The *Suzhi* Farmer: Constructing and Contesting Farming Subjectivities in Post-Socialist China

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Abstract

This paper analyses the use of the cultural convention of *suzhi* in attempts to improve biosecurity practices in the Chinese pig industry. *Suzhi* loosely refers to 'quality' and has been used to define the appropriate conduct of citizens during the era of market reforms. Like other forms of agricultural governmentality, *suzhi* provides a way of distinguishing 'good farming' and creating entrepreneurial subjectivities. However, in other policy areas, *suzhi* has been shown to marginalise the poor and reinforce social inequalities. This paper examines the extent to which discourses of *suzhi* in a biosecurity context contributes to the use of preventive animal health practices, amongst pig farmers in Chongming Island, Shanghai. Drawing on documentary evidence and interviews with 33 farm animal breeders and 3 pig veterinary surgeons, the paper examines how *suzhi* contributes to the creation of 'good farming' subjectivities in order to modernise the animal health practices of pig farmers. The paper shows how *suzhi* contributes to the valourisation and stigmatization of different pig farming subjectivities, suggesting that it reinforces existing socio-economic inequalities. Moreover, the paper describes the ways in which modes of conduct associated with *suzhi* are negotiated and challenged and reduced to a symbolic 'cloak' that disguises the reality of preventive animal health practices.

1. Introduction

Since the 1978 market reforms in China, discourses of '*suzhi*' （素质）– referring to personal quality, character and appropriate conduct – have been constructed within particular national policies to define and shape the behaviour of the Chinese population. As Kipnis (2006) argues, *suzhi* has become central to contemporary Chinese governance: it defines appropriate conduct, as well as justifying political hierarchies and government reforms. Birth control policies are a prime example, relying on *suzhi* discourses to construct and promote a modern, healthy and educated Chinese population. Other rural policies such as 'Building a New Socialist Countryside'[1] and the 'Construction of Beautiful Villages'[2] have deployed *suzhi* in an attempt to transform the countryside into civilised, clean and tidy villages, and shape the rural population into educated, self-sufficient and productive subjects (Schubert and Ahlers, 2012; Schneider, 2015). Underlying these policies is Xi Jinping regime's blueprint for 'building a beautiful China'[3] whose aim is to help the Chinese population achieve 'spiritual, social and ecological civilisation' by 2035 (Xinhua net, 2018). 'Civilisation' – achieved through the concept of *suzhi* – becomes a discursive governing strategy to enforce the values of the Chinese government and the ideology of striving for a 'quality' population (Cartier, 2013).

In this paper, we explore how these and other discourses of *suzhi* have been extended into the management of agriculture and animal health through the construction of new agricultural subjectivities. To do this, *suzhi* is equated to a form of 'good farming' (Burton, 2004b), that discursively defines and shapes farmers' behaviours. Specifically, the 'good farming' literature facilitates an examination of how *suzhi* discourses contribute to the construction of the subjectivities of 'standardisation'

[1] It is one of the primary objectives of the 11th Five-Year (2006-10) policy program to develop the Chinese countryside with advanced production, a comfortable livelihood, a civilised lifestyle, clean and tidy villages and democratic administration. This program aims at combining agricultural modernisation, rural governance innovation, the expansion of social welfare, the strengthening of rural education and fiscal reform (See also in Schubert and Ahlers, 2012, p70).

[2] This is a policy to improve rural people livelihoods and transform Chinese villages into well-off and civilised places.

[3] The discourse of 'Building of Beautiful China' is emphasised by the 18th National Congress of the Central Planning Commission. It is defined as "the sum of the beauty of the environment, the beauty of the times, the beauty of life, the beauty of society and the beauty of common people" (See Marlinelli, 2018, p14).

(*Biao Zhun Hua*标准化) and 'modernisation' (*Xiandai Hua*现代化) in pig farming which accommodate the idea of 'high *suzhi*' farmers and sustain the values of large-scale production (Shanghai Municipal Development and Reform Commission, 2010, p8). At the same time, 'low *suzhi*' discourses are likely to be associated with 'poor farming' and used to blame farmers for pollution and biosecurity failures.

Recent *suzhi* studies have focused on school children, migrant workers, the urban middle class and ethnic minorities (Caprioni, 2012; Jacka, 2009; Lin, 2017; Woronov, 2009; Yan, 2003); however, the governing tactics employed by the Chinese state to bring pig farmers up to environmental standards (employing *suzhi* discourse to propel agricultural change) have received little attention (Schneider, 2015, p336). Some commentators draw on governmentality and neo-liberalism perspectives to examine the connection between 'body' and *suzhi* through an understanding of how peasant bodies are disciplined and controlled (Anagnost, 2004; Greenhalgh and Winckler 2005; Yan, 2003). Others, however, have suggested that *suzhi* discourses have the potential to perpetuate 'categories of exclusive citizenship and inequality' (Sigley, 2009). The latest debate on *suzhi* goes beyond ideological, governmentality, and neoliberalism analyses by addressing how government officials and ordinary people "think about and speak of" *suzhi*. This perspective allows researchers to address the *suzhi* discourse more deeply and examine how social expectation cultivates one's personal *suzhi* within the context of China's modernisation (Huang, 2016, pp909-910).

Our research therefore further examines key players' (i.e. farmers, vets and government officials) perspectives as well as other literature about farming subjectivities (i.e. Burton 2004a; Lockie and Higgins, 2007), to explore the role of *suzhi* in the construction of new agricultural subjectivities in China, asking: what effect do discourses of agricultural *suzhi* have upon farming practices? Documentary evidence and interviews with 33 farm animal breeders and 3 pig veterinary surgeons in Chongming Island, Shanghai, are used to show how *suzhi* contributes to the creation of 'good farming' subjectivities in order to modernise the animal health practices of pig farmers. At the same time, the paper examines the extent to which opportunities for negotiating *suzhi* subjectivities exist. The paper therefore addresses two key questions: firstly, how are dominant discourses of *suzhi* challenged and reconstructed

at a local level as they intersect with farmers' own identities and priorities? And secondly, how do pig farmers themselves perceive and talk about *suzhi*?

The paper is divided into five parts. In section two, we define *suzhi* and discuss its relationship with agricultural development and animal health management. Subsequently, we detail our methodological approach to data collection. Section four reports on the empirical findings to show how social discourses construct three major pig farming identities and how Chinese *guanxi* (i.e. social connection) allows pig farmers to ignore or renegotiate *suzhi*. In section five, we highlight the importance of exploring the socio-cultural dynamics, social connections and farmers' identities which influence pig farmers' animal health practices. More importantly, the paper goes on to argue that social expectations construct pig farmers' *suzhi* and good farming subjectivities, giving them uniquely 'Chinese characteristics'.

