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1 **The ‘good farmer’: farmer identities and the control of exotic livestock disease in England.**

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7

8 **Abstract**

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

20 **Key words**

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

22

23 **Introduction**

24 The management of livestock disease is an essential aspect of good animal husbandry and
25 livestock production. Animal keepers routinely deal with endemic diseases through both
26 proactive and reactive control measures, including, for example, the implementation of animal
27 health plans, vaccination programmes and the treatment of illness with antibiotics. However,
28 the management of exotic livestock diseases is less routine, despite recent outbreaks of exotic
29 diseases in England, including Swine Fever (2000), Foot and Mouth Disease (FMD) (2001 and
30 2007), Bluetongue (2007) and Avian Influenza (most recently in 2015). Additionally, a warming
31 climate is increasing the risk of the introduction of other exotic diseases such as African Horse
32 Sickness (MacLachlan and Guthrie 2010). In order to manage and prevent exotic livestock
33 diseases, animal keepers are expected to carry out regular stock surveillance and implement a
34 range of biosecurity measures such as limiting and controlling farm visitors; cleaning and
35 disinfecting clothing, vehicles and buildings; and careful stock sourcing and isolation
36 procedures. Animal keepers are also expected to report any suspicion of exotic livestock
37 diseases promptly.

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

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

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

74 The 'good farmer'

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

84 Individuals' values have been found to influence what an animal keeper considers to be 'good'
85 or 'bad' practice. Tind Sorensen *et al.* (2001) suggest that a farmer is faced by a wide variety of
86 concerns which are likely to shape their values. For example, a farmer must consider issues of
87 animal welfare, productivity, food safety, and impact on the environment. Certain issues are
88 likely to conflict with others. Tind Sorensen (2001) points out that the goal of providing high
89 welfare space for livestock may come into conflict with the goal of reaching a particular profit
90 margin. Such a system may also conflict with some aspects of disease control which can be
91 more manageable in intensive systems which offer less space to each animal. Te Velde *et al.*
92 (2002) identify a range of values held by keepers relating to animal welfare that shape
93 individual's understanding of what constitutes being a 'good farmer' in relation to managing
94 their livestock. These values include the following: animals should be treated well; they should
95 be provided food, drink and shelter; they should be kept under hygienic conditions; and they
96 should not be treated roughly. The authors also found that farmers often distanced
97 themselves from examples of poor practice, disassociating themselves from what they
98 considered to be particularly 'bad' production systems or animal welfare approaches.

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

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

123 **Social Identity Theory (SIT)**

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

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

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

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

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

173 **Methods**

174 This paper draws on data collected from 60 face-to-face interviews with animal keepers, 19
175 interviews with government and private veterinarians and eight focus groups attended by a
176 total of 60 animal keepers across England and conducted in early 2015. The primary research
177 was designed to inform the evidence for the Department for Food, Environment and Rural
178 Affairs' (Defra) review of compensation payments for exotic livestock disease in England
179 (animal health and welfare policy is a devolved issue with Scotland, Wales and Northern
180 Ireland setting their own agendas). Study participants were selected from across four livestock
181 sectors (pig, poultry, cattle and sheep) and represented a wide range of systems (e.g.
182 intensive/extensive, upland/lowland, food/non-food). Of the 60 animal keepers interviewed,
183 50 were selected from existing databases held by Defra and had past experience of a
184 suspected or confirmed case of an exotic disease. The remaining animal keepers were
185 purposefully selected through industry gatekeepers and existing contacts to represent a broad
186 range of farm types, sizes and systems. The veterinary participants were also selected from
187 Defra databases identified as having been involved in the reporting or management of past
188 suspected or confirmed cases of exotic disease. Eleven of the vets were employed by the
189 Animal and Plant Health Agency (APHA) and eight were private vets.

