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Agricultural Sciences

Small-scale farmers' intentions to carry out conservation-oriented agriculture through participation in the Entry-Level Stewardship Agri-Environment Scheme

- The role of attitudes and values in farming behaviour

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Abstract

This thesis investigates the attitudes of small-scale farmers towards conservation-oriented farming as prescribed through the Entry-Level Stewardship Agri-Environmental Scheme. It aims to understand whether values and identity play a role in how agricultural practices are perceived by farmers and whether this affects their behavioral intentions. The research relates to an ongoing discussion in what is referred to as an 'agricultural transition', where in recent decades national and supranational agricultural policy has shifted its support away from productivist-style farming towards agriculture that is increasingly environmentally conscious. Using the Theory of Planned Behaviour, this thesis investigates whether these policy transformations have translated into changing attitudinal and value positions, which centralise the importance of the environment and the provision of public goods. While the farmers presented pragmatic attitudes towards farm management, in line with traditional productivist agriculture based on economic motivations, an awareness of environmental externalities are present within their behavioral intentions to some extent. A diverse range of attitudes were present in the data, however, farmers in general presented positive attitudes towards ELS participation.

Keywords: Agri-Environment Schemes, Productivism, Multifunctionality, Conservation-oriented Agriculture, Attitudes, Values, Identity, Behaviour, Agricultural Transition.

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Abbreviations

AES	Agri-Environment Scheme
CAP	Common Agricultural Policy
CSS	Countryside Stewardship Scheme
DEFRA	Department for Environmental and Rural Affairs
ELS	Entry Level Stewardship
EU	European Union
Ha	Hectares
HLS	Higher Level Stewardship
MFA	Multifunctional Agriculture
PES	Payment for Ecosystem Services
RPA	Rural Payments Agency
RSPB	Royal Society for the Protection of Birds
TPH	Theory of Planned Behaviour
TRA	Theory of Reasoned Action
UK	United Kingdom

1 Introduction

The productivist trend in UK agriculture in the post-war period has dramatically changed the character of traditional small holder farming. A process of agricultural intensification has significantly modernised small family farms into production-oriented businesses (Wilson 2001). A physical transition has occurred on the land in addition to an identity transition, which has centred farmers' values, attitudes and subsequent behaviours on high-production agriculture. Perceptions of what it is to be a 'good farmer' predominantly centres on attitudes and symbols of productivism, of which these values guide what behaviours are acceptable within the rural social settings (Kuhfuss et al. 2016).

Since farmers are the central actors within the rural setting, this continuous process of agricultural intensification, which is reinforced and reconstituted through the transfer of values, has had considerable negative environmental impacts. National and supranational governments have recognised the environmental consequences of agricultural intensification and have initiated a policy shift aimed at creating what this paper terms an 'agricultural transition' towards more environmentally friendly agricultural practices. In the context of the UK, the policy of the EU has acted as a driving force of change within the agricultural field, directly de-coupling farming subsidies from production. In addition, to de-coupling, Pillar One of the CAP has included a greening element that requires farmers to directly address negative environmental externalities of their farming practices (Grossman 1997).

The policy shift is a consequence of the widening of agricultural space, which increasingly recognises the public's concern for environmental quality; the awareness of ecological interconnectedness now requires farmers to provide goods that are not simply produce, but rather environmental goods (Cairol et al. 2008). The creation of Agri-Environmental Schemes under the second pillar of the CAP aims to place responsibility on the farmer by financially incentivising them to provide these environmental goods. What is particularly problematic is whether the adoption of these measures creates meaningful change within rural areas. Many studies on Agri-Environment Schemes have focused on farm-level characteristics as a means to test policy effectiveness. However, more important to understand is the perspective of farmers themselves, and whether AES influence the way farmers engage with and value the environment, thus making lasting positive changes beyond the parameters of the scheme (De Snoo et al. 2013). Although some studies have used socio-psychological models to determine farmer behaviour, qualitative studies using the same models have not been widely used. This thesis aims to fill a gap in the literature that interprets individual-level attitudes, values and dispositions as a means to characterise the identities of different farmers using the behavioural model of the Theory of Planned Behaviour (Ajzen 1991).

1.1 Problem Statement and aim

The introduction of AES in the United Kingdom is part of an agricultural transition that takes into consideration the environmental impact of agricultural practices. So called ‘broad and shallow’ schemes, such as the Entry-Level Stewardship Scheme, were introduced with particularly low entry requirements in order to capture the largest amount of agricultural land and include all farming typologies. However, it is questioned whether the voluntary approach to the scheme along with the freedom to choose environmental options, leads to meaningful changes in agricultural practices (Buller et al. 2000). Furthermore, the coupling of nature conservation and environmental goods with economic incentives increases the danger that the social responsibility of the farmer will be eroded. Creating a precedent of payment for nature conservation means that continuous financial investment may be expected by farmers to maintain environmental quality (Darragh and Emery 2017). A central challenge of the schemes is therefore to reconcile environmental values with the identity of farmers.

Through these problematisations of the scheme, it can be understood that the success of nature conservation efforts is dependent on how farmers take up environmentally friendly behaviour beyond the parameters of the scheme (De Snoo et al 2013, p.67). Thus, to understand how this behaviour may occur, it is essential to identify farmers’ attitudes towards the Agri-Environment Schemes, giving some indication of their intentions to pursue conservation-oriented behaviour. It will further situate whether farmers’ identities change with the agricultural policy shift from productivism to post-productivism.

Based on these problematisations, the guiding research questions for this study are:

- What are the reasons farmers choose to participate in ELS?
- How do farmers engaged in Entry Level Stewardship relate to conservation-oriented agriculture?
- How do values and identity influence reasons for participation?

The aim of this study is to look specifically at farmers engaged in ELS and identify their rationale for joining the scheme as well as their attitudes towards conservation-oriented agriculture. The thesis uses the term ‘conservation-oriented’ agriculture as the schemes’ environmental options are predominantly focussed on creating and protecting habitats and species diversity. It is synonymous with environmentally-oriented agriculture; however, this thesis does not look at other elements of environment such as pollution or climate change mitigation, which is why the word ‘conservation’ is mostly used. Additionally, despite the focus of the thesis being Entry-Level Stewardship, most of the farmers interviewed were also participating in Higher-level Stewardship. Although the research is aimed at ELS, there is some overlap with other Agri-Environment Schemes, which is accounted for in the analysis.

