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What are they thinking? Consumer attitudes to meat production in Australia

Heather J Bray, Emily A. Buddle and Rachel A. Ankeny

Abstract

Meat production has come under increasing scrutiny from consumers and citizens who feel that certain practices are unethical and impact negatively on farm animal welfare. Animal welfare can be viewed as both a scientific and social concept, and purchasing products with animal welfare claims can be considered an act of “ethical consumption”. This paper reviews research which examines consumers’ attitudes to animal welfare and highlights tensions between consumer and citizen attitudes and behaviours, and assumptions that are made within these studies. We present our own research into motivations to purchase free-range eggs as an example of research that attempts to unpack these assumptions, in particular that such purchases are made out of concern for animal welfare. We present a further example of our own research that attempts to identify how attitudes to meat production are socially constructed. We conclude with recommended strategies to engage the broader community in discussions about animal production in order to improve industry-community communication about farm animal welfare in meat production industries.
1.0 Introduction

The practice of raising animals for meat has come under increasing public scrutiny in recent decades, particularly in western, developed societies where food is relatively plentiful. Most of these concerns relate to what is broadly termed “animal welfare”; however it is becoming clear that different actors within the food system think very differently about the meanings associated with this term (Coleman et al. 2016; Dockès et al. 2006; Hansson and Lagerkvist 2012; Vanhonacker et al. 2008), and this difference in opinion has resulted in animal welfare becoming a point of tension and debate. More recently, concerns about the impact of animal production on the environment, and the sustainability of meat production, also have been raised (Verbeke et al. 2010); however animal welfare continues to be the main ethical issue for consumers and the community, at least with respect to the pork industry in Australia, and thus is the focus in this paper.

The diversity of opinions about farm animal welfare among food system actors, changing opinions among these actors over time, increasing scrutiny of food production methods within the media (Phillipov 2016a), combined with ongoing and increasing demand for affordable animal protein products presents challenges for livestock production. The purpose of this paper is first to outline research into both community and consumer attitudes to livestock production from a range of disciplines and across locales including Australia, with particular focus on the assumptions about consumers that underpin this research given the methodologies employed. Second, we present findings from our own research (Bray and Ankeny 2017; Bray et al. 2016) which reveals how Australian consumers
think about animal welfare. Third, we suggest strategies for engaging the community in
discussions about farm animal production based on our findings and literature within the
scholarly field of public understanding of science.

2.0 Background

2.1 Defining animal welfare

Although humans have drawn general parallels between themselves and non-human
animals for thousands of years, the understanding that animals suffer, and beliefs that
humans should not cause undue suffering even in the context of meat production, has been
a much more recent phenomenon. Often framed as a response to food shortages after the
Second World War, intensive livestock production has been enabled through scientific and
technological innovations together with policies that aimed to increase food production. In
the UK, the 1964 publication of Animal Machines by Ruth Harrison mobilised public interest
and led to the inclusion of the positive concept of ‘welfare’, rather than focus merely on
cruelty, in legislation referring to the treatment of production animals (Woods 2011).

Research efforts into farm animal welfare initially aimed to maximize productivity while
addressing the welfare needs of animals in production systems, and focused on the
connection between animal biology and an animal’s “welfare state” (Fox 1980). Improved
understandings of motivation, cognition and the intricacy of social behaviour has led to a
rapid development of animal welfare science in the past 30 years (Broom 2011).

Considerations about animals focus on three sets of issues: physical attributes (such as
growth and health), mental feelings (pleasure or suffering), and naturalness (environmental
or behavioural), or all three combined (Fraser et al. 1997; Veisser and Miele 2014). These
approaches are characterised in what are termed the ‘Five Freedoms’, namely freedom from injury and disease, hunger and thirst, discomfort, fear and distress, and freedom to perform normal behaviour (Farm Animal Welfare Council 1997, as cited by Appleby 2005), forming the basis of some theories of animal welfare.