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

198 The sector specific focus groups were held in a range of geographical areas to ensure diversity
199 in attendees. Two focus groups were held for each sector (pigs, poultry, cattle and sheep). .
200 Focus groups lasted for approximately three hours and were facilitated by two experienced
201 social scientists. Attendees were self-selecting and were contacted via industry gatekeepers to
202 request attendance. All research participants were assured of anonymity and permission was
203 obtained to record the interviews and focus groups. All recordings were transcribed verbatim.
204 The interviews and focus group discussions centred on the potential role of compensation in
205 influencing animal keeper disease management behaviour. However, a key area of discussion
206 was the routine management practices adopted by animal keepers and the factors influencing
207 these practices, which forms the focus of this paper. Research participants were then asked to
208 consider how their disease management routines may differ in two different scenarios. The
209 scenarios focused on two alternative compensation systems: (1) a system based on penalties
210 for poor disease management practice; and (2) a system based on bonuses for good disease
211 management practice. The data were analysed using the qualitative software NVivo, following
212 a coding framework which was devised based on an initial reading of interview and focus
213 group transcripts to identify key themes and follow up meetings with all members of the
214 research team. Research team members were also asked to review the final coding of the
215 transcripts in order to ensure validity. The results from the data collection and analysis are
216 presented below.

217 **Results**

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

223 **Defining the 'Good Farmer'**

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

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

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

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

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

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

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

255 “Probably not, not if he’s going to do poor practice, it’s too late then” (Cattle keeper
256 focus group participant, ID6).

257 “He wouldn’t realise it was poor practice in the first place” (Cattle keeper focus group
258 participant, ID1).

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

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

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

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

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

275 **Separation from 'the Other'**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

329 With reference to the 2001 outbreak of FMD:

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

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

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

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

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

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

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

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

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

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

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

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

366 **Conflicting Identities**

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

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

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

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

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

403 **Discussion and conclusion**

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

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

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

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

- 435 • *The ‘Good Neighbouring Farmer’ identity.* Secondly, the ‘good neighbouring farmer’
436 identity was also evident whereby animal keepers involved in this study regularly
437 voiced feelings of responsibility to local farmers, with whom many were well
438 acquainted, to prevent disease spread and resume business function as soon as
439 possible. The ‘good neighbouring farmer’ did not want to be judged poorly by other
440 local animal keepers or to cause unnecessary problems, particularly to those with
441 which the keeper identifies most closely (e.g. other local keepers in the sector).
442 Returning to Fielding et al’s (2011) work on social identity, animal keepers are likely to
443 relate to a number of identities, with certain identities becoming more salient
444 depending on a particular context. In relation to the pig keeper example outlined in
445 the results section, where the pig keeper eventually agreed to allow his pigs to be
446 culled, the farmers ‘good animal welfare’ identity was superseded by his ‘good
447 neighbouring farmer’ identity due to the unusual context in which he was positioned.
- 448 • *The ‘Good Public Facing Farmer’ identity.* Thirdly, moving on from the micro level,
449 research participants demonstrated the ‘good public facing farmer’ identity, whereby
450 animal keepers felt a responsibility to the wider industry to portray good disease
451 control practices during exotic disease outbreaks in order to maintain a positive
452 industry identity, despite voicing doubts about the efficacy of such measures. Research
453 participants were mainly only concerned about the portrayal of their own sector
454 rather than of animal keepers more generally, often distinguishing between sectors
455 and at times criticising the disease management practices of keepers in other livestock
456 sectors. For example:
- 457 “If you start at the biosecurity policy, I would say I would score, let’s say an
458 eight, against a sheep farmer who’d score one or two” (Pig keeper focus group
459 participant, ID49).

460 “The sheep people, let’s make no bones about it, they’re mucking about with
461 these bloody sheep, they’re going from one end of the country to the
462 other...and they’re all sort of laughing about it” (Cattle keeper interviewee,
463 ID81).

464 *Defending the ‘Good Farmer’ Identity*

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

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

485 the uncontrollable nature of exotic disease. For example, research participants often referred
486 to the spread of wind-borne pathogens as being completely outside of their control, thus
487 defending any lack of individual action. Accounts of bad exotic disease management by
488 government representatives were regularly encountered, as exemplified by quotes from
489 research participants reported in the results section, particularly in relation to FMD.