2 Literature Review

A brief literature review is essential to situate this present study in the academic field, taking into consideration previous and current research on the effectiveness of Agri-Environmental Schemes. This section will first outline what an Agri-Environmental Scheme is, drawing on definitions within a range of literature in the field. The literature review will then describe the trends in research focussing on AES. It notes that research is increasingly farmer-centric, moving from the study of farm-level characteristics to actors' values, attitudes and identities as explanatory factors of behaviour. The section details how attitudinal and behavioural focussed studies have been more effective in explaining farmers' intentions to carry out conservation-oriented practices, which is the juncture at which this thesis inserts itself.

2.1 What are Agri-Environment Schemes (AES)?

AES are part of Agri-Environmental Policy that pays farmers for pursuing farming techniques that maintain or enhance environmental quality. Agri-Environment Schemes are different to Agri-Environment Programmes; Kleijn and Sutherland (2003, p.949) consider "an agri-environment programme to be the collection of schemes implemented in a country". Agri-environmental programmes differ between countries based on their own socio-political and economic circumstances, meaning that AES vary in their scale and scope across different states. The 1992 MacSharry reforms of the CAP established that AES are compulsory for EU member states. However, even within the EU framework, AES fall under the second pillar of the CAP that allows states to pursue their own rural development programmes and it is therefore the purview of individual member states to create and apply said schemes.

Agri-Environmental Schemes are policy instruments that stem from Agri-Environmental Policy, which aims to "to regulate the agricultural sector and promote sustainable modes of production, as well as supporting the rural communities associated with farming" (Wynne-Jones 2013, p.79). Further to this, it is part of a broader environmental management policy that centralises farmers as private actors by incentivising them to act upon their own land. As a policy instrument that incentivises environmental protection through economic reward, AES are more of a 'soft' or 'hands-off' approach to enacting environmental protection that nudges farmers to change behaviour (Runhaar et al. 2014). Cunha and Swinbank (2011) emphasise that due to the liberalisation of the market and the presence of industry and agricultural interests in policy making, a state-centric regulatory approach is ever more difficult to enforce and therefore behaviour-changing incentives are ever-more necessary.

AES in their current form reflect a looser form of Payment for Ecosystem Services (PES) due to the conditionality of payments made by CAP, "restricting the opportunity for more direct pricing mechanisms that explicitly cost the values of ecosystem services (Wynne-

Jones 2013, p.77). Ecosystem services are the goods and services that people receive from the environment that contribute to human wellbeing (Zhang et al. 2007). These goods are interrelated and complex, ranging from regulatory goods such as pollination, supporting services like nutrient recycling to cultural goods that reflect goods that can be used for recreation (Zhang 2007, pp.253-254). The agricultural sector therefore has a large influence on the quality of these services, which is why greater focus on environmental indicators in Agri-Environmental Policy has occurred.

However, literature disputes whether Agri-Environment Schemes in their current form qualify as PES at all (Wynne-Jones 2013; Reed et al. 2014; Prager et al. 2012). Firstly, because the purpose of payment is to subsidise income and economic disadvantage rather than being solely aimed at the provision of environmental goods, it means that payment relates to individual level actions rather than a broader notion of landscape (Reed et al. 2014, p.46). Targeting AES at ecosystem services that transcend field margins is therefore difficult to achieve.

Secondly, the ubiquitous aims of AES differ to an ecosystem services approach in that they do not target specific ecosystem services but rather related to a broader notion of environmental quality. AES in the European Union were largely driven by a duality of economic and environmental rational based on the assumption that the subsidisation of over-production had a negative impact on global commodity prices, EU funds and environmental quality (Batáry et al. 2015). In this respect, AES were a policy response aimed at striking a balance between agricultural intensification and extensification, which drew a general assumption that reducing intensification, would lead to a general improvement in environmental quality. Although Tuck et al. (2014) establish that schemes have objectives relating to environmental criteria such as protecting biodiversity and reduction of water pollution, the aims of AES do not target one particular environmental service but rather an amalgamation of many that refer to a broader notion of environmental conservation. Although certain targeted schemes exist, the majority of AES are so called 'horizontal' schemes that can be applied as a blanket scheme to whole countries (Kleijn and Sutherland 2003). However, as mentioned previously, both types of schemes are applied at the level of the farmer and there is thus limited scope to incorporate wider landscape-level management.

The literature demonstrates that AES as a form of PES seeks to influence the behaviour of the farmer by centralising them as a key actors in the agricultural field, giving more weight to the study of farmer-scheme relationships. The next part of the literature reviews how this relationship has been addressed within recent studies.

2.2 The Study of Farmers and AES

2.2.1 *Farm-level characteristics*

The effects of farm-level characteristics have predominantly dominated literature surrounding AES, acting as explanatory factors for AES participation or non-participation; using uptake as a broad measure for scheme success or failure (Wilson 1997; Pavlis et al. 2015; Herzele et al. 2013; Wilson and Hart 2001). Borges et al. (2014, p.164) note that "existing studies on the adoption of innovations in agriculture are usually based on a random utility framework. These studies focus on explaining how characteristics of the innovation and observable socioeconomic characteristics influence farmers' decisions". Based on this premise, it has been found that farm characteristics are an important explanatory factor in reasons for participation where larger farms were found to be more likely to participate in conservation centred AES as they qualify for more environmental options because their land covers a wider range of habitats (Ingram et al. 2012).

A strong emphasis has been placed on contextual factors in explaining the motivations of farmers to participate in AES, where economic stimuli provide the most explanatory clout (Brouwer and Lowe 1998; Whitby 1996). Wilson (1997) and Ingram et al. (2012) both emphasises that subsidies through AES are more attractive to full-time farmers, where extra income from farm activities contribute to farm continuation. In cases where economic rationale is a motivating factor, AES subsidies contribute to making the windfall in income as a result of reducing production. Similarly, economic are central for non-participation if money from AES does not cover the implementation and management costs of conservation measures and taking land out of production (generally more applicable to smaller farms) (Busck and Kristensen 2014). It has been shown that farmers' desire to pass their farm on to the next generation gives significant weight to the focus on the commercial and economic incentives for joining AES (Ingram et al. 2012). The study of farm-level characteristics is temporally limited in understanding long-term agricultural change (Kuhfuss et al. 2016). It reveals relatively little about how farmers actually engage with the schemes or how they relate to conservation measures and environmental practices. In what Kuhfuss et al. (2016, pp.641-642) term "the end of contract problem" they argue that norms surrounding the implementation of AES will slowly permeate the norms of farmer. Consequently, a deeper understanding of farmer identity is required that goes beyond the analytically-shallow economic descriptors.