2. Defining *Suzhi*

Suzhi is an important geographical filter for understanding China's social values, governmentality and the politics of agricultural development and animal health management. Jacka (2009, p523) notes that in contemporary China, concerns about *suzhi* 'pervade the social imagination and inform a wide spectrum of discourses and debates'. In popular usage, *suzhi* represents a form of value coding to differentiate between the good and the bad, the rich and the poor and the civilised and uncivilised (Jacka, 2009), reflecting physical, psychological and cultural attributes, as well as personal consciousness (Sze, 2015). Frequently, *suzhi* is used to discriminate against the 'other' - usually 'rural migrants, litterbugs, the short, the near-sighted and the poorly dressed' (Kipnis, 2006, p296). In fact, as Anagnost (2004, p190) writes, the concept of *suzhi* draws on a strong rural-urban dichotomy in which rural migrants are seen as devoid of *suzhi*, whilst urban middle class bodies are 'fetishized as a site for the accumulation of the very dimensions of *suzhi'*.

Whilst *suzhi* is often used to refer to 'quality' or 'high quality', it can also refer to a range of specific qualities, predispositions, and characteristics (Lin, 2017). *Suzhi* can therefore refer to the 'innate and nurtured physical, psychological, intellectual, moral, and ideological qualities of human bodies and their conduct' (Jacka, 2009, p524). The rise of *suzhi* has seen it shed its connotations of 'innateness' and instead focus on the

effects of 'nurture' as a means to organise and articulate value, worthiness and utility (Sigley, 2009). *Suzhi* therefore reflects qualities such as civility, self-discipline and modernity (Yan, 2003) and is tied into discourses on the subjects of producing the 'ideal' citizen and gradations between different types of citizenship as well as the challenge of what to do with the 'less-than-ideal citizen' (Jacka, 2009). In short, contemporary *suzhi* reflects and has become central to different biopolitical regimes in contemporary Chinese government and society to imbue citizens with patriotism and obedience to the state (Woronov, 2009). The concept of *suzhi* is deployed to justify and bolster any kind of policy decision: the Chinese government justifies its own legitimacy by 'producing a strong nation by individually and collectively raising the quality of its citizens' (Kipnis, 2006, p296). As *suzhi* has become central to the Government's aims, references to *suzhi* have become increasingly important due to the authoritarian linguistic environment in which the use of key slogans and words provides access to hierarchy and policy-making (Lee et al., 2012).

2.1 Contextualising *suzhi* through the lens of governmentality

Viewing *suzhi* discourses as a form of governmentality allows an examination of how the Chinese State employs different policies, techniques and programmes to produce self-regulating subjects in accordance with social and political expectations (Bray and Jeffreys, 2016; Jeffreys, 2009). By Foucault's explanation, governmentality is an "ensemble formed by the institutions, procedures, analyses and reflections, the calculations and tactics" that subdue and influence individual life (Foucault, 1991, p102). The concept of governmentality is a lens for understanding how Chinese institutions deploy different tactics, technologies and political rationale to influence the behaviours of the population (Dutton, 2008; Jeffreys and Sigley, 2006; Murphy, 2004) and reproduce individual subjectivity (Lora-Wainwright et al., 2012; Yeh, 2009). In this sense, *suzhi* discourse becomes one of the governing technologies to categorise, differentiate and highlight gaps between 'good' and 'bad', 'rich' and 'poor', and 'civilised' and 'uncivilised' (Jacka, 2009, p525). For instance, Anagnost (2004) and Yan (2003) elucidate how *suzhi* discourse constructs the idea that middle class children in China are 'higher *suzhi*' because of having received nutritional supplements

and a high-quality education, whereas the peasant body is something to be disciplined and trained because due to being 'low *suzhi*'.

Commentators have pointed out that the Chinese state tactically engages with *suzhi* discourse to 'upgrade' the population's 'quality' and align themselves with global social values whilst maintaining China's 'state-centric' governance system (Buckingham and Jepson, 2013; Yan, 2003). As China embraces the 'socialist market economy', different kinds of 'subject' are being produced in addition to the passive human subjects to include autonomous "high quality" subjects who are capable of navigating the competitive global economy (Sigley 2009). However, describing programs of citizenship education amongst rural farmers in China, Murphy (2006) shows that the inverse is also true: farmers used their own 'low *suzhi*' as a justification for resisting attempts to modernise their production methods, disclaiming responsibility and autonomy.

Viewing *suzhi* through the lens of governmentality helps this study to examine the new forms of subjectivities that are emerging – specifically those concerning the 'entrepreneurial' farmers who are shaped by environmental policies (Higgins, 2001; Lockie and Higgins, 2007). Here, calculative technologies are central to self-governance, helping to render measurable and calculable aspects of farming practices in order to allow farmers to reflect upon how their conduct can be optimised (Higgins, 2007; Enticott, 2016). According to Murphy (2004), programs designed to improve farmers' *suzhi* were designed to reflect farmers' material aspirations and resonate with their beliefs that prosperity can be brought about by a 'benevolent government' and 'individual industriousness'. Farmers were not involved in deciding what was 'good for them', therefore resistance may be related to other social and cultural reasons.

Developing the concept of 'good farming', Burton (2004a; 2004b) shows how attempts to engender broad cultural change within productivist agriculture fail because of their failure to recognise the importance of cultural symbols central to identity and status in agriculture. Ignoring symbolic capital leads to low status and damages the reputation of the farmer. The extent to which these ideas of 'good farming' undermine citizenship education in China has not yet been fully explored: Thøgersen (2003) suggests that farmers 'tended to do things their own way' without fully explaining what that way was. Under this backdrop, incorporating the concept of 'good farming' with

the ‘governmentality’ perspective allows this study to offer two major reflections on how governing technologies construct the social approval of farming subjectivities.

First, the governmentality perspective helps us to examine how governing institutions distinguish ‘good farming’ through the processes of ‘standardisation’ and ‘modernisation’ within pig farming to sustain the idea of high *suzhi*. Smallholders are socially constructed as low *suzhi* because they are perceived as backward and criticised as the source of disease outbreak due to lack of biosecurity and environmental awareness. In other words, ‘standardised’ and ‘modernised’ pig farmers are believed to be ‘high *suzhi*’; while small breeders are supposed to be ‘low *suzhi’*.

