The 'good farmer': farmer identities and the control of exotic livestock disease in England.

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Abstract

Exotic livestock disease outbreaks have the capacity to significantly impact individual livestock keepers, as well as devastate an entire industry sector. However, there has been limited research undertaken to understand how farmers think about and carry out exotic disease control practices within the social sciences. Drawing on aspects of Social Identity Theory and Self-Categorisation Theory, this paper explores how the 'good farmer' identity concept influences farmers' exotic livestock disease control practices. Using findings from an in-depth, large-scale qualitative study with animal keepers and veterinarians, the paper identifies three context specific and at times conflicting 'good farmer' identities. Additionally, a defensive component is noted whereby farmers suggest an inability to carry out their role as a 'good farmer' due to government failings, poor practice undertaken by 'bad farmers', as well as the uncontrollable nature of exotic disease.

Key words

Good farmer, exotic livestock disease, social identity theory, biosecurity.

Introduction

The management of livestock disease is an essential aspect of good animal husbandry and livestock production. Animal keepers routinely deal with endemic diseases through both proactive and reactive control measures, including, for example, the implementation of animal health plans, vaccination programmes and the treatment of illness with antibiotics. However, the management of exotic livestock diseases is less routine, despite recent outbreaks of exotic diseases in England, including Swine Fever (2000), Foot and Mouth Disease (FMD) (2001 and 2007), Bluetongue (2007) and Avian Influenza (most recently in 2015). Additionally, a warming climate is increasing the risk of the introduction of other exotic diseases such as African Horse Sickness (MacLachlan and Guthrie 2010). In order to manage and prevent exotic livestock diseases, animal keepers are expected to carry out regular stock surveillance and implement a range of biosecurity measures such as limiting and controlling farm visitors; cleaning and disinfecting clothing, vehicles and buildings; and careful stock sourcing and isolation procedures. Animal keepers are also expected to report any suspicion of exotic livestock diseases promptly.

Exotic livestock diseases pose significant risks to the livestock industry and can be a significant cost burden to the taxpayer in compensation paid to farmers. For example, £1.3 billion was paid in compensation for animals that were slaughtered during the 2001 FMD outbreak (Bourne 2002) and farmers faced an estimated £84 million in additional losses associated with other costs such as the restocking of livestock and wages (Sharpley and Craven 2001). Despite this significant cost burden, there has been limited research undertaken into how animal keepers think about and manage exotic disease risk. Nonetheless, a number of useful studies have explored the ways in which farmers understand issues around (mainly endemic) livestock disease management, including biosecurity. For example, Enticott et al. (2012) distinguish between 'localised' and 'population' strategies to encourage farmer uptake of biosecurity

practices, concluding that interventions which draw on locally situated practices and knowledges of disease are more likely to have a positive impact on biosecurity behaviour. Studies have also sought to explore the nature of animal disease governance, within an increasingly neoliberal political environment. For example, Hinchcliffe and Ward (2014) note the importance of situated knowledge practices rather than the promotion of a uniform approach in encouraging the uptake of biosecurity. Hinchcliffe and Ward (2014) suggest that farmers' understandings of biosecurity (or what they label 'making life safe') are complex and may be threatened by conventional messaging from government which can often over-simplify the skilled, situated practices that farmers must adopt to remain free of disease. At a time when farmers are being encouraged to take a more active role in disease management through the political framework of 'cost and responsibility sharing' (Garforth *et al.* 2013, Maye *et al.* 2014), understanding farmers' biosecurity behaviour and the factors which are influential is essential.

This paper draws on findings from a large qualitative study which explored animal keepers' exotic disease control practices. The study included interviews with animal keepers who had direct experience of exotic disease and also asked animal keepers with no direct experience to consider their potential reactions to a range of exotic disease scenarios. The paper builds on existing research in two main ways. Firstly, it addresses the under-researched area of exotic livestock disease management which has been somewhat neglected by the social sciences. Secondly, in conceptual terms, it draws on the notion of the 'good farmer' to explain how farmer identities are likely to influence their livestock disease management behaviour. This furthers work by Silvasti (2003), Burton (2004), Sutherland and Burton (2011) and others who explore the role of farmer identity within the context of the adoption of new practices which may contravene farmers' understanding of what being a 'good farmer' constitutes. This conceptual framework is applied in this paper to the context of exotic disease management, which has not been done previously.