More recently, definitions of animal welfare have broadened to include other concepts that people value, such as the dignity and integrity of animals (Appleby 2005), positive welfare states (Mellor and Beausoleil 2015), and “quality of life” (Mellor 2016; see also Cornish et al. 2016 for a more detailed review). However, much of the farm animal welfare research has had a strong emphasis on scientific understandings of welfare and the impact of associated practices on the profitability and the supply chain, rather than on how members of the broader public conceptualise animal welfare. While there is scientific evidence to assist in justifying how some farm animals are raised, some contend that these justifications align more closely with the profitability of the system, rather than with the moral obligations towards animals that many in Western societies believe that we should have. To put it even more bluntly, it could be argued (as it is by activist groups when arguing against industry domination of research efforts) that the aim of much farm animal welfare research has been to identify production environments that have the least negative impacts on the animal, rather than developing optimal environments.

As Fraser (2008) states, “our understanding of animal welfare is both values-based and science-based. In this respect, animal welfare is like many other topics of ‘mandated’ science…where the tools of science are used within a framework of values”, with acceptance of removal of the animal from its “natural” environment being one of those
values. However, the extent to which an animal should be able to have a natural life within an artificial environment is one of the key areas of tension between scientists and the broader community. Broom (2011), Rollin (1990, 1995), Fraser et al. (1997), and Fraser (2008) all agree that animals should be able to live reasonably natural lives. However, in defining what counts as ‘natural’, there is considerable emphasis on the biological functioning of the animal and its interactions with its environment. Broom (2011) also argues that the environment provided to an animal should fulfil the needs of the animal but does not have to be the same as it would be in the wild. On the other hand, as shown in international studies, members of the broader community place much more emphasis on how the animal may feel in its environment, often connecting animals’ happiness to their abilities to express their natural behaviours (Vanhonacker et al. 2008).

2.2 Consumers, citizens and ethical consumerism

Individuals can have roles as consumers, who purchase and eat animal products, and as citizens, who voice opinions or participate in activities related to policy or regulation (Coleman et al. 2016), and it has been noted that these roles may not be well coordinated with respect to meat production (Verbeke et al. 2010). Not all members of society agree that it is appropriate to consume animals or products made from animals, and those who avoid meat and other animal products may not considered “consumers”, however their views and behaviours as citizens are still important to the livestock production sector. Those who do eat animal products can act as both consumers and citizens in different contexts. Ethical consumerism aims to reconcile these behaviours to some extent and typically refers to voluntary food choices made out of concerns for a “moral other” (such as a food animal) because of a consumer’s values and beliefs, and may involve choosing certain foods over
others because of perceived ethical superiority, or avoiding foods that can be morally problematic (Ankeny 2012). For example, someone who purchases sow stall-free pork because he or she believes it is morally wrong to confine pregnant sows and gilts in pens is participating in an act of ethical consumerism. Ethical consumerism also can be thought of as a political or economic act, aimed at changing or eliminating certain types of practices by consumers “voting with their dollar” (Shaw et al. 2006; Willis and Schor 2012) or “voting with their forks” (Parker 2013); an example would be purchasing sow stall-free pork (rather than that produced using other methods) with the aim of using market forces to eliminate the use of sow stalls.

Public interest in “ethical” food production and consumption also has been raised in recent years by TV shows featuring celebrity chefs such as Jamie Oliver, popular books including Michael Pollan’s The Omnivore’s Dilemma (2006), and films such as Food, Inc. (2008), all of which draw attention to avoidance of food produced from intensively-farmed animals. The awareness of ethical claims on food products also has been brought more into the mainstream in recent years by retailers (Hartleib and Jones, 2009), who have “reconceptualise[d] values by promoting particular standards or principles of judgement to apply to food decision-making” (Dixon 2003, p. 37). Major sponsorship of popular television cooking shows by retailers strengthens their location at the centre of popular discourse about food production and consumption (Phillipov 2016b).