Second, the governmentality perspective when combined with an awareness of the concept of ‘good farming’ is also important in understanding how pig farmers monitor other farmers from a distance: through *guanxi* development and vaccination practices. The ‘good farmer’ subjectivity is constructed by a “set of principles based on value and standards embedded in farming culture” (Sutherland and Darnhofer, 2012, p232). These principles act like social and cultural scripts to control and reconstruct Chinese pig farming subjectivities, norms and symbolic values in the eyes of other pig farmers (Silvasti, 2003; Vanclay and Enitoctt, 2011).

2.2 *Suzhi* and agricultural development

A change in the socio-economic context and national policies requires a change in the discursive frame of farmers’ *suzhi* to reconstruct farmers’ subjectivities to fit in with government policies. Schneider (2015, p336) critically examines the framing of the *nongmin* (i.e. farmers) over the past three decades, showing how in the social imagination, peasants have been thought of as a ‘burden’ in the 1980s, ‘surplus labour’ in the 1990s and “backwards, unsophisticated, uncultured, ignorant and low-quality” in the 2000s. In Chinese popular culture, *nongmin* (农民) are regularly depicted as unsophisticated and ignorant (Qiang, 2013; Xiao, 2009; Wang and Yang, 2006). Here the intention is to justify modern farming practices by criticising peasant farmers as ‘problems’ whilst providing training to transform them into ‘modern farmers’ (Schneider, 2015). This framing also naturalises the Chinese government’s intervention through a series of national policies to reproduce the *suzhi* of farmers.

For instance, the policy programme for 'Building a New Socialist Countryside' in the 2000s aimed at: (1) applying modern technology to boost production capacities and transform traditional agricultural production (Long et al., 2010, p467), (2) promoting 'urban and rural integration' and 'transform[ing] farmers into urbanites' and build a 'civilised' countryside (Bray, 2013, p54), (3) empowering smallholders by organising them into co-operatives to improve farmers' income (Day and Schneider, 2017; Lingohr-Wolf, 2007). In the 12th Five Year Plan (2011-2015), the agricultural policies depict the kinds of personal *suzhi* that farmers should aspire to, including: being well-educated, understanding technology, adopting business management skills, obeying the laws, following prevailing customs and adopting a healthy lifestyle (Chen, 2002; Chinese Peasant's Quality Research Group, 2008). All these policies linked up to reconstruct farmers' *suzhi*, with a particular emphasis on transforming traditional practices and smallholdings into specialised 'commercial family farms', 'large holdings' and agribusinesses (Day and Schneider, 2017, p12) through commercialisation, specialisation and vertical integration between production and processing (Zhang and Donaldson, 2008, p29).

Concerns about environmental quality connect *suzhi* to agricultural subjectivity and the blaming, civilising and re-ordering of agricultural conduct. In this context, the Shanghai municipal government implemented two major policies: the 'Implementation Plan for Rectifying Practices on Unregulated Small and Medium-Sized Pig Farms' (Shanghai municipal government, 2016) and the 'Discharge Standard of Pollutants for Livestock and Poultry Breeding' (Shanghai municipal bureau of ecology and environment, 2013). These policies locally enact China's first national-scale environmental regulation[4] to control animal waste in 2014 which have been used by the Shanghai municipal government to devise husbandry plans to prohibit pig farming in ecological sensitive zones and require any farm construction, rebuilding, and expansion of existing husbandry facilities to pass environmental impact assessments. Additionally, the regulations stress that the comprehensive utilisation and treatment of pig manure should be promoted, which includes the return of processed manure to agricultural lands, the development of biogas facilities, and the manufacturing of

[4] Since 2014 the State Council has implemented the Regulation on the Prevention and Control of Pollution from Large-scale Livestock and Poultry Husbandry (State Council, 2014).

organic fertiliser (Shanghai Municipal Government, 2016b). To do this, the Shanghai municipal government has translated these environmental requirements into quantifiable animal waste reduction targets and incorporated them into a municipal- and country-level target responsibility system (*mubial zerenzhi目标责任制*) which is used to evaluate local officials' performance (Zhang, 2017, p755). In this context, the nation-wide livestock waste regulation and animal waste reduction targets has exerted stress for the Shanghai municipal government to forcibly closed down non-standardised pig farms with "poor farm structures, waste management facilities, and weak vaccination practices" (Shanghai Municipal Government, 2016). The behaviours of these unstandardised pig farms challenged "ecological civilisation" and produced "nuisance, social threats and instability" in Shanghai (Shanghai Chongming Government Net, 2017). Steps to remedy this include the demolition of 210 non-standardised pig farms on Chongming Island in 2017 and the requirement for remaining farms to install animal waste treatment and biogas facilities to utilise and convert the animal waste into green resources (Shanghai Chongming County Agricultural Net, 2017).

2.3 *Suzhi* and animal health

Concerns over the management of food safety mean that animal health is a key area of agriculture that programmes of *suzhi* improvement seek urgently to address. An increasingly urbanised and affluent Chinese middle class is raising concerns about food safety and animal health, ranging from milk powder contaminated with melamine to recycled oil, toxic chemical usage in the food production system (Chan, 2015), and problems of antibiotic misuse and resistance (Yu et al., 2014). One area of agriculture particularly at risk from animal disease is the pig sector. The pig sector has undergone significant restructuring since 1978 market reform and the Chinese state has aimed at increasing pork production and consumption by providing financial incentives, investments, and supportive policies for medium and large-scale pig production firms (Schneider and Sharma, 2014, p11). Until the 1978 market reforms, the central state provided fodder crops, vaccines and medicines for the collective farms in a hierarchical top-down production system (Unger, 2002). Since de-collectivisation of farms and

privatisation of former state-owned farms, farmers have become responsible for decisions on animal health management and disease control. However, agricultural modernisation continues to address on-going outbreaks of different diseases, such as Porcine Reproductive and Respiratory Syndrome[5] (PRRS) (Wei et al., 2015). Chinese observers believe that the PRRS outbreak was first started in "backyards, smallholdings and medium-scale pig farms and then spread to intensive [commercial] pig farms" (Zhou and Yang, 2010, p32). In 2006, the PRRS epidemic began in central China and quickly spread to 12 provinces infecting more than 2 million pigs and causing the deaths of 400,000 of pigs (Zhou et al., 2008, p156). Measures implemented by the Ministry of Agriculture of China include a nationwide immunisation plan against animal epidemic diseases to conduct compulsory vaccination against three major pig diseases including PRRS, Foot and Mouth Disease and Swine Fever. The scheme provides vaccines to farmers as well as training courses to improve pig farmers' animal health procedures. However, outbreaks of PRRS also served to provide a justification for further industrialisation (Schneider, 2011) and uses of *suzhi* discourses to label smallholders as 'ignorant' and 'unhygienic' (Xu, 2016; Chen, 2011). The rest of this paper examines how discourses of *suzhi* combine with animal health messages to promote the use of vaccination against PRRS in China, exploring the extent to which these discourses of 'quality farming' (i.e. 'high-*suzhi*' farming) are accepted and/or negotiated by pig farmers.