The 'good farmer'

Researchers have explored the concept of the 'good farmer' to understand farmer attitudes and behaviour. The concept has been mostly applied to understand farmers' conservationist versus productionist identities (Silvasti 2003, Burton 2004, McGuire *et al.* 2013). For example, Burton (2004) suggests that farmers may be reluctant to take up particular schemes (e.g. the Community Forest scheme) or change their practices in any way that may undermine their primary identity as producers of the nation's food. In short, studies around farmer identities often conclude that *farmers want to farm*, potentially limiting efforts to influence uptake of particular behaviours which may be considered to be at the side-lines of productive farming (Allison 1996, Burgess *et al.* 2000).

Individuals' values have been found to influence what an animal keeper considers to be 'good' or 'bad' practice. Tind Sorensen et al (2001) suggest that a farmer is faced by a wide variety of concerns which are likely to shape their values. For example, a farmer must consider issues of animal welfare, productivity, food safety, and impact on the environment. Certain issues are likely to conflict with others. Tind Sorensen (2001) points out that the goal of providing high welfare space for livestock may come into conflict with the goal of reaching a particular profit margin. Such a system may also conflict with some aspects of disease control which can be more manageable in intensive systems which offer less space to each animal. Te Velde et al. (2002) identify a range of values held by keepers relating to animal welfare that shape individual's understanding of what constitutes being a 'good farmer' in relation to managing their livestock. These values include the following: animals should be treated well; they should be provided food, drink and shelter; they should be kept under hygienic conditions; and they should not be treated roughly. The authors also found that farmers often distanced themselves from examples of poor practice, disassociating themselves from what they considered to be particularly 'bad' production systems or animal welfare approaches.

An animal keeper's values are also likely to influence what they consider to be their own role in managing exotic disease risk. In a study conducted by Garforth et al. (2013), a distinction was made by animal keepers between the management of endemic and exotic diseases. Due to the strategic nature of exotic disease management and the public goods associated with control (e.g. sustainable and safe food supply), animal keepers were more likely to designate responsibility for the exotic disease control to the government, while endemic disease control was more often considered to be a shared responsibility. In relation to perceptions of responsibility, Huddy (2001) suggests that although government and the public may expect all animal keepers to maintain a certain level of biosecurity implementation, the norms of the groups in which the keeper are positioned is likely to have a far greater influence. Therefore, if the shared values held by the group suggest that responsibility for exotic disease control lies with the government, messages from the government encouraging individual action may have limited influence on behaviour. Studies exploring the uptake of biosecurity measures (to address both endemic and exotic diseases), have shown that feelings of responsibility have a strong influence on biosecurity implementation. For example, where farmers consider the spread of a particular disease to be the fault of the government, reluctance to implement disease control measures at the micro level have been found to be high (Gunn *et al.* 2008, Maye*, et al.* 2014).

The literature suggests that individual and collective identities, together with the associated values and norms, have an important influence on animal keepers' attitudes and behaviour. This paper draws on the concept of the 'good farmer' to explore the role of identity within the context of exotic livestock disease control. From a theoretical perspective, Social Identity Theory (SIT) and Self-Categorisation Theory are used to further explore 'good farmer' identity. These theoretical approaches are outlined in the following section.

Social Identity Theory (SIT)

During the 1970s and 1980s, SIT was developed by Taifel and Turner (Taifel 1970, Tajfel and Turner 1979) to help understand intergroup behaviour. SIT addresses a limitation of the Theory of Planned Behaviour which, despite having gained popular appeal in understanding and interpreting individuals' behaviour, has been critiqued for being too focussed on individuals, thereby neglecting the wider contexts in which attitudes are formed and behaviour expressed. SIT suggests that an individual's self-identity is influenced by their status within society, which in turn is strongly shaped by their social categorisation. SIT is therefore furthered by Self-Categorisation Theory, which describes the circumstances under which an individual will perceive groups of people, including themselves, as belonging to particular social groups. Within the context of this study, such categorisations may include, for example, 'commercial' or 'hobby' keepers, 'cattle' or 'poultry' keepers, 'intensive' or 'extensive' farmers, 'good' or 'bad' farmers.

A number of attempts have been made to integrate SIT into the Theory of Planned Behaviour (see, for example, Rise and Sheeran 2010, Fielding *et al.* 2011). In so doing, the link between self-identity and behavioural norms has been emphasised. Fielding et al (2011) argue that the norms of a particular group with which an individual identifies are likely to have a far greater influence on behaviour than the expectations of others outside of the group. Empirical evidence from other studies support this theory, including, for example, work on household recycling and fitness behaviours (Terry and Hogg 1996, Terry *et al.* 1999).