490 Experience is likely to have an influence on animal keepers' perceptions of the legitimacy of
491 the government to provide suitable guidance in relation to keepers' role in exotic disease
492 control. This study found that cattle and sheep keepers were often more negative in relation
493 to the government's role and the relevance of their policies and guidance. This may be related
494 to the significant exotic disease outbreaks experienced by the sectors in recent memory, in
495 particular the 2001 and 2007 FMD outbreaks. In both cases, research participants regularly
496 blamed the government's lack of decisive action or poor regulation for the spread of the exotic
497 disease and rarely apportioned any responsibility to livestock keepers themselves. In
498 comparison, livestock keepers from other sectors, particularly poultry were less likely to
499 portray the government in similarly negative terms. Across all sectors, emphasis was given to
500 the need for government responsibility for exotic disease control, especially in relation to
501 controlling borders. This has animal health policy implications in terms of farmer buy-in to a
502 cost and responsibility sharing compensation system between government and industry for
503 exotic disease management and warrants further exploration.

504 Poor relations with government and the apportioning of blame within the livestock disease
505 management context has been reported by others (see Hall *et al.* 2004, Heffernan *et al.* 2008).

506 Research participants also criticised the advice provided by government during exotic disease
507 outbreaks. In relation to Social Categorisation Theory and SIT, Fielding *et al.* (2011) suggest that
508 relations between the in-group and the out-group may have an important influence on
509 whether in-group members decide to carry out a particular behaviour being promoted by the
510 out-group. The salience of messages communicated by those perceived as outside of the group

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

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

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

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

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

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569 **References**

570 Allison, L. (1996) On planning a forest pp. theoretical issues and practical problems. *Town*
571 *Planning Review*. 67(2): 131-143

572

573 Bourne, J. (2002). *The 2001 Outbreak of Foot and Mouth Disease*. National Audit Office.

574

575 Burgess, J., Clark, J. and Harrison, C. (2000) Knowledges in action: an actor network analysis of
576 a wetland agri-environment scheme. *Ecological Economics*. 35: 119-132

577

578 Burton, R. J. F. (2004) Seeing through the 'good farmer's' eyes: towards developing an
579 understanding of the social symbolic value of 'productionist' behaviour. *Sociologia Ruralis*.
580 44(2): 195-215

581

582 Ellemers, N., Kortekaas, P. and Ouwerkerk, J. W. (1999) Self-categorisation, commitment to the
583 group and group self-esteem as related but distinct aspects of social identity. *European Journal*
584 *of Social Psychology*. 29: 371-389

585

- 586 Enticott, G., Franklin, A. and Van Winden, S. (2012) Biosecurity and food security: spatial
587 strategies for combating bovine tuberculosis in the UK. *Geographical Journal*. 178: 327-337
588
- 589 Fielding, K. S., Terry, D. J., Masser, B. M. and Hogg, M. A. (2011) Integrating social identity
590 theory and the theory of planned behaviour to explain decisions to engage in sustainable
591 agricultural practices. *British Journal of Social Psychology*. 47(1): 23-48
592
- 593 Garforth, C. J., Bailey, A. P. and Tranter, R. B. (2013) Farmers' attitudes to disease risk
594 management in England: A comparative analysis of sheep and pig farmers. ***Preventive***
595 ***Veterinary Medicine***. DOI: 110: 456-466
596
- 597 Gunn, G. J., Heffernan, C., Hall, M., McLeod, A. and Hovi, M. (2008) Measuring and comparing
598 constraints to improved biosecurity amongst GB farmers, veterinarian and the auxiliary
599 industries. *Preventive Veterinary Medicine*. 84(3-4): 310-323
600
- 601 Hall, M., J., Ng, A., Ursano, R., J., Holloway, H., Fullerton, C. and Casper, J. (2004) Psychological
602 Impact of the Animal-Human Bond in Disaster Preparedness and Response. *Journal of*
603 *Psychiatric Practice*. 10(6): 368-374
604
- 605 Heffernan, C., Nielsen, L., Thomson, K. and Gunn, G. (2008) An exploration of the drivers to
606 bio-security collective action among a sample of UK cattle and sheep farmers. *Preventive*
607 *Veterinary Medicine*. 87(3-4): 358-372
608