3. Data Collection and Methodology

Research was undertaken with pig farmers on Chongming Island, a district of Shanghai at the mouth of the Yangtsze River. Chongming covers an area of 1,411 km^2 with a population of 24,152,700 (Shanghai Statistical Year Book, 2016). Administratively, Chongming Island is divided into 16 townships and two administrative villages. Chongming Island has a high level of ecological construction (*Shengtai jianshe* 生态建设): wetlands and agricultural lands cover 30% of island. From 2005, the Shanghai municipal government planners have attempted to convert Chongming Island into an "ecological Island" (Shanghai Urban Planning and Design Research

[5] PRRS is one of the most influential swine infectious diseases globally, characterised by abortion in sows and serious respiratory problems in nursery and flattening units.

Institute, 2008), transforming the Island's 'poor countryside' into a "clean environment" and an "eco-tourism destination".

Research was undertaken from October to December 2016. Firstly, disease data and policy documents (e.g. national animal disease surveillance and epidemiological investigation reports) were collected to contextualise the pig farming industry and the governance of animal disease control in Shanghai. To gain access to the Chongming District Agricultural Commission's veterinary stations, we collaborated with the Shanghai Veterinary Research Institute (SVRI) to recruit participants through its referrals. The researchers also developed their own contacts to be interviewed based on information and referrals provided by previously interviewed farmers. Twelve small- and medium-sized pig farmers were interviewed, as well as five corporate pig farmers. Through the SVRI's referral, we conducted in-depth interviews with three pig vets who worked for township-level veterinary stations on Chongming Island.

Data was collected using Wengraf's (2001) Biographic Narrative Interpretive Method (BNIM) to investigate farmers' historical animal health practices and the various influences resulting in the adoption of new practices, such as the drivers and experiences of using vaccines. The BNIM is a specific type of interviewing methodology where the interviewer asks a "single question used to induce narrative" (SQUIN). The main focus is on the interviewees' stories and lived experiences in relation to disease diagnostics procedures and treatment decisions (McAloon et al., 2017). In this study, the SQUIN posed to Chinese pig farmer was: "*I want you to think back to when you first started farming and describe to me your experiences of managing the health of your herd. When you do this, please tell me about what you consider to be the most significant challenges you have faced relating to the management of animal health and the most significant changes that you have made*." Once farmers responded to this question, their accounts were probed in depth to understand how the sequence of lived events, certain 'trigger points' and personal identity all affected their vaccination practices and particularly their decision-making as regards animal health management and disease treatment.

The BNIM interviews were recorded when consent was given, transcribed and coded for analysis. The interviews were conducted by one of the authors who could speak Mandarin, who had both experience in BNIM techniques and knowledge of pig farming. The use of the BNIM method was not without problems. Some pig farmers

found the idea of talking about their farm freely and at length disconcerting, preferring to answer direct questions. This reflected the generally challenging nature of conducting fieldwork in China (Heimer and Thøgersen, 2006). State supervision with officials accompanying researchers means that researchers often adopt 'guerrilla tactics' collecting data in both officially approved and unapproved arenas. Animal health is a sensitive issue for the Chinese state and state officials monitored our activities. Whilst they were concerned about any research with state-owned dairy farmers, by contrast, we were relatively undisturbed throughout our research with pig farmers.

4. *Suzhi*, Animal Health and Pig Farming in Rural China

Following the market reforms and restructuring of pig farming in China, traditional farming subjectivities have been challenged by new aspirational and entrepreneurial subjectivities. On Chongming Island, interviews with farmers and vets as well as analysis of animal health policy documents associated with pig farming revealed three main types of farming 'identity' – '*Tu Yang*'[6], '*Biao zhun hua*'[7] and '*Xiandai*'[8] – each of which carries a connotation of either 'low' or 'high' personal *suzhi.* Whether a certain farming identity was perceived as being of 'high' or 'low' *suzhi* seemed to depend upon an assessment of each of the following criteria: hygiene, productivity and entrepreneurialism, benefits brought to the community, learning and self-improvement and finally loyalty and obedience. The following sections show: (1) how these indicators of 'high *suzhi*' are implicated in and constructed by the government policies and (2) how pig farmers perceive and speak of these indicators as pertains to each of the aforementioned pig farming 'identities'.

[6] A type of farmer who is lacking skills and knowledge of modern farming.
[7] A type of farmer who is capable of transforming from traditional farming (*Tu Yang*) into standardised farming by securing governing subsidies to upgrade their animal waste facilities and farm houses for the nursery and sows units to meet the government standards.
[8] A type of farmer who is equipped with the knowledge of modern farming and understands new technology. A *Xiandai* farmer is diligent and up-to-date with the latest thought and research about pig breeding and capable of maintaining a high level of business knowledge and achieving agro-industrial integration.

4.1 *Tu Yang* Farmers

Tu Yang (土养) farmers are traditional farmers lacking skills and knowledge of modern farming. A *Tu Yang* farmer is a type of farmer who raises less than 20 sows and less than 500 pigs in their farms. The scale of pig raising is small and their facilities, and management styles are below national standard, particularly *Tu Yang* farmers' "lack of animal disease prevention awareness and incapability of following state's vaccination programme" (Zhao, 2017, p124). This small-scale pig farming is criticised by the Chongming government as being the source of 'social unrest' and 'disease outbreaks' (due to inferior building structures) as well as having a 'lack of effective animal waste treatment facilities' and 'poor environmental awareness' (Shanghai Chongming County Government Net, 2017). One way the 'poor *suzhi'* of *Tu Yang* farmers is expressed is in relation to the unhygienic conditions in which *Tu Yang* farmers work. *Tu yang* is considered to be as much a style of agriculture as it is a specific agricultural identity: households are "poor in managing animal hygiene" and produce "filthy, chaotic, inferior and stinky breeding conditions" (Anon, 2017; Shanghai Municipal Government, 2015). Here, dirt, poor hygiene and poor environmental quality are associated with the '*Tu Yang*' style. Another sign of the 'poor *suzhi*' of '*Tu Yang*' farmers is in the use of traditional breeds (e.g. '*Taihu*' 太湖 or '*Meishan*' 梅山 pig breeds) that are considered productively inferior when compared to exotic breeds (e.g. 'Landrace' and 'Duroc' breeds). Conversely, 'high *suzhi'* pig farmers conduct crossbreeding between exotic pig breeds imported from overseas in order to improve the productivity of their pig farms.