However, there is an inherent tension between people acting as citizens and consumers which has been noted by some food studies scholars: for instance Johnston (2008) and Guthman and Brown (2016) found that in circumstances where people are encouraged to act as citizens and hence make decisions based on the “greater good”, such as shopping at a
Whole Foods Market (Johnston 2008) or posting comments online opposing the use of an agricultural chemical (Guthman and Brown 2016), consumerism still becomes dominant (see also Ankeny 2016 for more on the contrast between food citizens and consumers). Other scholars using a critical animal studies approach (Jenkins and Twine 2014) contend consumers are not as “free” as we might think when making food choices, given dominant sociocultural norms particularly about animal consumption. They also stress that food choices, for instance whether to be vegan or to consume animal products, are moral rather than lifestyle decisions, and hence should not be viewed via the consumer model. As we discuss further in this paper, we agree that there are limitations to focusing solely on consumer behaviours, for instance by utilizing only market mechanisms such as willingness to pay to assess public opinions; other behaviours such as citizen behaviours (including voting and advocacy in relation to relevant issues) are important to examine in order to understand community attitudes to animal production. However, studies that unpack assumptions about why consumers make the choices they do still provide insights into how consumers think about animal production, as we discuss in the next section.

3.0 Consumer attitudes to animal welfare and purchasing behaviour

Various European, American, and Canadian studies have demonstrated that consumers generally focus on the animal’s resources, notably the access that animals have to unenclosed areas, believing that such settings will lead to happy and healthy animals (Lassen et al. 2006; Miele et al. 2011; Spooner et al. 2014). Consumers also have a strong preference for animals to be reared in natural environments (Miele and Evans 2005; Lusk et al. 2007; Boogaard et al. 2008; Spooner et al. 2014), support humane handling practices (Miele and Evans 2005; Boogaard et al. 2008; Vanhonacker et al. 2008; Boogaard et al. 2011), and express concerns
related to humane transport and slaughter (Miele and Evans 2005; Spooner et al. 2014).

Consumers often object to animal suffering or pain associated with modern production methods (Vanhonacker et al. 2008; Tuyttens et al. 2010; Spooner et al. 2014). Economic studies have been used to examine how consumers value products which have animal welfare claims. In economic terms, animal welfare is a credence attribute, that is, it cannot be directly discerned from the product itself by consumers at time of purchase or after consumption, in contrast with experience attributes such as flavour. The motivations for purchasing products with increased animal welfare attributes are associated with consumer socio-demographic characteristics, knowledge of animal welfare issues and trust in information about rearing systems (Toma et al. 2012; Gerini et al. 2016); for instance, choice experiments in the US revealed a higher willingness to pay for animal welfare attributes verified by a trusted authority such as the USDA (Olynk et al. 2010). Providing information about animal welfare may not increase willingness to pay for some products (Elbakidze and Nayga 2012); however European studies indicate that consumers are willing to increase their meat expenditure by about a third in response to a welfare labelling regime (Kehlbacher et al. 2012). Despite sector growth, average consumer willingness to pay for cage-free and organic eggs was much less than the estimated price premiums (hence their smaller market share) in a US study by Chang (2010). This research also found that price premiums were higher than the increased costs of production, highlighting the importance of retailer pricing strategies in this market.

Although animal welfare concerns are not a strong driver of purchasing behaviour at least compared to other attributes such as taste or health attributes, recent studies have shown that consumers consider animal welfare to be connected to both of these attributes, and so
‘animal welfare’ (as understood by the consumer as opposed to other food system actors) may be an increasingly important driver of purchasing as it is a proxy for taste and health, as we discuss in more detail below. International studies have shown that consumers view high animal welfare standards during production as an indicator that the resulting meat is safe, healthy, better tasting and of high quality (Verbeke et al. 2010). A link between food safety and farm animal welfare in terms of antibiotic and growth hormone use in livestock production has been documented (Spooner et al. 2014), as well as concerns about genetically-modified products (Lagerkvist and Hess 2011). A Flemish study found that higher animal welfare products were positively related with better product taste, although it was not as strongly related to attributes such as quality, healthiness, safety, and environmental friendliness (Verbeke 2012). A UK survey also found that 78% of participants either agreed or strongly agreed that “animals raised under higher standards of care will produce safer and better-tasting meat” (Lusk et al. 2007).