In contrast, a study by Lobley and Porter (1998) has detailed patterns of participation between the Countryside Stewardship and Environmentally Sensitive Areas scheme in the UK, highlighting that the tiered Countryside Stewardship scheme appeals to more conservation-orientated farmers because they already apply many countryside management environmental options. Fish et al. (2003) build on the attitudinal approach to the effectiveness of AES, where a study of 100 land managers detailed their intrinsic interest in land management. It subsequently gives credence to the centrality of attitudes, values and identity as farmers have a relationship with nature and wildlife that goes beyond the economic rationale for joining schemes. An interesting finding from the studies focussed on motivations for participation is that younger farmers are more likely to join schemes than older farmers (Pavlis et al. 2016), presenting a turn in the literature that is geared towards values and identity as a central explanatory factor in both participation but also the effectiveness of environmental management under AES.

However, the uptake of AES is only a partial measure of scheme effectiveness, as it does not evaluate the quality of environmental benefits, especially through more general, low-compliance schemes (Buller et al. 2000). Although these take-up indicators are essential in monitoring the progress of certain schemes, Wilson and Hart (2001) argue that the neglect of farmers' attitudes towards conservation management does not shed any light on how farmers engage with AES both now and in the future (ibid). Morris and Potter (1995) point to the ineffectiveness of levels of enrolment in explaining AES success but rather that the commitment and degree of compliance of farmers should be evaluated. They look at levels of compliance among Environmentally Sensitive Area scheme participants in the UK and found that farmers are generally passive adopters in that they participate in the scheme but make the minimum changes required. However farmers may be encouraged to adopt more conservation-focussed measures through advice and training (ibid). Here, the literature moves towards the role of knowledge provision as a means to affect change and recognises that social norms and knowledge within social groups influence decision-making. Riley (2016, p.62) argues that the limitations of looking at motivations for participation as a "present-centred issue", neglects the influences of historically rooted farmer identity, where knowledge and values play a central role in how farmers engage with conservation-oriented practices.

2.2.2 *The role of values and attitudes*

This study fits into the ongoing debate around whether long-term participation in Agri-Environment Schemes causes changes in farmers' attitudes and behaviours towards more conservation or environmentally-oriented farming, where the expression of environmentally oriented values take precedence over productivist tendencies. Lowe et al. (1999) postulate that shifts in attitudes are inevitable as exposure to environmental values through AES force farmers to rethink their relationship with nature and their land. Bager and Proost (1997, p.91-92) discount the validity of studies that look at participation-level rationality for joining schemes, as "farmers hardly remain unaffected by their practical pro-environmental efforts. The process may well start on the basis of pure calculative reasoning, but environmental priorities and concerns may over the years sneak into their minds".

However, studies have emphasised that values may remain unchanged by schemes that are characterised by relatively low compliance and require farmers to make few changes to existing practices (Hodge and Reader 2009, Burton and Paragahawewa 2011). Darragh and Emery (2017) use the crowding-out theory to emphasise that by providing economic incentives for public goods it reduces intrinsic motivations for such provision, yet come to a rather vague set of conclusions that intrinsic and extrinsic values are difficult to separate. For example, Herzele et al. (2013) found that increased revenue was a central concern for farmers employing more demanding techniques associated with higher tier schemes; they also found that farmers participating in more complex schemes were more concerned with environmental benefits resulting from their actions. These findings highlight the importance of understanding attitudes and behaviours towards the environment, especially in the case of lower compliance schemes. Since the schemes are a voluntary, policy needs to focus on how schemes promote more conservation-oriented attitudes, both during and beyond scheme participation, if environmental benefits are to be recognised (Ingram et al. 2012).

Despite varying levels of explanatory power, the literature surrounding AES is increasingly farmer-centric, consolidating the importance of identity with emphasis on farmers' values and norms in explaining how AES encourage conservation-oriented practices (Best 2010). Social-psychological theories have gained credence in the field of attitudinal and behavioural studies in an agricultural context (Dijk et al. 2014; Borges et al. 2014; Zeweld et al. 207). Employing more social and psychological theoretical approaches is argued to counteract the simplicity of looking at farm-level characteristics as an explanatory factor of pro-environmental behaviour (Best 2010). How people define the nebulous terms of stewardship, environment and nature is critical for understanding how farmers' translate the aims of the schemes (Raymond et al. 2016). To this extent it was found that altruism, intrinsic values and moral norms as part of a farmers' identity play just as great a role as socio-economic contexts (Price and Leviston 2014).

This study follows in the same direction as other work that has employed the Theory of Planned Behaviour to assess the intentions of farmers to practice environmentally-oriented agriculture (Beedell and Rehman 1999; de Krom 2017). It goes some way to contributing to the understanding of whether low-compliance schemes affect the attitudinal and behavioural dispositions of farmers. What is special about attitudinal studies is that they emphasise the importance of social norms in explaining the relative permanence of practices relating to what is considered to be 'good farming' (Vanclay and Enticott 2011; Kuhfuss et al. 2016). The idea that individual behaviour is encouraged by the behaviour of others around them and that social rules guide behaviour in groups of people within the same social context has encouraged a move towards understanding how knowledge and values are formed (ibid). Although applied to sub-Saharan Africa, the work of Meijer et al. (2014) nonetheless contributes to the literature focussed on the role of knowledge, attitudes and perceptions in farmers' decision-making process to change farming practices and behaviour. Morris (2006) further found that the knowledge of farmers differs to the knowledge of policy-makers and advisors. Differing knowledges further stipulates that

different beliefs and values are present, and therefore the meeting and sharing of these differing views may open up pathways to value change through learning (Tsouvalis et al. 2000). Building on the work of Tsouvalis et al. (2000) in their work on knowledge cultures, the importance of knowledge-creation through interaction with both agri-environmental schemes and advisors is central to understand the intentions of farmers.