The different roles and positions that an individual occupies help to form their personal identity. However, each individual shares these identities with others. For example, an individual is not the only cattle farmer, or the only small scale poultry keeper. Instead, these personal identities are shared, making them also collective identities. The interaction between personal and collective identities becomes salient when considering collective action, social norms or feelings of responsibility to others with which an individual may identify. Fielding et

al (2011) point out that for the majority of the time, collective identities will remain latent. However, changes in contextual circumstances may bring collective identities to the fore. For example, a disease outbreak may lead individuals to more strongly demonstrate their collective as well as individual identities. Where an animal keeper may suspect disease on their farm, their individual identity as a 'good farmer' as well as their collective identity as a 'cattle farmer', and the associated group norms and feelings of responsibility, may encourage the keeper to report suspicion of disease quickly.

Self-Categorisation Theory suggests that an individual is more likely to act as a member of a particular group, the stronger they identify with it (Ellemers *et al.* 1999). An individual will hold a number of identities and the strength of a particular identity, influenced by a particular context or event, is most likely to impact on their behaviour (Terry and Hogg 1996). If an animal keeper does not associate with a particular identity (for example 'cattle farmer' or 'good farmer') they may not behave in the same way as those who identify strongly with such groups. For example, an animal keeper may recognise that the welfare of their animals may have become neglected due to external pressures such as finances or personal health problems and may therefore no longer consider themselves to be a 'good farmer' or even a 'farmer' at all and may cease to conform with the social norms of behaviour associated with that group. SIT is not without its critics (Rabbie et al 2006). For example, Huddy (2001) finds that the theory fails to account for existence of identities acquired by choice (as opposed to automatic membership/identity) or to account for how identities progress from weak to strong. Such criticisms are valuable, but SIT, especially when combined with insights from Social Categorisation Theory, can nevertheless provide a useful lens through which to explore how farmer identity may influence exotic livestock disease control behaviour. The methods adopted for the study are outlined in the following section.

Methods

This paper draws on data collected from 60 face-to-face interviews with animal keepers, 19 interviews with government and private veterinarians and eight focus groups attended by a total of 60 animal keepers across England and conducted in early 2015. The primary research was designed to inform the evidence for the Department for Food, Environment and Rural Affairs' (Defra) review of compensation payments for exotic livestock disease in England (animal health and welfare policy is a devolved issue with Scotland, Wales and Northern Ireland setting their own agendas). Study participants were selected from across four livestock sectors (pig, poultry, cattle and sheep) and represented a wide range of systems (e.g. intensive/extensive, upland/lowland, food/non-food). Of the 60 animal keepers interviewed, 50 were selected from existing databases held by Defra and had past experience of a suspected or confirmed case of an exotic disease. The remaining animal keepers were purposefully selected through industry gatekeepers and existing contacts to represent a broad range of farm types, sizes and systems. The veterinary participants were also selected from Defra databases identified as having been involved in the reporting or management of past suspected or confirmed cases of exotic disease. Eleven of the vets were employed by the Animal and Plant Health Agency (APHA) and eight were private vets.

The interviews lasted approximately one hour and asked participants to recall in detail their routine disease management practices. Interviewees who had past exotic disease experience were asked specifically to recall their actions during the suspected or confirmed outbreak. This included the point at which they became concerned, who they contacted, the actions that they undertook and the concerns and emotions that they experienced. A biographical narrative approach was adopted which encouraged interviewees to speak freely and in detail about their experiences, recognising the importance of wider social and environmental contexts which influence how events are experienced and recollected (Rist 1994).

The sector specific focus groups were held in a range of geographical areas to ensure diversity in attendees. Two focus groups were held for each sector (pigs, poultry, cattle and sheep). . Focus groups lasted for approximately three hours and were facilitated by two experienced social scientists. Attendees were self-selecting and were contacted via industry gatekeepers to request attendance. All research participants were assured of anonymity and permission was obtained to record the interviews and focus groups. All recordings were transcribed verbatim.

The interviews and focus group discussions centred on the potential role of compensation in influencing animal keeper disease management behaviour. However, a key area of discussion was the routine management practices adopted by animal keepers and the factors influencing these practices, which forms the focus of this paper. Research participants were then asked to consider how their disease management routines may differ in two different scenarios. The scenarios focused on two alternative compensation systems: (1) a system based on penalties for poor disease management practice; and (2) a system based on bonuses for good disease management practice. The data were analysed using the qualitative software NVivo, following a coding framework which was devised based on an initial reading of interview and focus group transcripts to identity key themes and follow up meetings with all members of the research team. Research team members were also asked to review the final coding of the transcripts in order to ensure validity. The results from the data collection and analysis are presented below.