In the processing of self-identification, some *Tu Yang* farmers felt looked down upon because they were small-scale peasant farms. Wordings such as 'uneducated', 'low quality' and 'negligible' were used by *Tu Yang* farmers to describe themselves (PFS1, 2 & 10, 2016). *Tu Yang* farmers suggested they were unable to self-improve their farm productivities with entrepreneurial skills and adopt new technologies to manage animal waste. Moreover, their low *suzhi* meant that they were unable to access resources such as training or farming subsidies:

> *'I feel so exhausted…For Tu Yang farmers like us, we have to get our hands dirty to* keep up with *everything. Working on a small pig farm is daunting. I would*

describe my pig farming life as bitter (ku苦), tiring (lei累) and dirty (zang脏). Even if I want to take out a loan from the banks, the bank officials look down on small farm owners…and the government officials see us as different from the large-scale farm owners because we are too small in scale in officials' eyes' (PFS1, 2016).

The poor hygiene conditions of '*Tu Yang*' farmers are reflected in Government documents. For example, in 2015, the State Council implemented the 'Action Plan for the Prevention and Control of Water Pollution'[9] and the Shanghai Municipal Agricultural Commission formulated the 'Action Plan for the Comprehensive Treatment of Pollution in the Livestock and Poultry Farming Industry in the City of Shanghai' (Action Plan in short) (2017-2018), and stipulated that the large-scale pig farms which planned to be operated by the end of 2018 should strengthen the sewage treatment facilities to meet the environmental regulations and standards. The Action Plan suggested that *Tu Yang* farmers not meeting these environmental standards would be banned or relocated (Shanghai Municipal Bureau of Ecology and Environment, 2017b), yet State authorities were not optimistic about the ability of *Tu Yang* farmers to improve their hygienic practices (China Animal Disease Control Centre, 2007). Farming groups also criticised *Tu Yang* farmers for the indiscriminate discharge of pig waste into streams, feeding the pigs with pigswill, and cohabiting with pigs (Huang, 2015).

4.2 *Biao Zhun Hua* Farmers

'*Gai zao*' (改造) refers to the process of 'transformation' that *Tu Yang* farmers undergo to upgrade their scale of production and hygiene conditions in accordance with production standards in order to stabilise the pork supply in China. Subsidies are provided by the Chinese government to facilitate this transition to become what are known as "*Biao Zhun Hua*" (标准化) – or 'standardised' farmers. To achieve 'standardisation', '*Tu Yang*' farmers must obtain the joint support of the county government and township-level veterinary stations. Meanwhile, pig farmers must follow the state's guidelines and Animal Husbandry Law to standardise their pig farm

[9] In April 2015, China's State Council released the Action Plan for Prevention and Control of Water Pollution (or known as the "Water Ten Plan"), this is an official plan to ameliorate the water quality in China.

structures, disease prevention practices, pigpen design, pig feed quality, animal waste management, biogas installations and disease management and vaccination programs are the way of standardising pig farming practice (State Council, 2007). Through the Farm Standardisation Project, the 'standardised farmer' aims to produce prolific sows and utilise the transformation subsidies to upgrade current pig waste and sewage treatment, pigpen systems and disease prevention. As one farmer explained:

> *'In 1995, we only had 500 sows. Now we have 700 sows. In 2008, our farm participated in the state-funded "standardisation and scale farm project". In this project, we received funding from the state and we could increase our farm's productivity and scale of production. As you know, we have used 'ping yang' raising methods: we elevated the pigpens (i.e. high bed breeding) and sows were kept in farrowing crates. With the aid of this funding, we built five more pig huts and standardised the management of farrowing, fattening, piglet-raising and production flow' (PFS14, 2016).*

Whilst 'clean' and 'efficient' practices are central to the 'standardised farm', these farmers also acted as examples to others, inspiring them to work to improve the rural economy and provide better quality pork meat. They demonstrated to others that standardisation could happen in a number of ways and could be accessible to all. One farmer described how standardisation was made visible to all around him by his placing a large noticeboard at the entrance of his farm displaying the layout of a 'modern farm'. Others described how visible signs of productivity had environmental as well as social benefits. The installation of biogas and waste treatment facilities acted as a visible demonstration of large-scale production, as well as the success of the 'modern farmer'. Biogas treatment facilities could deal with the seemingly 'unhygienic' smell of pig farms which was usually associated with *Tu Yang* farmers. At the same time, the electricity they generated was provided to other villagers at low cost:

> *'Before we got the biogas facilities, our fellow villagers always complained about the pig odour. However, once we installed the biogas station in 2009, things started to change because biogas reduced their electricity costs by a third, and they did not need to pay a lot for the consumption of natural gas' (PFS7, 2016).*

Learning and self-improvement is also a key element of the 'high *suzhi*' of standardised farms. Policies such as 'Building a New Socialist Countryside' explicitly

seek to build a “new type of farmer” who is well-educated, has an understanding of agricultural techniques and adopts business management skills. Providing subsidies and technological extension services are two major tactics to transform farmers’ quality (Xin et al., 2005). To transform ‘low *suzhi*’ pig farmers into ‘high *suzhi*’ pig farmers, county-level animal disease control centres and township-level veterinary stations provide training courses for them. When it comes to animal health, specific pig farming training courses have been provided by the State and private companies to promote new vaccines and fodder crops, new techniques for pig raising and animal health management, new husbandry rules and regulations and new business practices to farmers. For example, training courses provided by township-level veterinary stations could involve power-point style presentations and instructions on various agricultural topics. The China Animal Health Inspection Bureau (CAHIB) also provides certificates of training in animal quarantine and epidemic prevention, such as courses on the theory of animal health and hygiene. For farmers seeking to become ‘standardised farmers’, these certificates are crucial.