In the evaluation of literature surrounding the relationship between farmers and Agri-Environmental Schemes, two central hypotheses were prevalent:

1. The 'broad and shallow' nature of ELS does not require farmers to make significant changes to their farming practices, which means may not be influenced by doing conservation-oriented practices.
2. The financial incentives of schemes results in the connection of environmental goods with financial rewards. Thus, in the absence of schemes, conservation-related behaviour will not exist.

Through answering the research questions of this thesis, these hypotheses will also be tested in the analysis.

3 Agri-Environment Policy Context - The Agricultural Transition

This section details a process of change in farming practices, which necessitates the study of changes in farmer identity. The section starts with a problematisation of productivist agriculture and then through the exploration of practices and values associated with a negative impact upon the environment, the section then demonstrates how policy has significantly changed direction in the last few decades. In what the paper terms an ‘agricultural transition’, the shift towards a more environmentally-conscious agri-environmental policy will be explored. Particularly, how the creation of a new rural paradigm that includes a wider array of actors beyond the farm boundary has contributed to changes in farming values and identity.

3.1 Productivism and the ‘good farmer’

Productivism is a concept used to describe a certain type of agriculture, which is theoretically utilitarian in nature (Burton 2004, p.198). This means that agricultural land must achieve its full yield potential in an efficient way. Under a political-economic system led by macro-economic conditions, the aim of agricultural production historically in the UK was to increase food production to meet the consumption patterns of a growing population, as well as the demands of an export-oriented market (Ibid). Here, agricultural intensification can be seen as a strategy of productivist agriculture, supported by national and supranational policy in the United Kingdom in the last 50 years (Boatman et al. 2007, p.2). Agricultural intensification is a process of maximising productive capacity and yields through employing high-tech, resource-intense farming strategies (Lobley and Potter 2004, p.500).

The notion of the ‘good farmer’ centres around the idea that actors situate themselves within certain social contexts, where they adopt behaviours, values and therefore certain identities, which are synonymous with the identity of their particular community (Burton 2004, p.200). Through systemic influences such as subsidies and policy, a productivist policy narrative has dominated agricultural policy, which Lowe et al. (1993, p.221) argue is conceptualised by “a commitment to an intensive, industrially driven and expansionist agriculture with state support based primarily on output and increased productivity”. Farmers who enact these productivist policies come to demonstrate certain behaviours associated with maximising production, which is instilled in their values and identity of what it is to be a ‘good farmer’.

Bourdieu (1986) uses the concept of capital to explain how good farming practices are constituted, which “...entail bodily and mental activities as well as materials or things involved in performing these practices” (Huttenen and Peltomaa 2016, p.218). According to Bourdieu (1986), there are three forms of capital; cultural, social and economic. In the study of farming, cultural capital has gained particular significance because it emphasises

the creation of symbols that draw upon social and economic forms of capital (Burton and Paragahawewa 2011). In the context of agricultural intensification, increased yields are an important indicator of successful farming, which is both a form of objectified cultural capital present in physical symbols, but also an embodied cultural capital, present in practices or ways of knowing and 'doing' (Bourdieu 1986). The modernisation of what Lowe et al. (1993) call the 'notional farm' based on productivist values resulted in the heavy mechanisation of agriculture, increased resource inputs and a large increase in land area used for more intensively practiced harvesting. Agricultural values were based on the idea that agricultural land should be strictly used for production, and was the purview of farmers who were the central owners of privately held land (Wilson 2001, p.79).

The productivist style of the 'good farmer' has had considerable impacts on the environment, which are important to highlight in order to contextualise how Agri-Environment Schemes can address these negative externalities. The relative growth in consumption patterns has demanded greater yields to meet demands. On both a local and regional scale intensification has led to less farmland heterogeneity (Boatman et al. 2007). Firbank et al. (2008, p.777) emphasise that smallholder and more traditional farms originally served local markets with a diverse range of produce, where farmland was small and semi-natural. Comparatively, the takeover of large scale agricultural infrastructure, which intensively specialises in one or a few products is characterised by an ecological homogeneity. Resultantly, habitats are increasingly fragmented leading to species decline and extinction (Boatman et al. 2007). Statistics published by Defra (2016, p.16) illustrate a cropland production area of 4.5 million hectares, whilst the number of livestock increased from 9.1 million to just over 10 million. Smallholder farming is slowly declining, as competition to larger agri-business increases competitiveness. It can therefore be assumed that the increase in both crop-production and livestock can be accounted for by intensification rather than the entrance of new farmers into the market.

Changes to crop management typify another element of agricultural transformation that has significantly impacted biodiversity (Firbank et al. 2008, p.777). The wide-scale application of pesticides, herbicides and fertilisers has enabled farmers to achieve 'symbols' of higher yields in order to meet the food demands of a growing population. At the same time, the mechanisation of agricultural practices allows the quick turnover of harvests. The significant extermination of agricultural pests (both weeds and insects) through chemical substances has resulted in the decline of species supported by these insect species (Boatman et al. 2007, p.6). Intensification is not limited to lowland crop production as Boatman et al. (2007, p.1) note that Upland areas in the United Kingdom also face such intensification processes through increased highland grazing of many sheep breeds, which negatively affects vegetative cover and the species who live in these areas.

In what Boonstra et al. (2011) term 'farming styles', farmers place value on certain activities and ways of operating attributed to the notion of what it is to be a 'good farmer'. Practices linked to high productivity like the application of fertilisers and a neatly maintained landscape therefore become symbols and are used for self-evaluation and evaluation by other farmers (Burton 2004). Bourdieu (1984) suggests that these symbols influence the way others practice farming and if it is taken-up by a number of farmers in the same field these practices become part of a normative expectation. To some extent this explains the durability of productivist farming styles (Saunders 2016). Saunders (2016, p.4) argues that productivism is so durable because for symbols to become embedded and desirable they must be visual. Hence, this problematizes how conservation symbols become firstly noticed but secondly valued by farmers. Since farmers are wedded to a productivist doctrine, there is little consensus as to what constitutes environmental or conservation symbols in this field. Therefore, it is essential to identify how farmers value nature in order to understand what constitutes conservation/environmental values.