Results

The study sought to establish animal keepers' routine animal welfare and disease control practices and to explore how these might change in the event of an exotic disease outbreak. Central to animal keeper responses was the concept of the 'good farmer'. Animal keepers regularly described what they considered to be 'good stockmanship'. This differed significantly across the livestock sectors.

Defining the 'Good Farmer'

Intensive keepers, particularly those in the poultry sector, spoke about specific flock health indicators, including water intake and mortality rates. Such measures were regularly recorded and considered to be essential in maintaining animal health:

> "I think a very basic thing that everyone would do is you monitor your mortality…everyone would do that…You then have water monitoring, so every day you would read a water meter and graph that and the same with the egg feed" (Poultry keeper focus group participant, ID31).

> "The birds that we buy are bought with a predetermined set of specifications, a KPI [Key Performance Indicators] to say that on day one it will weigh this, on day two it will weigh this. So the growth can be graphed and the food conversion can be graphed" (Poultry keeper focus group participant, ID33).

In comparison to the specific markers used by poultry keepers to monitor animal health, keepers running extensive systems, particularly those within the cattle and sheep sectors, described identifying illness or disease in their stock as an innate skill or instinct and often found identifying signs of illness difficult to describe:

> "I would hope it would be fair to say that most decent stockmen or livestock farmers check their stock every day and if they aren't being checked every day then they should be…the signs of good health are…for somebody sat in an office, it might be difficult to understand because you're not going to be there with a sheet ticking things off but you very quickly see if an animal is off colour and it's just something that you know, you have that ability to do" (Cattle keeper focus group participant, ID1).

> "You always know when something's not right, you know. They look happy and if not, you've got problems" (Cattle keeper interviewee, ID28).

Although at times keepers found it difficult to describe exactly what constitutes good animal welfare practices, livestock keepers often distinguished themselves from 'bad' farmers, who they considered to be 'beyond help'. For example, during a focus group discussion, cattle farmers were presented with scenario one, which described a situation whereby the level of compensation would be reduced if the animal keeper was found to be undertaking 'poor disease management practice' thus representing a penalty. Participants were asked whether such an approach would help improve areas of poor practice. The following responses were typical:

> "Probably not, not if he's going to do poor practice, it's too late then" (Cattle keeper focus group participant, ID6).

> "He wouldn't realise it was poor practice in the first place" (Cattle keeper focus group participant, ID1).

There was an assumption among research participants that all 'proper' animal keepers should be routinely undertaking what they considered to be 'good practice'. When asked to reflect on scenario two, a compensation system based on bonus payments for 'good disease management practice', participants considered whether such incentives would have any influence on exotic disease control practices. According to a commercial duck keeper:

> "I think there should be an expectation that it should be done properly anyway, rather than paying people extra. There should be an expectation that it should be done properly and I think that if you are caring about your animals you would be doing it anyway" (Poultry keeper interviewee, ID84).

Although distinctions were often made between 'good' and 'bad' practice, or more generally, 'good' and 'bad' farmers, research participants found defining a 'good farmer' difficult. For

example, during a face-to-face interview, when asked to describe what he meant by the term 'good farmer', a sheep keeper gave the following response:

> "Anyone that has got good stock, proud of their stuff, proud job, if we didn't take pride in it, we'd have nothing…the proud farmers are better farmers" (Sheep kepper interviewee, ID85).

Separation from 'the Other'

While all animal keepers involved in the study were prepared to recognise that areas of poor practice exist across all livestock sectors, pig and poultry keepers more regularly referred to 'poor farmers' as particular sub-sectors of the industry, most regularly referring to hobby farmers. Cattle and sheep farmers were more defensive. For example:

> "There's something like 1500 serious pig keepers…but there's like 30,000 people in the country who keep pigs…Obviously, in an ideal world, I'd rather they didn't but the world isn't ideal and I have to accept that other people have to exist in the world. I think I have the right to expect that those people understand their obligations" (Pig keeper interviewee, ID119).