Animal welfare labels also can alter the perceived quality of a product, with high animal welfare standards leading to higher quality expectations (Carlucci et al. 2009), or attribution of other characteristics such as nutritional value (Anderson & Barett 2016). Food labels can be thought of as boundary objects (Star and Griesemer 1989), which are objects that form an interface between one group and another. Boundary objects such as food labels are interpreted differently across groups and hence are flexible in various ways, but also maintain their integrity, remain recognisable, and serve as interpreters between communities based on some underlying content that remains stable or static (see Bray and Ankeny 2015 for a more in-depth discussion about ethical food labels). Labels clearly are not free-floating bundles of information but arise in a context that is strongly shaped by a
variety of factors which may explain the broader associations that consumers may have
towards animal products with ethical claims, in particular the attribution of superior
characteristics (Lee et al. 2013; Anderson and Barrett 2016). However, confusion about the
claims made on labels is not just about the public’s failure to receive and act on information
provided by ‘experts’, as might be claimed under a deficit model of public understanding.
People’s eating habits and food choices do not occur in a cultural, social, or historical
vacuum but within broader sociocultural, moral, and historical contexts that oftentimes go
unrecognised in conventional approaches to these issues. Consumers may wish to make
‘informed choices’ but struggle to do so within the context of real shopping which is limited
by time as well as economic and other resources. To focus merely on the need for more
education about the ‘facts’ about various types of food categories is to overlook the context
within which food choices occur, and the diverse values that people bring to these choices.

4.0 Australian attitudes to meat production

There has been comparatively less research in Australia than in Europe or North America
aimed at understanding community and consumer attitudes to farm animal welfare;
however it is generally understood that Australia lies midway between Europe and the USA
in terms of both attitudes and policy responses. Although animal agriculture is important
economically, historically, and culturally, Australia is highly urbanized, with 80% of people
living in the major cities (Australian Government Department of Infrastructure and Regional
Development 2015). There is evidence that our food habits and systems differ in important
ways from other countries; we have lower rates of vegetarianism than in other locales and
define this category differently (Beardsworth and Keil 1992), have higher average rates of
intake of meat, and deep cultural identification with being meat eaters (Ankeny 2008, Chen
In addition, Australia’s quarantine restrictions on imported animal products for human consumption result in a heavy reliance on domestic production, and the duopoly in our retail sector means retailers play major roles, perhaps greater than producers and consumers, in how food products come to be valued (Dixon 2003). Lastly, because of the relatively short period of time over which European food and fibre production activities have taken place in Australia, and because the species of plants and animals used in agriculture have all been introduced, agricultural activities are not seen as ‘part of nature’ (Saltzman et al. 2011) and hence attitudes towards what is ‘natural’ for animals in production systems may differ than those in other countries.

Surveys have shown that Australians believe that farmers do a ‘good job’ of looking after their animals (Cockfield and Botterill 2012; Worsley et al. 2015) and that farmers have the highest level of trust among food systems actors (Henderson et al. 2011). However one critique of these studies is that we do not know what understanding of the term ‘farmer’ employed by the participants in these studies, for instance whether a caged-egg producer is thought of as a ‘farmer’ in the same way as a beef cattle producer, and whether there are differential levels of trust depending on the type of production system. We do know via popular media and commercial intelligence that Australian consumers are increasingly concerned about animal welfare in Australia’s livestock industries. Recent media reports have focused on practices that some consumers believe are unethical: sow stalls, caged hens, bobby calves, and live export of beef cattle and sheep. Heightened attention to these issues may be due in part to recent activist activity focused on these practices, especially in the case of live export (Tiplady et al. 2013). Other prominent local campaigns include Animals Australia’s “No way to treat a lady” (http://www.animalsaustralia.org/no-way-to-
treat-a-lady) and “Make it possible” (http://www.makeitpossible.com/) campaigns featuring local celebrities and television and billboard advertising aimed at caged-hens and intensive housing in the pig industry respectively.