However, farming practices can change over time (Sutherland and Darnhofer 2012). Changing institutional contexts within the field may help the formation of new forms of

capital, and with it new values and social norms. According to Der Ploeg et al. (2000) the agricultural field is undergoing significant change, where the concept of rural development is placing greater responsibility on the role of farmers to produce public goods. Similarly, this new intuitional context at an EU and national level places significant expectations on farmers to enact environmental conservation. The economic rewards for increased yields are declining through the decoupling of production from subsidies, and the new role of Agri-Environmental Schemes in the provision of income now ties environmental behaviours to traditional economic values. In order to understand how productivist behaviour can be changed, an understanding of the policy context must first be established.

3.2 The changing policy environment and the agricultural transition

The departure point for this thesis centres around the debate on an agricultural transition. The primacy of agricultural production in rural areas is being eroded by a policy shift towards post-productivist forms of agriculture. These new policies, which originate beyond the farm boundaries, have significantly altered the meaning of the 'rural', altering the foundations of the farming community. Post-productivism refers to the move away from traditional forms of agriculture based on industrialised production and commercialisation, whereby agriculture is no longer at the centre of society (Wilson 2001, pp.80-81). In other words, it refers to the move away from productivist agriculture as defined in the previous section. As will be noted, there is no one-defined paradigm of post-productivism but rather it is made up of a variety of conceptualisations.

The implications of the productivist farming culture on the environment are contributing to the transition of agricultural policy towards more environmentally-orientated thinking. The increasing importance of sustainable development in agricultural policy recognises the wider functions of agriculture other than for food production (Cairol et al. 2009). The concept of multifunctional Agriculture (MFA) arose in the 1990s as a result of this thinking, as well as the recognition of the unforeseen social and environmental consequences of the sector-based Common Agricultural Policy (Cairol et al. 2009). The term multifunctionality has become a ubiquitous term employed by policy-makers and academics alike but is generally understood as the multiple uses of agriculture (Renting et al. 2009). The concept has become rather vague and consequently has been difficult to translate into a theoretical model due to different interpretations (Wilson 2007, p.186). However, by clarifying its central characteristics it can contribute to a better understanding of a new rural development paradigm that is more useful in understanding the transition of agri-environmental policy.

The agricultural sector can be characterised as a regime in that it is constructed around different actors and rules, such as regulations but also social norms and values (Renting et al. 2009). The productivist agricultural regime is centred on a supply chain geared towards a market economy and each constituent part of this chain upholds said regime. In order for regime change (also known as transition) to occur a different relationship between the two ends of the supply chain needs to evolve. What Wilson (2001, p.93) terms the 'territorialisation' of productivist agriculture, essentially means that the organisation of agricultural systems geared towards meeting the demands of capitalist economic systems have little horizontal integration into rural communities (Wilson 2001, p.93). Subsequently, food production and farmers are segregated from wider society, where actions and consequences are not immediately visible.

The McSharry reforms of 1992 initiated the erosion of the productivist doctrine by decoupling agricultural production from subsidy provision (Cunha and Swinbank 2011). The reforms were followed by continual adjustments in 1999 and 2000 that altered the

productivist paradigm based on farm-level intensification, orienting towards an agricultural policy that encompassed the farmed countryside as a whole (Ward 1999). Fish et al. (2003, p.19) emphasise that a new vision for rural development emerged through these reforms that placed landscape quality and sustainability at the centre of policy. MFA, whilst initially focussed on trade-related issues, is now considered as a way to improve relations between agriculture and society through moving towards more sustainable forms of agriculture (Renting et al. 2009, p.113).

Building on this territorial expansion of the 'rural', the acknowledgment that ecosystems interact on a landscape-wide level and are interrelated in many ways, providing multiple ecosystem services is central to the transition to post-productivist thought (Bennett 2009, p.1394). For example, the knowledge that heavy use of fertilisers is linked with water pollution, which is an undesirable externality of agriculture, has a direct impact outside of the farm boundary. The awareness of the interconnectedness of ecological systems has generated a shift in the belief that farmers are the sole stakeholders of the countryside. The fact that ecosystems provide important services "...vital to human wellbeing..." (Jiang et al. 2013, p.841) has necessitated approaches to agriculture that protect certain environmental goods for stakeholders beyond the field margins. The concept of multifunctional agriculture recognises this "mutual co-existence of productivist and post-productivist rural spaces" (Wilson 2001, p.96). The interaction of political, economic and social agendas has widened the territorial space of agriculture to take a more holistic view of rural areas (Cairol et al. 2009). It is this recognition of the changing social relations between actors that has motivated this understanding that the countryside does not belong solely to farmers (Marsden and Sonnino 2008).

The de-coupling of agricultural subsidies under Pillar One of the CAP aims to address public concerns about the negative externalities of agricultural intensification. The Single Payment Scheme (now superseded by the Basic Payment Scheme) is the primary direct payment from the EU to member state farmers, and is now linked to specific objectives that favour environmental protection (Ward 1999). For example, payments are provided based on area of land rather than payment per head of livestock or amount of crop. As such subsidies now largely account for income lost by not converting farmland into input-intensive farming, aiming to address the issue of intensification through financing extensive practices. The removal of state support for overproduction now means that production is based on supply and demand dictated by the consumer market, and through "...the combination of trade liberalisation and rural diversification [it] has undermined the dominance of the productivist mindset" (Erjavec and Erjavec 2015, pp.53-54).

The Basic Payment Scheme is further accompanied by a 'greening' element. In order for farmers to qualify for subsidies, they must meet the cross-compliance criteria and "farmers who do not comply with certain requirements in the areas of public, animal and plant health, the environment and animal welfare are subject to reductions of or exclusion from direct support" (European Commission 2017). The policy therefore seeks to ensure farms are in 'good agricultural and environmental condition'. Whereas the decoupling element of direct payments aims to indirectly redress the balance between intensification and extensification, the greening element pays farmers to protect and enhance the environment and is intended to culminate in the production of public goods (Hanley et al. 1999; Cairol 2009).

An idea about the countryside as a place to live and work and thus the economic viability of these areas is central to the multifunctionality approach (Cairol et al. 2009, p.273). As mentioned above, the expectation that farmers must produce goods other than produce has led to the establishment of pluriactive households (Djurfeldt and Waldenström 1999). Through the demands of consumers farmers have recognised the need to diversify production in order to maintain a place in the competitive market, i.e. through the production of organic produce. Kinsella et al. (2000) note that income generation from on-farm diversification and off-farm income substitution has become a way of maintaining the

viability of rural livelihoods. The decoupling of EU subsidies from production has meant that farms (especially smallholders) must find other ways of making the windfall from the loss of income (O'Connor et al. 2006). The reflection on rural development in policy centralises farmers in the maintenance of rural areas and through various income-substituting schemes, such as AES, ensure that farmers remain in rural areas to provide these public goods. MFA has thus emphasised the need for rural development policy to make livelihoods viable in rural areas (Ibid).