> "Taking into consideration the site that was affected with [Avian Influenza], on all four sides of it were areas of land that they sold off to hobby farmers. They all had chicken pens. One of them didn't even have a pen they just wandered, so from our point of view, that's the biggest risk. It's like having a time bomb amongst your biosecurity. It doesn't matter how much you control it on your land, it's how you control it on neighbouring land" (Poultry keeper interviewee, ID3).

> "Hobby farmers, they might feed kitchen scraps to their pigs. They might actually have swine fever on the farm but nobody would necessarily know about it" (Pig keeper focus group participant, ID53).

Poultry and pig keepers were more able to distance themselves from 'bad farmers' than those in the cattle and sheep sectors, often categorising themselves as 'serious' or 'commercial' farmers and others as 'hobby' farmers, while cattle and sheep keepers were less able to make a clear distinction. As one poultry keeper pointed out:

> "Think about other agricultural sectors, nobody usually has a pet cow and its very rare to have a pet sheep, whereas for the poultry industry, all of a sudden [hobby farming] is a significant feature" (Poultry keeper interviewee, ID3).

While commercial keepers were keen to distinguish themselves from hobby farmers, hobby farmers who were involved in the study did not make the same 'us' and 'them' distinction. Additionally, when hobby farmers were asked to outline their routine animal welfare and disease prevention practices, no obvious areas of poorer practice were encountered.

There appears to be a clearer line between commercial and hobby farmers within the poultry industry, allowing keepers to identify with a defined sector of the industry. In comparison, for cattle and sheep farmers in particular, the line is far more blurred. What constitutes a 'hobby' cattle or sheep farmer is less clear. Instead of drawing a comparison between 'commercial' and 'hobby' farmers within the cattle and sheep sectors, farmers belonging to these sectors were more ready to distinguish themselves from 'dealers' and 'travellers' who they often suggested were 'poorer' animal keepers, more likely to ignore or hide disease:

> "The reporting wasn't a problem [during the 2001 FMD outbreak]…if you know there is an outbreak, okay, reporting is pretty simple. But you get the odd dealer that will try it on, we all know it happened…they were actually moving sheep around in order to get the disease to get the compensation" (Sheep keeper interviewee, ID96).

> "We have quite a large travelling fraternity around where [the disease] was first diagnosed. They have got livestock and were shipping them out right, left and centre in

> trailers and land rovers…none of them have been registered so nobody knows that they actually exist so you don't know if [FMD] could have been hanging around in some of that stock" (Cattle farmer interviewee, ID1).

In addition to identifying and distinguishing between different sub-sectors of the industry, animal keepers also distanced themselves from disease risk management by apportioning blame to the government. This was particularly evident among cattle keepers:

> "I think we have a deep distrust of the government and a complete dissatisfaction and complete dissolution with anything that the government either throws at us or tries to will upon us" (Cattle keeper focus group participant, ID34).

> "[Exotic disease] is the government's problem. They should sort it out and we should be compensated properly" (Cattle keeper focus group participant, ID9).

With reference to the 2001 outbreak of FMD:

> "The government took a long time in not closing the country down for seven days, that's what did the damage. The one case would have stayed pretty local if they'd stopped the first case; it took them seven days to close the country down" (Cattle keeper focus group participant, ID8).

> "Don't tell me the reporting was a problem. The reporting wasn't a problem, it was the government that were the problem" (Sheep keeper interviewee, ID96).

Allocating blame to the government allowed farmers to distance themselves from having responsibility for controlling the spread of the exotic disease. Further distancing themselves, cattle keepers emphasised the uncontrollable nature of wind borne diseases such as FMD:

> "We have no control over it, full stop, there is nothing we can do. It comes in on the wind, it can come in with birds and I'm afraid we haven't got any control, whatever we

> do; whatever we can do we can't control that one" (Cattle keeper focus group participant, ID2).

While some animal keepers felt there was very little they could do to control exotic disease, they explained that they would implement particular measures during an exotic disease outbreak, despite low levels of confidence in the efficacy of implementation:

> "It's not going to stop any disease outbreaks but it looks as if you're doing the best you can do" (Cattle farmer focus group participant, ID2).

> "We bolted down a disinfectant mat and kept that topped up [during the FMD outbreak] but I think a lot of it is a feel good factor from our point of view because if you were taken with foot-and-mouth you could have sat there hand on heart to your partner and said 'I did my best'…I don't think anything made a difference, it just made us feel better at the end of the day" (Cattle farmer focus group participant, ID1).