A lack of knowledge about animal production practices within the community is often linked with increasing community concern about farm animal welfare, and studies have shown that Australians do have generally poor knowledge of agriculture (Worsley et al. 2015). Australians self-report a wide variability of knowledge of farming practices, but often do not perform better than chance when asked factual questions about farming practices (Coleman 2010; Coleman et al. 2015). While these previous studies provide insight on general attitudes and knowledge regarding animal welfare, they do not give us an understanding of the impact of attitudes and knowledge on actual purchasing behaviours or on community behaviours that may exert regulatory pressure on animal production practices.

To date, there have been few studies exploring willingness to pay for products with welfare claims in Australia; Taylor and Signal (2009) is one exception, but this research uses self-reporting within a survey rather than behavioural economics methods, and thus faces the usual limitations presented by reliance on self-reporting including a tendency to promote positive bias toward issues presented as of concern. This research revealed that only 6% of participants were not concerned about farm animal welfare, and 37% described themselves as ‘concerned’; 34% would pay 5 to 10% more for products made in ways that ensured the Five Freedoms (Taylor and Signal 2009). Interestingly, self-rated knowledge did not increase willingness to pay among rural participants, but did among those from metropolitan areas, suggesting these groups of consumers are working with different types of knowledge, or
that the knowledge which they have has led to different perspectives and hence diverse conclusions.

5.0 Why are consumers motivated to purchase products with animal welfare claims?

Although the research discussed so far in this paper has revealed important findings for our understanding of attitudes to farm animal welfare and willingness to pay for products with welfare claims, almost all of it has assumed that there are shared understandings between the researchers and the research participants about what animal welfare is, that is, that it is related to animal well-being, similar to how it is defined in the Five Freedoms. The findings of Taylor and Signal (2009), Coleman et al. (2016), and others highlight that consumers have different understandings of animal production and animal welfare, yet the motivations and reasonings behind why consumers may be concerned about animal welfare have not been critiqued and have been broadly interpreted as concern for animal well-being in production systems. Similarly, a willingness to pay for products with welfare claims is assumed to be motivated by desires on the part of consumers to improve animal well-being. Thus industry efforts to address well-being may be insufficient unless there are further efforts to understand how consumers think about animal welfare in relation to meat production.

As part of a much larger study examining ethical consumption, we recently explored why consumers purchased free-range eggs (see Bray and Ankeny 2017 for a full description of this work). For this research, we conducted interviews and focus groups with over 70 Australians from diverse backgrounds in a qualitative investigation of their purchasing behaviours, and in particular whether they made any purchases that they viewed as “ethical”. We asked participants explicitly whether they purchased food with animal welfare
claim; free-range or cage-free eggs were the most commonly mentioned products. However often those who had preferences for free-range eggs did not prefer meat with animal welfare claims. Our participants suggested reasons for this apparent inconsistency, namely that the labelling on egg products was larger, that they were easier to find in the supermarket, but perhaps most importantly that the price difference as compared to the conventional product was manageable within their budgets whereas meat was already an expensive item and therefore the premium for welfare claims made it “too expensive”.

When participants talked about free-range meats, it was more common for them to mention chicken than pork, and there was little discussion of beef and sheep meat. One of the main issues that people raised in connection with meat production was confinement, revealing their perceptions that it is common practice for pigs and meat-birds to be confined, which they do not think is the case with other meat animals. Although efforts on behalf of retailers to credential their products may be having one of their desired effects, namely to reassure their customers that they are concerned about animal welfare, participants in our research were confused about some of the claims, for example confusing sow stalls with farrowing crates.

Confinement was not an issue for our participants for the reasons that most animal scientists and even possibly producers would expect. Confinement was seen as preventing animals from exhibiting natural behaviours (i.e., moving around) which in turn was thought to be important because it enabled animals to access their ‘natural’ diets. In contrast, participants described the diets of housed animals as ‘unknown’. It may be the case that some of our participants thought that access to a ‘natural’ (in their words) diet is a welfare
issue, in other words that certain foodstuffs may reduce an animal’s wellbeing or even make animals ill. However, we suggest that it is more likely that our participants felt that an ‘unknown’ animal diet increased the risk associated with the resulting food products.

