quality of life for farm animals are also taken into account alongside and in relation to scientific framings of farm animal welfare. However, as knowledge act 3 illustrated this is no simple task and requires an acknowledgement by animal welfare scientists of the different values and preferences that underpin public understandings of farm animal welfare. This implies that there is a need to question current framings of animal welfare science and to scrutinise the underlying values and assumptions that they are based upon.

Recently we have seen the rapid growth of a number of animal farming innovations in Europe aimed at increasing the welfare of farm animals (see Amos and Sullivan, 2018) and addressing public concerns about farm animal welfare. Many of these innovations have been created by new partnerships between scientists, NGOs, non academic animal welfare specialists and retailers. For example, the ‘Rondel’ housing system for egg production in the Netherlands (Koerkamp and Bos, 2008) represents the outcome of such a ‘hybrid forum’ (see Callon and Rabehaisoa, 2003). Furthermore,

various supermarket chains (e.g. Waitrose¹⁵ in the UK and CoopItalia¹⁶ in Italy) have adopted a similar ‘more-than-scientific’ approach to develop bespoke animal welfare standards for their suppliers.

These innovations show that there is a need for a clear commitment to explore new avenues of scientific research, and a willingness to explore new partnerships for producing more ‘*knowledge in the wild*’ to borrow from Callon and Rabehaisoa (2003) that could provide answers to the multiple and diversified public demands for a better quality of life for farm animals: for example research on positive emotions in farm animals, animal sociality and body integrity (see for example Miele, 2016, Latimer and Miele, 2013, Veissier et al., 2009, Veissier and Forkman, 2008) and other types of investigations more attuned to lay understandings of farm animal welfare that challenge the current moral and political status of farm animals.

¹⁵ For example Waitrose’s commitments to promoting animal welfare seek to address what they perceive to be the current limits of animal welfare assessments, as they declare in their webpage (https://www.waitrose.com/home/inspiration/about_waitrose/the_waitrose_way/waitrose_animal_welfare_recommitments.html) : ‘*We recognise that as sentient beings animals have the ability to both feel pain and experience positive emotions such as joy and pleasure. As such, whilst we currently capture a breadth of welfare outcome measures we feel it is the right time to explore further measures such as those underpinning the freedom to express positive emotions. We have been actively working with independent industry experts including academics, NGOs and animal welfare specialists to develop the extended list of outcome measures for each supply chain.*’ (accessed on November 30th 2018).

¹⁶ CoopItalia in Italy <https://www.e-coop.it/benessere-animale>

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