This attitude indicates a wish to portray the 'good farmer' identity to those both within and outside of the livestock industry. While there was some doubt about the efficacy of implementing biosecurity measures, feelings of responsibility to the industry to be a 'good farmer' during an exotic disease outbreak were regularly encountered:

> "There's a sense of ownership over [disease], and we've recognised that if we all run around in the middle of an outbreak and make it worse, we won't have an industry. It would be very easy to spread, and so we all have a sense of responsibility over that and to protect what we've got" (Poultry keeper focus group participant, ID31).

> "If you know there is disease around, your biosecurity improves somewhat. Yes, definitely, you would be more vigilant. Because, you know, hopefully, as an industry, farmers will think they're sort of in it together. You're protecting your own livelihood,

> but at the same time you're very aware that what you're doing could be affecting others" (Sheep keeper interviewee, ID96).

Conflicting Identities

The complexities of the 'good farmer' identity concept were evident in the various responsibilities that the animal keepers recognised. In particular, there were conflicts at times between a range of responsibilities, including responsibility for keepers' own livelihoods, responsibility for the welfare of their livestock and responsibility to other local livestock keepers. These conflicts were clearly evidenced by the experiences of one commercial pig keeper whose pigs were culled during the 2000 Swine Fever outbreak, despite being clear of the disease. The keeper was informed by the then Ministry of Agriculture, Fisheries and Food (MAFF) that his pigs would be culled as they were classed as a 'dangerous contact' due to the farm's proximity to other pig herds that had contracted the disease. Initially, the pig keeper refused and requested that the case be taken to Judicial Review. However, the keeper was informed that movement restrictions would remain on the farm and the local area until the outcome of the review was known. The keeper recognised that this would delay the recovery of the local pig industry in his area and allowed the cull to proceed:

> "[The MAFF representative] said, 'if we're going for a judicial review, by the time they tell you they're going to kill the pigs, you will have to put the slaughter date back'. I said, 'the situation is, none of my mates are going to understand. We all know each other, they're not going to be very pleased with me'…I didn't want to delay the slaughter because you're dealing with a community of pig farmers, who I know most of them, and you're telling them, 'we aren't going to get out of this problem because I'm arguing over it'" (Pig keeper interviewee, ID122).

Another pig keeper whose herd was culled as they were considered to be a 'dangerous contact' also demonstrated the complexities surrounding the 'good farmer' identity in relation to maintaining animal welfare. In comparison to the case outlined above, this pig keeper requested that his pigs be culled in order to end their suffering due to poor living conditions brought about by a long period of movement restrictions during the 2000 Swine Fever outbreak. The keeper's situation is demonstrated by the following quote:

> "By the time we got to the middle of September…by then we'd been held up for getting on for eight weeks…I can't stop the old girls giving birth…I rang the vet and said 'you need to get in touch with [MAFF], you need to persuade them that I am a dangerous contact'…They never found [Swine Fever] here and I would have been disappointed if they had found it because we were really strict about who was allowed on. It wasn't a particularly easy decision; it's not a particularly nice thing" (Pig farmer interviewee, ID119).

The results presented here have demonstrated the wide range of identities with which an animal keeper may associate and their related practice-based complexities. The potential implications of these findings are discussed below.

Discussion and conclusion

The results presented in the previous section demonstrate the complexities associated with the identity of the 'good farmer' within the context of exotic livestock disease management. Animal keepers clearly hold a number of individual and collective identities and the wider context in which they are positioned is likely to have an important influence on which identity or identities drive their behaviour. The role of social identity and self-categorisation has been explored previously in terms of how it may shape the identity of an individual and influence their behaviour. Taifel (1970) suggests, for instance, that an individual defines himself and

others based on his or her location within a system of social categories. An individual's identity, and in particular their values, is therefore shaped by comparisons with other categories of society.

This study sought to explore the concept of the 'good farmer' within the context of exotic livestock disease management. In-depth analysis of the data collected for this study emphasised the complexities associated with understanding exactly what a 'good farmer' is. In relation to exotic disease control, a number of 'good farmer' identities were noted and included: the 'Good Stockman' identity; the 'Good Neighbouring Farmer' identity; and the 'Good Public Facing Farmer' identity. Each of these is likely to drive particular exotic disease management behaviours. Farmers may associate with one or more of the three identities alongside other personal and collective identities, each of which may become more latent or salient depending on a particular context. Each of these identities is discussed in more detail below.