Specific examples provided by participants that reinforce these fears include grain that may have been sprayed with pesticides, been genetically modified, or contain ‘unknown’ chemical additives (presumably referring to antibiotics or ‘hormones’ that many think are used in animal food production), all of which were thought to be negative and to decrease the safety of the resulting product. In addition, several participants described positive effects of a ‘natural’ diet which in turn improve the quality of the product: animals that have natural diets somehow naturally express that in the resulting product which is in turn of higher quality.

Although further work is needed to understand what the community thinks of as a ‘natural’ diet for pigs, there are three important implications for these findings. First, although a preference for products with welfare claims may appear to be an act of ‘ethical consumption’, it appears instead that welfare claims are being used by consumers as proxies for quality in terms of both nutrition and safety. This finding is critical as it changes the category of behaviour from one that is ‘ethical’ and oriented towards the moral other (e.g., the animal whose higher welfare is desired or even the environment which might be affected by production practices), to one that is motivated by the needs and desires of oneself and one’s family. In short, it may well be the case that preferences for animal welfare products are not based on what we typically consider to be ‘ethical’ considerations.
Second, these findings force us to revisit research that has identified preferences for welfare claims, especially willingness to pay (WTP) studies, where it is concluded that people will pay more for products from production systems with better animal welfare, and where animal welfare is understood by the researchers to relate to a ‘scientific definition’ (and may not be analysed in additional detail with the participants). If welfare is a proxy for quality, then the WTP for animal welfare actually may be a WTP for a better quality product. If consumer perceptions of superior sensory characteristics of products with welfare claims are correct, then animal welfare should not continue to be considered to be a credence value. In other words, consumers believe that it can be directly discerned from the product itself based on appearance at time of purchase or sensory characteristics detected during consumption.

Lastly, to be precise, our work does not show that people do not consider the welfare of animals when they make their purchases or engage in citizen behaviour related to animal welfare, but instead that consumers think about animal welfare in much broader and holistic terms than simply defining it as animal well-being, and in particular that they often associate animal well-being closely with access to a ‘natural’ diet. They also feel very strongly that better welfare is connected to improved product quality and safety, a finding which echoes those found in international studies mentioned previously. 6.0 How do Australians talk about meat production with their children

So far in this paper, we have emphasised that attitudes to and understandings of animal welfare differ among different members of the community, and that these attitudes
typically do not relate specifically to ‘factual knowledge’ of animal production systems. In order to understand how attitudes toward meat production are socially and culturally constructed, we explored how Australian families talk about meat production with their children (see Bray et al. 2016 for a full description of this work). Talking about animal death is generally considered to be a sensitive topic in countries such as Australia, especially in front of children, and until very recently, there were few educational programs aimed at children that deal expressly with meat production. We hypothesised, based on tracking discussions on social media, that this might also be a difficult subject for parents in meat-consuming families to discuss because of fears that their children might become emotional, or that it may seem to contradict messages about caring for animals. Parents, particularly those in urban areas, also may feel that they lack knowledge of animal production. We also could find no information about what Australian parents thought was an appropriate age for children to learn about the animal origins of meat, or whether certain activities such as attending agricultural shows were important for teaching children about meat production.

To address these questions, we surveyed 225 primary carers of children from Australian households where meat was consumed. Most of respondents (93%) had talked with their children about meat production and 60% felt that these conversations were appropriate when the children were five or younger. Most conversations occurred when preparing (67%) or eating (65%) meals. Parents stressed that it was important from an early age for children to know where their food comes from. They also noted that if children were older when they were told where meat comes from, they were more likely to become upset. There were some differences in the ways that women and men thought about meat eating; for instance, women were more likely to agree that children should make conscious decisions
about eating meat. In addition, women were more likely than men to be understanding if their children stopped eating meat and more likely to feel conflicted themselves about eating meat. Men were more likely to believe that meat should be eaten as part of a healthy diet, and that children should eat what is put in front of them without question. As the links with meat and masculinity have been well documented, the gendered aspects of our findings are perhaps not surprising. More generally, women have greater general concerns about animal welfare and are more likely to avoid meat than men.