4.3 *Xiandai* Farmers

‘*Xiandai*’ (现代) pig farmers operate pig raising businesses that can be privately owned, state-owned, or exist as part of a partnership or joint venture between foreign and state-owned firms (Schneider, 2011). These businesses may be fully integrated, operating processing units and fodder crop-growing enterprises. Also known as ‘Dragon-head’ enterprises, these businesses are considered to be the driving force for developing new market segments, technological innovation, and developing new management organisations (Lingohr, 2007). Dragon-head agricultural enterprises ‘are typically seen as acting as the dragon’s head, which pulls the rural households (the dragon’s tail) along the value chains’ (Lingohr-Wolf, 2013, p38). These farms achieve standardisation of the live pig supply chains by using unified pig breeds, veterinary drugs and disease treatment and vaccination programmes. ‘*Xiandai*’ farmers are also sometimes referred to as “Doctor farmers” (*Boshi Nong* 博士农), not just because of their education level but also because they are seen as innovative, use new technology, and use the latest research about pig breeding (Mao and Shi, 2017; Shanghai Chongming County Government, 2017).

'*Xiandai*' farmers are strongly influenced by corporate culture and are part of broader internationally-focused farming organisation. For example, multiple farms may be integrated within fodder crop companies with headquarters in urban parts of China (e.g. Shanghai). These companies have established their own standardised pig raising practices that go beyond those of the government 'standardised farming' schemes – particularly in relation to animal health – to include systematic disease-prevention measures and bio-security practices. Moreover, individual farm directors are responsible for implementing these measures that include training workers in 'high *suzhi* farming':

> *'We adopted modernised management methods to organise farming routines in these farms. Not only do we provide training for workers but also pay attention to farm zoning to organise the work flow. The training is specialised for farm workers in different farming zones. For instance, porker and piglet zones will have different training adjusted for quantity of fodder crops and room temperature' (PFS 14, 2016).*

Just like the 'standardised' farmer, the superior 'quality' of the *Xiandai* farmer is visible to all. The aims, ambitions and working practices of *Xiandai* farmers are frequently written in large font at farm entrances (see Figure 1) or on farm buildings (see Figure 2) which highlight the self-consciousness and psychological attributes of a high *suzhi* farmer.

***Figure 1**:"Doctor Farmers" billboard to demonstrate suzhi qualities particularly the capability of doctor farmers to install anti-epidemic isolation, automatic feeding and waste treatment facilities to improve environmental conditions and pig health.*

Figure 2: Exterior of a *Xiandai* farm emphasizing *suzhi* qualities of the farmer

(Slogan on the left: I raise pigs, pigs raise me
Raising good pigs, giving me a good life.
Slogan on the right: Corporate development depends on my
Entrepreneurship, I depend on the corporation to survive.)

4.4 Suzhi and Social (Im)mobility

On Chongming Island, a farmer's *suzhi* can be thought of as being comprised of the visible symbols of the cultural capital of 'good farming' that pig farmers on the island may aspire to. In this section, however, we consider the extent to which these symbols of '*suzhi*' belong to controlling authoritarian discourses, rather than inspiring a new sense of entrepreneurial self-governance amongst pig farmers. To do this, we show how farmers – particularly '*Tu Yang'* farmers – are excluded from opportunities for self-improvement. Secondly, we show that on its own, 'high *suzhi'* is not enough to attract subsidies: social connections – what the Chinese refer to as '*guanxi'* (Smart and Hsu, 2007; Smart, 1993) – are vital. Thirdly, we show how '*guanxi'* allows some farmers to ignore and renegotiate the requirements of *suzhi.*

Despite the provision of free courses providing training in modern pig farming practices, these courses were not suitable for all farmers nor could all farmers access them. *Tu Yang* farmers felt excluded from these courses. Firstly, the delivery of the courses via power-point presentations meant that they were simply not designed to be relevant for or accessible to *Tu Yang* farmers (who were unlikely to possess the necessary equipment for viewing power-point slides). Moreover, *Tu Yang* farmers cited their 'hard working' lives and 'lack of education' as the reason that they simply did not have time to attend these courses.

The notion that Tu Yang farmers perceive themselves as having a 'lack of education' implies they do not have time to undertake agricultural training. This drives them to have a 'hard life' socio-economically and culturally compared to 'standardised' and 'modern' pig farmers. Additionally, *Tu Yang* farmers use of the phrase 'hard life' (*ku ming* 苦命) to explain their disengagement with modernisation projects is similar to Murphy's (2006) observation that farmers use their poor culture and knowledge as reasons for not seeking training in modern farming methods. *Tu Yang* farmers referred to yet other aspects of their 'low *suzhi'* to explain why they could not improve their farming methods, suggesting they were trapped in a vicious circle in which their small size meant they were discriminated against and ignored by State officials. For example:

> *'For the modernised pig farm owner, the government officials will pay more attention to them. I [Tu Yang farmer] remember one time when I had a meeting with the local officials and a group of pig farmers. I said hello*

> *to a government official, but he ignored me. However, I then saw him speaking energetically to a pig farm owner who raises more than 7,000 pigs. This is so simple; this pig farmer is rich and large-scale in terms of production' (PFS4, 2016).*

Others referred to their lack of resources as the reason for their not being able to do anything about modernising their farms or challenge the appropriateness of new animal health procedures such as banning the use of pigswill. One farmer described writing four times to request permission to use his 'special pig feed' but was ignored by State officials because of his 'low *suzhi'*. Ironically, however, these farmers also demonstrate 'high *suzhi'* through their obedience to the law. Yet, their own fatalistic attitude towards the limited future of *Tu Yang* pig farming belies their anger and disappointment at the prospect of losing their farms as a result of State intervention:

> *'The stream pollution problem causes the State to close down Tu Yang pig farms. We do not have a say about the policy of closing or relocating pig farms. When the State officials come to demolish our pig farms, we cannot resist. It is very challenging for small-scale pig farms to maintain high quality treatment of animal sewage because the waste treatment cost is too high' (PFS12, 2016).*

As mentioned above, access to subsidies and the symbolic capital provided by visible signs of 'high *suzhi*' (such as biogas installations) appears restricted to farmers that already have 'high *suzhi'*. However, *Tu Yang* farmers highlighted other cultural reasons why they were not favoured by State officials and unable to access modernisation resources. Referred to in Chinese as '*guanxi*', the ability to make social relationships depends on the various cultural conditions of relationship-making, in which gift exchange in both legal and corrupt ways (Smart and Hsu, 2007; Smart, 1993; Smart and Smart, 2000).

Tu Yang farmers described how *guanxi* and *suzhi* are interrelated: perceptions of 'low *suzhi*' and scarce symbolic capital restricted the ability to attract the attention of State officials and develop *guanxi* with them. By consequence, the pattern for modernisation was already established: large farms became richer, whilst smaller ones remained small and unhygienic. In this sense, as the quote above shows, discourses of *suzhi* are not empowering because farming subjectivities are already pre-set and static.