- 609 Hinchcliffe, S. and Ward, K. (2014) Geographies of folded life: How immunity reframes
610 biosecurity. *Geoforum*. 53: 136-144
611
- 612 Huddy, L. (2001) From social to political identity: a critical examination of social identity
613 theory. *Political Psychology*. 22: 127-156
614
- 615 MacLachlan, N. J. and Guthrie, A. J. (2010) Re-emergence of bluetongue, African horse
616 sickness, and other Orbivirus diseases. *Veterinary Research*. 41(6)
617
- 618 Maye, D., Enticott, G., Naylor, R., Ilbery, B. and Kirwan, J. (2014) Animal disease and narratives
619 of nature: Farmers' reactions to the neoliberal governance of bovine tuberculosis. *Journal of*
620 *Rural Studies*. DOI: 10.1016/j.jrurstud.2014.07.001
621
- 622 McGuire, J., Wright Morton, L. and Cast, A. D. (2013) Reconstructing the good farmer identity:
623 shifts in farmer identities and farm management practices to improve water quality.
624 *Agriculture and Human Values*. 30: 57-69
625
- 626 Rabbie, J. M., Schot, J. C., and Visser, L. (2006) Social identity theory: A conceptual and
627 empirical critique from the perspective of a behavioural interaction model. *European Journal*
628 *of Social Psychology*. 19(3): 171-202
629
- 630 Rise, J. and Sheeran, P. (2010) The role of self-identity in the Theory of Planned Behaviour: a
631 meta-analysis. *Journal of Applied Social Psychology*. 40(5): 1085-1105
632

- 633 Rist, R. (1994) Influencing the policy process with qualitative research. In, Denzin, N. and
634 Lincoln, Y. (eds.) *Handbook of Qualitative Research*. Sage:
635
- 636 Sharpley, R. and Craven, B. (2001) *the 2001 Foot and Mouth Crisis - Rural Economy and*
637 *Tourism Policy Implications: A Comment*. [online] Centre for Travel and Tourism, University of
638 Northumbria, Northumberland, UK. Available from:
639 <http://www.commerce.otago.ac.nz/tourism/current-issues/homepage.htm> [Date
640
- 641 Silvasti, T. (2003) The cultural model of the good farmer and the environmental question in
642 Finland. *Agriculture and Human Values*. 20: 143-150
643
- 644 Sutherland, L. and Burton, R. J. F. (2011) Good Farmers, Good Neighbours? the Role of Cultural
645 Capital in Social Capital Development in a Scottish Farming Community. *Sociologia Ruralis*.
646 51(3): 238-255
647
- 648 Tajfel, H. (1970) Experiments in intergroup discrimination. *Scientific American*. 223(5): 96-102
649
- 650 Tajfel, H. and Turner, J. C. (1979) An integrative theory of intergroup conflict." *The social*
651 *psychology of intergroup relations* 33.47 (1979): 74. *The social psychology of intergroup*
652 *relations*. 33(47): 74
653
- 654 Te Velde, H., Aarts, N. and Van Woerkum, C. (2002) Dealing with ambivalence: farmers' and
655 consumers' perceptions of animal welfare in livestock breeding. *Journal of agricultural and*
656 *environmental ethics*. 15(2): 203-219

657

658 Terry, D. J. and Hogg, M. A. (1996) Group norms and the attitude behaviour relationship: a role
659 for group identification. *Personality and Social Psychology Bulletin*. 22(8): 776-793

660

661 Terry, D. J., Hogg, M. A. and White, K. M. (1999) The theory of planned behaviour: self-identity,
662 social identity and group norms. *The British Journal of Social Psychology*. 38: 225-244

663

664 Tind Sorensen, J., Sandoe, P. and Halberg, N. (2001) Animal welfare as one among several
665 values to be considered at farm level: the idea of an ethical account of livestock farming. *Acta*
666 *Agriculturae Scandinavica. Section A. Animal Science*. 30(1): 11-16

667

668 Turner, J. C. (2006) Social comparison and social identify: some prospects for intergroup
669 behaviour. *European Journal of Social Psychology*. 5(1): 5-34

670