- *The 'Good Stockman' identity.* Firstly, the 'good stockman' identity focused on the health and welfare of the animals to which good stockmanship was central, often described as innate, tacit knowledge, particularly among cattle and sheep keepers. Identifying disease and reporting suspicions of disease quickly to prevent the spread of disease was considered to be driven primarily by the 'good stockman' identity; however, the complexities surrounding this were exemplified by the need to make difficult decisions, including the culling of large numbers of animals on welfare grounds. Additionally, where keepers undertaking poor practice could not be allocated to a sub-group of the sector, research participants were more defensive of their behaviour, blaming personal, financial and/or health reasons rather than allowing the poor practice to be associated with the wider identity of the sector.

- *The 'Good Neighbouring Farmer' identity.* Secondly, the 'good neighbouring farmer' identity was also evident whereby animal keepers involved in this study regularly voiced feelings of responsibility to local farmers, with whom many were well acquainted, to prevent disease spread and resume business function as soon as possible. The 'good neighbouring farmer' did not want to be judged poorly by other local animal keepers or to cause unnecessary problems, particularly to those with which the keeper identifies most closely (e.g. other local keepers in the sector). Returning to Fielding et al's (2011) work on social identity, animal keepers are likely to relate to a number of identities, with certain identities becoming more salient depending on a particular context. In relation to the pig keeper example outlined in the results section, where the pig keeper eventually agreed to allow his pigs to be culled, the farmers 'good animal welfare' identity was superseded by his 'good neighbouring farmer' identity due to the unusual context in which he was positioned.

- *The 'Good Public Facing Farmer' identity.* Thirdly, moving on from the micro level, research participants demonstrated the 'good public facing farmer' identity, whereby animal keepers felt a responsibility to the wider industry to portray good disease control practices during exotic disease outbreaks in order to maintain a positive industry identity, despite voicing doubts about the efficacy of such measures. Research participants were mainly only concerned about the portrayal of their own sector rather than of animal keepers more generally, often distinguishing between sectors and at times criticising the disease management practices of keepers in other livestock sectors. For example:

> "If you start at the biosecurity policy, I would say I would score, let's say an eight, against a sheep farmer who'd score one or two" (Pig keeper focus group participant, ID49).

> "The sheep people, let's make no bones about it, they're mucking about with these bloody sheep, they're going from one end of the country to the other…and they're all sort of laughing about it" (Cattle keeper interviewee, ID81).

Defending the 'Good Farmer' Identity

The 'good public facing farmer' identity clearly exemplifies a defensive component which was evident throughout the data. Research participants regularly made sense of their individual and communal identities by rejecting the 'other'. Turner (2006) argues that, in their search for a positive identity, individuals will focus on areas of distinctiveness that positively differentiate their social grouping from other categories of society. As demonstrated in the the results section of this paper, animal keepers involved in this study regularly defined themselves as a particular 'type' of animal keeper and made distinctions between themselves and others. The most regularly encountered distinction was made between 'commercial' or 'proper' farmers and 'hobby' farmers/keepers. This distinction is clearly value driven and linked to the wider productionist 'good farming' logic discussed elsewhere (see, for example, Burton 2004). This was referenced most often where the distinction between the groups was clear within the livestock sector, which is particularly the case for poultry keepers. Where the distinction was more fuzzy, other categorisations were differentiated, for example, commercial livestock keepers referenced poor practice among 'dealers' and 'travellers' who they did not consider to be 'proper' farmers. Animal keepers also differentiated between 'farmers' and 'government' who they regularly criticised for poor management of previous exotic disease outbreaks. Where distinctions between categories of animal keepers were less clear, research participants simply differentiated between what they defined to be 'good' or 'bad' farmers.

In order to protect the positive identity of the sector, research participants also regularly apportioned blame for exotic disease spread elsewhere, most often to government but also to

the uncontrollable nature of exotic disease. For example, research participants often referred to the spread of wind-borne pathogens as being completely outside of their control, thus defending any lack of individual action. Accounts of bad exotic disease management by government representatives were regularly encountered, as exemplified by quotes from research participants reported in the results section, particularly in relation to FMD. Experience is likely to have an influence on animal keepers' perceptions of the legitimacy of the government to provide suitable guidance in relation to keepers' role in exotic disease control. This study found that cattle and sheep keepers were often more negative in relation to the government's role and the relevance of their policies and guidance. This may be related to the significant exotic disease outbreaks experienced by the sectors in recent memory, in particular the 2001 and 2007 FMD outbreaks. In both cases, research participants regularly blamed the government's lack of decisive action or poor regulation for the spread of the exotic disease and rarely apportioned any responsibility to livestock keepers themselves. In comparison, livestock keepers from other sectors, particularly poultry were less likely to portray the government in similarly negative terms. Across all sectors, emphasis was given to the need for government responsibility for exotic disease control, especially in relation to controlling borders. This has animal health policy implications in terms of farmer buy-in to a cost and responsibility sharing compensation system between government and industry for exotic disease management and warrants further exploration.