Amongst standardised (*Biao Zhun Hua*) and modernised (*Xiandai*) farmers, there was also a recognition that attendance at training events was not so much useful as a means to develop high *suzhi*, but rather performed a 'symbolic role' that allowed social connections and guanxi to be developed. For example, one pig farmer (PFS 11, 2016) doubted the effectiveness of the government-sponsored training courses. Rather, his major aim to attend training courses was to develop his relationship with the State officials, arguing that the more you attend, the more exposure you have in the '*guanxi* circle'. As another farmer described it, training courses were more about playing *Mahjong* with the other farmers and officials to build *guanxi* rather than learning new skills. Indeed, the extent to which these farmers' *guanxi* exceeded their actual *suzhi* was questioned by many farmers who suggested that the farm practices, cleanliness and disease status were no different if not worse than on farms not receiving subsidies.

The symbolic attendance at these events also led indirectly to *guanxi* being developed with other parties by those farmers truly seeking to improve their knowledge and skills and develop new animal health solutions that go beyond the national standards. *Xiandai* farmers have grown frustrated by the practices and the compulsory vaccines provided by the State which often appear not to work. Whilst many training courses exist, farmers described them as "useless marketing exercises" through which animal drugs are offered without regard for the specificities of individual farms (PFS 17, 2016). Farmers reported inconsistencies in the advice provided at training events by the private pharmaceutical companies - for example, when to use attenuated vaccines or inactivated cell-culture vaccines and how frequently the vaccines should be used. Other farmers reported adverse side effects such as miscarriage amongst sows after using the state-provided vaccines. Drawing on these experiences, some farmers stopped using the State's vaccines and developed new solutions using their guanxi with private animal health companies. For example:

> *'One thing I wanted to point out is that the inactivated and attenuated vaccines were provided by the state and were useless and not effective to prevent PRRS. This was not easy to explain because it was too sensitive to discuss. So lots of pig farmers decided to use the PRRS virus from their pigs to produce their own vaccines. As a result, different pig farms will vaccinate their pigs differently. I use the imported Boehringer*

PRRS vaccine and a homemade vaccine from the Shanghai Veterinary Research Institute because they were trustworthy' (PFS 16, 2016).

Whilst contrary to the government's standardisation policies, the development of these vaccines is legitimised by farmers' *guanxi*: firstly, they rely on *guanxi* with private providers to develop vaccines. Secondly, whilst the qualities of learning and entrepreneurship conflict with the ideal, obedient, high *suzhi* farmer, their *guanxi* with state officials allows them to negotiate these conflicts in '*suzhi*'. This saw some farmers attend meetings to collect vaccines yet not use them:

'These free vaccines were useless. So, whenever I received them from the veterinary station, I would just leave them in storage…I believe all other large corporate pig farms don't use the state-provided vaccines. Instead, I brought those imported vaccines from the company called Boehringer-Ingelheim' (PFS17, 2016).

Implicit within discussions of 'farming *suzhi*', then, is the way *guanxi* can be developed alongside 'high *suzhi*' practices whilst allowing farmers to renegotiate or ignore the specific notions and values of *suzhi*, such as obeying the law and showing loyalty to the State's policies.

4.5 The construction of good farming with the Chinese characteristics

Shanghai municipal government documents and the mass media associate *Tu Yang* farmers with 'poor *suzhi*': wording such as "dirt", "chaotic", "lack of environmental awareness" and "poor biosecurity" are used. This creates moral concerns for the Shanghai City officials and leads them to develop a set of vocabularies to produce 'good farming' subjectivities with typically Chinese characteristics. The meaning of good farming in China is different from in the West. The concepts of 'good farming' and 'high *suzhi*' is a specific governance device of the State which aims to control the production of animals by both developing a new set of production standards which legitimise a productivist model and causing farmers to strive towards a 'high-quality' persona. The production of *suzhi* is a new valuation of farmers' subjectivities specific to China's market reform. Its specific deployment as a form of value coding inscribes, measures, and mobilises human subjectivity as the powerhouse of productivity and development (Anagnost, 2004). In the Chinese context, we identified three major social and cultural factors that discursively construct social approval of 'good' pig farmers and their *suzhi* which will be elucidated below:

a) Understanding biogas and waste management technology

Understanding biogas technology (*Dong Zhaoqi jishu* 懂沼气技术) is a value embedded in Chongming Island farming culture and is thought of as being essential to producing a clean pig raising environment. The city government of Shanghai aims at combining traditional pig raising knowledge within the context of 'scientific waste management' as part of the state's knowledge to articulate a new ecological strategy for pig waste management. For instance, in 2009 the city of Shanghai launched the 'Small Biogas Project' to encourage pig farmers to convert pig waste into biogas and fertilisers. To co-ordinate pig farmers in their efforts to adopt scientific waste management methods, the Chongming Island government established a working group to develop animal waste management standards, deploy the biogas technology extension units and provide technical support for pig farmers (Mao and Shi, 2017). The instalment of the biogas facility signifies the quality of a 'good farmer' who is capable of turning waste into resources and contributing to the community by providing cheap biogas for the whole village.

b) Demonstrating high entrepreneurial skills and becoming a doctoral farm

Showing a high level of entrepreneurial skill (*Hui Jingying* 会经营) in developing 'scientific' and 'innovative' agriculture is another feature of a Chinese 'good farmer'. On Chongming Island, *Xiandai* farmers demonstrate the value of entrepreneurial skills by receiving the title of 'Doctoral Farm' (see Figure 1). This title is granted by the Chongming Island Ecological Agriculture Innovation Centre. Even though a *Xiandai* farmer does not necessarily have a Ph.D. degree, he/she can be awarded this title if he/she can demonstrate a high level of 'entrepreneurial skill', which can be broken down as scientific capacity, technological innovation, creativity and enthusiasm about farming. These Doctoral Farms serve as a modern agriculture base which can provide a multitude of services including sightseeing and leisure for the community and become a 'dragonhead' agricultural enterprise. They play a crucial role in absorbing excess rural labour and propel rural development, increasing the value-added processes through product development, technological advancement and increasing connectivity with processors and marketing traders.