3.3 Agri-Environment Schemes in rural change

Rural development policy in the UK has historically been more narrowly defined to socio-economic issues due to the restructuring of subsidies at an EU level (Ward and Lowe 2004, p.124). However, in the 1990s rural development policy widened considerably to focus on farm-level activity and incorporate issues surrounding countryside management, meaning there has been contention between socio-economic and environmental issues (Ward and Lowe 2004, pp.123-124).

The introduction of AES seeks to rebalance environmental issues and socio-economic viability by offering farmers additional contributions to their income in return for the provision of environmental goods (Hodge and Reader 2010). Agri-Environment schemes were introduced as a mandatory measure for member states under the second pillar of the CAP in 1992 and have historically been voluntary for farmers. Rather than seeing agriculture as the main problem in environmental conservation, this EU policy conversely sees farming as part of the solution for addressing environmental issues (Batáry et al. 2014, p.1007). For example, in 1987, the Environmentally Sensitive Area Scheme (ESA) was the first AES in the UK that sought to address the loss of ecological diversity due to agricultural intensification, such as the draining and ploughing of marshes (Hejnowicz et al. 2016, p.240). The scheme aimed to protect areas deemed high value in terms of landscape or ecology (Hodge and Reader 2010, p.271). Through a 10 year contract, the scheme focusses on redressing the balance between intensification and extensification by financially incentivising practices deemed less damaging to the land, such as low stocking rates and the delaying of hay cutting rather than a specific focus on one aspect of the environment (Wilson 1997, p.68). The schemes therefore placed responsibility for environmental protection in the hands of the farmer, which was hoped to translate into a change in productivist farming values and attitudes to post-productivist farming practices.

Hodge and Reader (2010, p.271) emphasise that AES in the UK gradually evolved from simply protecting the environment from degradation through de-intensification to actively encouraging 'environmental enhancement'. Particularly, the development of a second AES called the Countryside Stewardship Scheme (CSS), introduced in 1991, reflects this policy development. The five-year scheme enshrined principles pertaining to environmental protection and enhancement, being awarded on a competitive basis to those who create "...the greatest environmental and recreational benefits" (Morris 2006, p.119). The creation of environmental goods subsequently became a goal that farmers competed for (Ibid). It contributed to the redefinition of 'rural' as addressed through Pillar One subsidies, however, once again centralised the farmer in the decision-making process. Since the schemes are voluntary, the farmers therefore choose to enact environmental conservation, which can be seen as a way to transition farming values away from productivism to the provision of environmental goods.

Despite the relative success of the two schemes, the focus on specific sites of environmental quality and the restrictiveness of entry of CSS meant that a vast majority of farmland still did not abide by agri-environmental policy set out in the rural development programme (Morris and Potter 1995). Hence, the development of a programme of agri-environment measures was established in 2005 entitled the Environmental Stewardship

Scheme. This scheme aimed to significantly expand the amount of agricultural land incorporated under AES by developing a tiered system including; Entry Level, Higher Level and two farming-practice-specific (upland and organic). After the introduction of this scheme, the total number of farmers participating in Agri-environmental schemes significantly increased, and by 2009, the total number of agreements on AES amounts to 51,885, covering a total of 6,566,910 ha (Natural England 2009).

3.3.1 *Entry Level Stewardship scheme (ELS)*

The Entry-Level Stewardship (ELS) Scheme is one such AES that has been the centre of the debate around the level of change AES promote. Entry Level Stewardship as defined by Natural England (2013) is a scheme designed to provide "...funding to farmers and other land managers in England in return for delivering environmental management on their land" (Natural England 2013, p9). ELS is based on the assumption that moderate agricultural intensity enhances environmental quality (Hodge and Reader 2010, pp.271-272). As a result, the so called 'broad and shallow' Entry-level scheme is characterised by low compliance measures, in the sense that the goals are possible with minimal changes to existing infrastructure and practices. The scheme is non-competitive, which means that all applicants who meet the specified requirements will receive the twice yearly payments. Applicants must reach an average total of 30 points per hectare for the application to become an agreement. Farmers can choose how they reach their points total from a wider range of environmental options, which has resulted in the popularity of the scheme with 39,550 agreements in 2013 (Natural England 2013, p.10).

The critique of this approach is that the relatively minimal changes required as part of the basic tier schemes will not encourage farmers "...to rethink their approaches towards farm management and conservation" (Wilson and Hart 2001, pp.258-259). Consequently, despite the incorporation of a greater number of land-users as well as increased land areas under administered under the schemes, the extent to which environmental and conservation goals are achieved are not inextricably linked to this. It is now discussed whether ELS can produce a great enough share of environmental public goods to qualify as a successful Agri-Environmental Scheme (Hejnowicz et al. 2016, p.243).

Furthermore, the opening of the scheme to all farmers is criticised for not tailoring environmental management to regional needs as well as "...not providing a mechanism for delivering environmental benefits at the greater-than-farm scale" (Darragh and Emery 2017, p.3). Most significantly for this research, the provision of subsidy for environmental benefits at such a low level is argued to erode the intrinsic value of nature to farmers (Darragh and Emery 2017). They argue that future intentions to carry out conservation-oriented behaviour will be on the expectation of financial reward (Ibid). Hence, such policy measures that seek to improve conservation should be measured by the positive effect on attitudes related to conservation that will have longer term benefits due to increased conservation awareness despite the cost of implementation (Coleman et al. 1992, p.69). It is argued that the voluntary contractual nature of the Entry-Level Schemes is a motivational driving force to reduce the impact of farming on the natural environment; including the possibility for farmers to learn new skills to gain competitive advantage, however, "...unless they exert such an influence, AEP measures will inevitably be seen as temporary bribes, shallow in operation and transitory in their effect" (Morris and Potter 1995, p52).