We also found that those who lived in cities found conversations about food animals and meat more difficult than those who lived in rural areas. Families in rural areas did not perceive these types of conversations to be difficult or to be avoided and believed that children should be shown aspects of animal food production practices. People who lived in urban areas were more likely to feel that they lacked some of the necessary knowledge to talk about meat production and had preferences for avoiding these conversations.

Most of the participants provided details about how their children learned about the origins of meat. Some (particularly those who lived in urban areas) described cases where children became upset and chose not to eat meat for a period of time. In contrast, parents of rural children noted that knowing about the origins of meat was part of their day-to-day lives, and some were directly involved in raising farm animals for food. For some rural participants, their roles in animal production may be linked to their attitudes, but may also be connected to other rural values. Most participants, be they rural or urban parents, thought that it was critical to communicate a sense of respect to their children, namely that
animals should be treated well on farms and killed humanely, and that the effort that goes
into producing meat should be recognised.

Our research also found that the home environment is typically where children first learn
about food production, including meat. In addition, parents talk to children about meat in
ways that reflect their own values about meat production. We contend that one of the most
important findings was the value of respect stressed by most study respondents, which we
believe is an encouraging starting point for a broader conversation about the future of
ethical, sustainable, and affordable food based on shared values.

7.0 Moving forward – why education and information are insufficient

Knowledge and trust are clearly both important factors for consumers when they choose
their food. As we have shown, ‘farmers’ enjoy high levels of trust in Australia, and that this
trust is not associated with a high level of technical knowledge about food production. In
the past, communication efforts to encourage the community to accept controversial food
production methods, for example the production of genetically-modified crops, have
concentrated on increasing the community’s knowledge about the science behind such
methods. This approach to science communication is termed ‘the deficit model’ and has
largely been rejected by scholars in the science communication/public understanding of
science as it is both based on flawed assumptions and is highly ineffective, although it
persists as a dominant mode of communication (Simis et al. 2016). Hence while it is
tempting to treat worries about animal welfare practices as based on a deficit of knowledge
about current management practices that maximise welfare (at least in the opinions of
scientists and arguably producers), it is unclear that increasing awareness and knowledge of these practices will create more community acceptance or change consumer behaviours.

We argue that trust is more important than knowledge or information. While it is difficult to gauge community sentiments towards pig production for the reasons we have outlined above, based on the available literature in related domains, it is likely that concerns for animal welfare do not regularly influence the food choices made by the majority of consumers. Instead they rely on what is termed ‘habitual trust’ (Bildtgard 2008), that is, the assumption that events occurring in the world will continue in the same way as they have before; as long as this assumption is not betrayed, trust will be more or less habitual and automatic. Habitual trust is very different from ‘reflexive trust’, where a person “consciously weighs different values and corresponding forms of knowledge against each other, while trying to determine which systems and actors to trust” (Bildtgard 2008, p118).

Knowledge becomes important when and if people become aware that practices do not reflect what they thought occurred in practice; if the reality is more negative that perceptions, they can feel that their trust has been betrayed. This betrayal of trust is increasingly being described as a loss of a particular industry or sector’s ‘social licence to operate’ (Martin and Shepheard 2011).

Maintaining or building trust is key to community and consumer support for animal production. We know that shared values are more important for the formation of opinions, well ahead of technical knowledge (Sapp et al. 2009), and so we recommend that industry communication efforts must be based on shared values. However, it is dangerous to assume that just by ‘talking’ about shared values, an industry will be able to convince the
community that what they are doing is ‘right’. Engagement does not work if it only occurs in one direction; dialogue and a preparedness to change has to exist on both sides. A clear picture of the values and attitudes of both parties needs to be at the core in order to foster any effective dialogue.

Consumer and citizen behaviours are both complex. Understanding the physiological basis of animal welfare has been an area of considerable international and interdisciplinary research effort for decades, and at least a similar effort will be required to determine what society members feel are appropriate ways to raise animals for meat. Researchers from various fields such as psychology, economics, media studies, sociology, and science communication can help to reveal some parts of the picture using their own particular lenses, but it will take sustained and coordinated investment across disciplines to ensure alignment in attitudes to and understanding of animal welfare between meat producers and the broader public.

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