c) Ability to develop relationships with State officials

Understanding relationship-building (*Dong guanxi*懂关系) with government officials is one of the features of a Chinese 'good farmer'. Qi (2017, p3) explains that *Guanxi* is a long-term relationship which involves implicit social norms including '*xinyong*信用' (trustworthiness), '*mianzi*面子' ('face' as in 'good image' or 'honour'), and '*renqing*人情' (norms of interpersonal behaviour, reciprocity and obligation). Smart (1993) and Qi (2017) further argue that '*guanxi*' is a form of social capital for the obtaining and exchange of resources (e.g. gifts and favours) from interpersonal relationships under mutual trust, obligation and reciprocity. '*Guanxi*-making' methods are varied because they can be worked through either 'favour' or 'face', and through different modes of social relationships. Smart (1993) further explains that the cultivation of *guanxi* "involves more than the negotiation of a deal and the usage of customary forms to disguise what might otherwise be recognised as a corrupt and illegal exchange". According to pig farmer Mr Zhang's comment,

> *'It is very hard to develop guanxi with local officials because there are lots of illegal deals, though I invited them for dinner. They will not come out because they do not know about me. In this corrupt deal, local officials will be afraid of losing their jobs. However, if the local officials and I had grown up in the same village; we would have better trust. Whenever there is a state-funded project, my official friend would let me know and negotiate the ways to share the project money. For instance, the biogas project money…If I did something wrong like expose this corruption, my official friend could find my clan people and parents to take revenge after his incarceration. My whole family would suffer. Therefore, sharing project money requires a close circle and trust' (PFS 3, 2016).*

From Mr Zhang's comments, we can see that *guanxi*-building requires trust and repetitive interactions with the same individuals (i.e. his 'official friends'). This close relationship between pig farmers and government officials – which is characterised by repeated interactions and reciprocal exchange processes – will protect their legal or illegal deals from discovery. The process of negotiation between the pig farmer and government officials further strengthens their mutual trust and determines their portion of the project money is calculated, as Mr Zhang further explains:

> *'The way to share the project money is based on our trust and negotiation. Let's say if the biogas construction can obtain three million Yuan from the Central state, one million Yuan (approximately £115, 000) will go into my*

official friend's pocket and the rest of the money will go to my farm' (PFS 3, 2016).

From Mr Zhang's experience, we can see that the '*guanxi* network' is protected and legitimised by the formation of a "*guanxi* community". This community is a group of people who may belong to the same clans and share blood relationships and social ties but also adhere to common codes of conduct and share the same ethnicity, religion and dialects (PFS 3, 2016). As one *Tu Yang* farmer - who felt excluded from this '*guanxi* network' - explained:

'I don't have power. I am a small-medium sized farm owner. My relationship with the village is not tight. I will entrust one of the villagers to manage my conflicts with other villagers. This person acts like my spokesman to negotiate with the village' (PFS 2, 2016).

5. Conclusion

China is experiencing profound social and economic rural restructuring. Whilst various studies have focussed on the impacts of restructuring in rural areas and societies (Lo et al., 2016; Liu et al., 2016; Qian et al., 2016), our paper is the first to consider these changes as relating to the animal health practices of pig farmers in rural China. Our approach has been to explore the socio-cultural dynamics that lie behind animal health practices amongst pig farmers. Whilst the Chinese state may have instituted compulsory vaccination campaigns and education programs for pig farmers to upgrade their animal health practices, our research has sought to show how these schemes are received and negotiated by farmers and how this may, in part, account for continued epidemics of diseases like PRRS.

The production of farming *suzhi* is deeply connected with the discursive modernisation illustrated by the central state policies. Both the national animal waste regulation and the local officials' target responsibility system has shaped the *guanxi* between government officials and pig farmers discursively and materially. *Tu Yang* farmers who are more likely to produce environmental problems and violate the binding environmental targets that local officials must meet. This group of farmers tend to be blamed for environmental pollution and animal health problems. *Tu Yang* farmers seemingly develop 'poor *guanxi*' and are incapable of obtaining financial resources

from the government. Conversely, *Xiandai* farmers can install biogas facilities, animal waste treatment facilities, attend animal health workshops and demonstrate the symbolic values of 'high suzhi' and 'good farming' with Chinese characteristics, whilst helping local officials to achieve their binding goals and targets. Additionally, this group of farmers tend to have high self-consciousness and psychological attributes of understanding technologies and entrepreneurial skills. Therefore, the *Xiandai* farmers can develop better *guanxi* with the government officials and legitimise to obtain more state resources.

The new *suzhi* subjectivities promoted within government policies appear to be consistent with the kind of neoliberal 'entrepreneurial selves' implicit within agricultural reforms in other countries. However, they do not appear to be consistent with social mobility in China. Rather than inspiring neoliberal social mobility through self-improvement, the Chinese government's tactic of discursive modernisation appears to be more associated with the continued control and regulation of low-skilled pig farmers. At the same time, however, the role of *suzhi* and *guanxi* in reforming pig farming in China also points to the inherent hybridity of governmentality. For *Xiandai* farmers their ability to make *guanxi* – social connections – with other farmers, vets, state officials and private companies allows them to by-pass the demands of *suzhi*. Their attendance at state education events is merely performative, allowing them to play *Mahjong* with contacts rather than specifically learn about new animal health practices. In this way, the cultivation of *guanxi* allows these farmers to act entrepreneurially, but not in the ways described by *suzhi* discourses. In these acts of rising above high *suzhi* qualities, *guanxi* discourses demonstrate the instability and hybridity of farming subjectivities, in which controlling discourses sit alongside those of freedom. Importantly, however, these opportunities are not open to everyone – certainly not the poorest *Tu Yang* farmers – and are limited to the select few with the ability to cultivate *guanxi*.

Finally, the experiences of pig farmers on Chongming Island also raises broader questions for investigation by studies of agricultural change in China and beyond. Whilst high *suzhi* qualities can be rendered visible to signify the symbolic capital of the 'good farmer', it is those social relations made from *guanxi* that allow these qualities to be negotiated. This has important implications for the management of animal health: the provision of vaccines and training may simply be a 'cloak' to

disguise actual animal health practices created using *guanxi* (Chan and Flynn, 2017). Elsewhere, *guanxi* has similarities with other forms of social capital that link, bridge or bond different actors allowing effective knowledge exchange. In a Western context, Fisher (2013) shows how these forms of social capital may enhance disease management practices, but may also lead to exclusive and/or hierarchical relationships. Whilst there is a long history of analysing social networks in agricultural research, the ways in which these social relationships relate to and sit alongside concepts of the 'good farmer' are less well explored. Further analyses of farming hierarchies and social networks may help test the significance of symbolic capital in creating farming subjectivities. Given the continued threats posed by the spread of highly contagious pathogens to both animal and human health (AVMA, 2008), the extent to which social connections and cultural traditions such as *suzhi* and *guanxi* influence disease control practices and the treatment decision involving antimicrobials in animal farming should be an important focus of future research.

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