Although a vast majority of farmers now comply with a range of environmental options in the various stewardship schemes, there have been stark differences in the effectiveness of Higher and Entry-level schemes in providing environmental gains (Quillérou et al. 2011). Since the HLS is based on stricter and more prescriptive environmental options as opposed to the broader options that are farmer-selected under the ELS, it is suggested that HLS better addresses environmental concerns (Ibid). The schemes are considered relatively

successful due to their high uptake levels, however participation does not necessarily mean that significant changes in approaches to farming are taking place, especially in the less prescriptive ELS (Wilson and Hart 2001, pp.257-258). The broad criteria at which certain schemes operate do not place excessive demands on farmers to alter the way they operate, especially if their practices are relatively low intensity and thus “the success of a scheme depends on the extent to which potentially environmentally improving practices are taken up beyond their extent in the absence of the scheme” (Hodge and Reader 2010, p270). Therefore, this paper places emphasis on understanding the attitudes and values of farmers as a way to identify their intentions to implement these environmentally-oriented farming practices.

4 Theoretical Framework

This section will present the theoretical assumptions used to understand how farmers' attitudes and perceptions are formed. The framework will outline a broad constructivist theoretical starting position and use this to define some theoretical concepts necessary for understanding attitudes and behaviour. Since constructivism is an overarching theory, the Theory of Planned Behaviour is employed to focus more narrowly on behavioural intentions through understanding attitudes towards conservation-oriented agriculture as required by the scheme. Further to this, farmers' perceived behavioural control in doing the behaviour and the subjective norms around the behaviour are evaluated as important factors in the formation of attitudes. In behavioural studies it is necessary to understand the "...the motives, values and attitudes that determine the decision-making processes of individual farmers" (Falconer 2000, p.380, as it is through long-term changes in behaviour that the output of conservation goods are maximised (Morris and Potter 1995, p.52). This theoretical framework is used to translate and structure the empirical findings and ascertain certain attitudes and behavioural intentions of farmers participating in ELS.

4.1 A Constructivist approach

The social nature of this study emphasises that human behaviour is not readily supplanted in human consciousness but is constructed through interaction with the material world (Harlow et al. 2007). It can be argued that constructivism is based on relativist ontology – i.e. the things people know about the world to be real – and a subjectivist epistemology, that beliefs are known to the individual or a social group. Knowledge cannot therefore exist without the individual to create said knowledge, leading to the conclusion that knowledge is socially constructed. In other words, people understand realities based on the way certain objects have meaning to them (Wendt 1992, p.397). Hence, only through communication and language in social contexts can objects have meaning (Vanclay and Enticott 2011, p.261). Harlow et al.'s (2007, p.45) asserts that "...new knowledge could be constructed only when the learner is confronted with objects (i.e., external experiences) that could not be assimilated into prior knowledge".

As such, rather than acting as an explanation of behaviour in certain social situations, Rein and Schön (1993, p.146) argue that the constructivist approach gives a frame in which "...an amorphous, ill-defined, problematic situation can be made sense of and acted upon". However, by centralising the importance of individuals in the social construction of knowledge, it must be understood how different individuals interpret ontological realities. Thus, the social construction of reality gives agency to the individual due to their separate autonomy that stems from their own self-consciousness and social self-identification (Pearce 2013, p.9). Identity becomes paramount to explaining how knowledge and behaviour are created. A constructivist approach recognises that identities and interests of actors are formulated through social interaction, where values and attitudes shape the

behaviour of individuals (Florini 1996). Hence, some explanation of what identity and values are and the relevance of social context is an important theoretical starting-point before any theoretical framework can be applied.

4.1.1 The inseparability of identity, values and social norms

In order to situate the theoretical framework the relevance of identity, values and social norms, as well as their interconnection, must be briefly set out if the framework is to be employed effectively. Identity can be described as amorphous, in that it is a product of constant negotiation between how one interacts with the material world based on their ontological assumptions and how people relate to an image of what an individual believes they should be (Vanclay et al. 2006). It is thus a social construct in that it is based on experience both real and imagined (ibid). Values are central to this construction and determine how an individual interacts with the material world.

Values are a product of a systematic judgement process that gives certain things greater importance over others (Pearce 2013). People employ values that motivate decisions to take specific actions. They do this by attaching levels of importance to each value, making them relative to each other (Schwartz 1997). Conservation behaviour can therefore be motivated by a range of different values that converge to form an ecological worldview (Klößner 2013). Through their New Environmental Paradigm, Dunlap et al. (2000) highlight the importance of values and identity, establishing that they converge to form an ecological worldview, which accepts that nature is endangered by the actions of humans. In other words a greater level of importance to values associated with the environment. In this respect, it is suggested that 'biospheric' and altruistic values are correlated with an ecological worldview (Klößner 2013). Biospheric values are values that are self-transcending and demonstrate concern for nature and the biosphere, whereas altruistic values are "...defined as being concerned about the welfare for other humans" (Klößner 2013, p.1030). Both can thus be relevant for environmental behaviour as biospheric values may protect nature because of its inherent value, whereas the altruistic values may aim to protect nature for the benefit of others (Ibid). This is important for understanding how farmers relate to public goods, which affect people beyond the border of the farm, and must therefore be related to these two value positions in some way.

Since it has been established how identity and values exist in relation to each other it must be demonstrated how social norms exert influence. Social norms are a "...result of cultural practices" (Tsouvalis et al. 2000, p912) based on shared beliefs about standards of behaviour. Fehr and Fischbacher (2004) argue that through a socialisation and negotiation process, shared beliefs about the way individuals should act become established in given social contexts. Social norms therefore contribute to the formation of individual identities, as through interaction with these norms individuals take examples of values which become embedded in their relation with the world. Individuals may be internally differentiated in their identities depending on the time and setting (Fish et al. 2003, p.39), however, norms of social groups become embedded through constant interaction between the individual, the group and the social context (Tsouvalis et al. 2000).

4.2 Theory of Planned Behaviour

The Theory of Planned Behaviour (TPB) is a social-psychological model that uses the concepts of identity, values and social norms to explain a person's intention to pursue certain behaviour. The theory stems from Ajzen and Fishbein's (1980) Theory of Reasoned Action (TRA) in its emphasis on attitudes and perceptions of certain behaviours as an explanatory factor in a person's intention to carry out said behaviour. Ajzen (1991, p.182) argues that the behaviour is guided by a combination of motivation and ability and

therefore it must be noted that the theory only looks at intentions and possibilities to perform behaviours and does not aim to predict actual behavioural actions (Ajzen 2005). It is particularly relevant for this study that looks at farmers' intentions to carry out pro-environmental behaviour when engaging with AES. It can contribute to understanding why despite a large uptake in ELS, relatively little change in behaviour is seen.