Poor relations with government and the apportioning of blame within the livestock disease management context has been reported by others (see Hall *et al.* 2004, Heffernan *et al.* 2008). Research participants also criticised the advice provided by government during exotic disease outbreaks. In relation to Social Categorisation Theory and SIT, Fielding et al (2011) suggest that relations between the in-group and the out-group may have an important influence on whether in-group members decide to carry out a particular behaviour being promoted by the out-group. The salience of messages communicated by those perceived as outside of the group

is likely to be strongly influenced by the extent to which the situation is considered to be characterised by an 'us' and 'them' mentality. As Fielding et al (2011) state, there is significant research that suggests that messages coming from outside of the group are less likely to be trusted and there is likely to be more resistance to criticism from outgroup members. Additionally, where the greater power or status of the outgroup is perceived by in-group members to be illegitimate, in-group members may resist or undermine messages communicated by the outgroup. Fielding et al (2011) suggest that failing to follow guidelines or recommendations can be one way by which in-group members can register their resistence against the outgroup. Understanding an individual's or group's identity may therefore have an important influence on how messages from government or others outside of the group communicate messages and encourage particular behaviours. For example, messages to encourage good routine disease surveillance practices and early reporting of disease suspicion may be framed to appeal to animal keepers' 'good stockman' identity. In comparison, messages to encourage heightened biosecurity practices during an exotic disease outbreak may be best framed to appeal to animal keepers' 'good public facing farmer' identity.

This study has demonstrated the complexities associated with the identity of the 'good farmer'. Animal keeper practices are likely to be influenced by what they understand to be their individual identity as a 'good farmer' as well as their collective identities as perceived by those within the sector, as well as the perceptions of those outside. Although SIT and Self Categorisation Theory have provided a useful lens through which to consider the findings from this study, it is worth noting some limitations. First, SIT often assumes the existence of fixed groups with clear boundaries; however, this study has shown that group identity occurs on a continuum and is fluid and context dependent. Farmers may identify more strongly with a particular group during times of crisis or may similarly distance themselves from a particular group with which they may otherwise identify. Such shifts are difficult to predict and may occur quickly. Second, limited research has been undertaken within the context of SIT to

explore the extent to which particular personality traits may influence the extent to which an individual may seek to ascribe to particular group identities. This study has shown that feelings of responsibility may influence identity. Further research would be beneficial here in relation to what drives certain farmers to have stronger feelings of responsibility than others. Third, the findings from this study have emphasised the difference between ascribed and acquired identity. Ascribed identities such as being a beef farmer or a hobby farmer may have little influence on a farmer's behaviour compared to an identity that a farmer acquires, or perhaps even aspires to, brought about by a certain set of circumstances (e.g. good public facing farmer identity). These complexities emphasise the difficulties associated with predicting or assigning group identities.

This study has shown that the 'good farmer' identity within the context of exotic disease management is not simply confined to behaviour and values associated with good stockmanship, as outlined by Te Velde et al (2002), but is instead complex and context specific, incorporating identities which account for responsibilities to other farmers and the industry more generally. The findings presented therefore contribute to the further development of the 'good farmer' identity concepts and its constituents by outlining the factors that farmers perceive as threatening their ability to effectively carry out their 'good farmer' identity in relation to exotic disease management. These include uncontrollable factors such as weather, as well as the behaviour of others, including the government and specific groups such as hobby farmers, dealers or travellers. This defensive component is likely to influence the farmer's perceptions in relation to their own role in disease control and the roles of others. The farmer identities outlined by this study are specific to the context of exotic disease control in England. While some of the findings may be relevant elsewhere, it is likely that other identities may be more salient in other geographical contexts with different exotic disease histories. For example, the defensive component which has been identified here may be less discernible in a country where there has been limited experience of exotic disease and/or where recent

outbreaks have been brought under control quickly. In order to understand and potentially influence behaviour, it is important that the range of farmer identities are recognised within the particular context of interest and used to inform policy approaches to understand and influence exotic disease management behaviours.

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