TPB has been used for a wide array of studies relating to intention to carry out environmental behaviour, from recycling (Boldero 1995; Cheung, Chan and Wong 1999) to whether it can explain peoples' intention to engage in environmental activism (Fielding et al. 2008). More relevant to this study of participation in Agri-Environmental Schemes, a number of studies have employed TPB to look at intentions to perform sustainable agriculture (Price and Leviston 2014; Beedell and Rehman 2000). Work by Dijk et al. (2014) focussing on whether environmental cooperatives encourage participation in AES demonstrates that the Theory of Planned Behaviour is applicable in the study of farmers' intentions to carry out conservation-oriented agriculture. It strongly draws on the element of subjective norms, positing that cooperatives create group pressure on its members to enact conservation behaviour. This study builds on this work, looking at whether any connection can be drawn between smallholder farmers who are not part of collectives but who are all participating the ELS scheme and is therefore situated within a specific reference context.

The Theory of Planned Behaviour addresses the criticisms of its predecessor theory (Theory of Reasoned Action), accepting that behaviour is not under full volitional control (Fishbein and Ajzen 1980). External factors also affect the intention to carry out behaviour, which is captured by Ajzen's (1985) addition of perceived behavioural control. According to Ajzen's (1991, p.188):

“As a general rule, the more favorable the attitude and subjective norm with respect to a behavior, and the greater the perceived behavioral control, the stronger should be an individual's intention to perform the behavior under consideration” (Ajzen 1991, p.188).

The three variables, attitudes towards behaviour, subjective norms (whether people think the behaviour is good or bad) and behavioural control (also known as constraining/encouraging factors) are understood as follows:

Attitudes towards behaviour: This relates to personal attitudes, specifically an evaluation of whether the behaviour is positive or negative (Fielding et al. 2008). Ajzen (1991, p.191) establishes that attitudes develop from a belief about an object or behaviour, which links the behaviour with either a positive or negative outcome. Through this process actors learn to develop positive attitudes to processes that have desirable outcomes (Ajzen 1991). In the case of farmers behavioural beliefs, traditional farmers' attitudes towards the application of fertiliser has been positive because it is associated with producing greater yields. Attitudes were consequently found to be a significant factor in restricting the influence of converting to organic agriculture in Ireland and the UK (Hattam 2006).

Subjective norms: This is how somebody perceives a particular behaviour, influenced by the way others judge that specific behaviour (Ajzen 1991). As mentioned previously, this relates to the social construction of identity and the prevalence of certain values and norms within social groups (Fehr and Fischbacher 2004). Fielding et al. (2008, p.319) emphasise that an important factor of consideration is whether the actor thinks other important people in their life will approve of them performing a behaviour. In the case of smallholder farms like this study, family and neighbours who tend to also engage in agricultural practices may have a significant influence on subjective norms.

Perceived behavioural control: This element refers to the resources that an actor believes they possess that will enable them to carry out certain behaviour. Ajzen (1991, p.183) argues that the "resources and opportunities available to a person must to some extent dictate the likelihood of behavioural achievement". In the context of AES where farmers must implement environmental options on their farm, this could refer to the

physical resources farmers have, such as machinery and man-power, financial resources or resources relating to knowledge of environmental processes. Through a rational assessment of resources available, a persons' intention to pursue a certain type of behaviour is weighed against whether they will be successful at that given task and relates to confidence in their ability (Bandura 1977; 1982; Ajzen 1991, p.184). Sniehotta et al. (2014) criticise the homogenisation of all contextual variables under one parameter as some variables may carry significantly more influence than others (Sniehotta et al. 2014). However, Ajzen (2011, p.1122) argues that:

“In-depth processing is reserved for important decisions and behaviours in novel situations that demand careful consideration of the behaviour's likely consequences, the normative expectations of significant others, and the obstacles that may be encountered” (Ajzen 2011, p. 1122).

Thus, when considering behaviour in new situations, like under participation in Entry Level Stewardship, only the most important contextual factors have a significant impact upon decision-making.

Despite being valid in demonstrating behavioural decisions based on rational self-interest, conservation is partly understood as a moral dilemma where “...one's self-interest and the interest of others are at odds with each other” (Kaiser et al. 2005, p.2152). With this in mind, the TPB model has been criticised for its neglect of moral considerations, which dehumanises human behaviour when in fact all behaviour is not self-motivated and rational (Ibid). The effects of emotions are omitted from TPB, which questions the validity of a statistical model that focusses strictly on rational behaviour (Sheeran, Gollwitzer and Bargh 2013). It has led other to suggest that such an approach has little explanatory power because it is simply based on “common-sense statements which cannot be falsified” (Sniehotta et al. 2014). However, by focussing on a relatively small data set and conducting qualitative interviews, this study goes some way to mitigating those criticisms as any emotional traits are transcribed by the researcher. Although this study codes the data into comparable findings, results are not statistically fitted to regimented themes, meaning that through a process of abduction further theoretical explanations are given some credence.

5 Methodology

5.1 Choice of study area

Agri-Environmental Schemes are implemented across all European Union member states. The United Kingdom, however, was one of the first countries to implement AES as part of their rural development programmes in 1985 before they were established as mandatory feature of the second Pillar of the Common Agricultural Policy. The UK's long history of Agri-Environmental schemes means that there is a wealth of information in the form of policy documents and academic literature relating to the schemes. Furthermore, the study of the United Kingdom is particularly interesting because it is possible to look at the development of AES over time and the changes and restructuring of the schemes.

This research is based on the North East region of England, covering four different counties; Northumberland, County Durham, Tyne and Wear and Cleveland.

The total farmed land in the region as of 2016 was 603,000 hectares, of which permanent grassland accounted for 43%, cropped area 27% and rough grazing 20% (DEFRA 2017, p.8). The largest agricultural activity is pastoral farming, with cattle and sheep production making up a bulk of agricultural output (£86 million and £68 million respectively) (DEFRA 2017, p.8). The study focusses on the North East region of the United Kingdom because pastoral farming is the predominant form of agriculture. I could therefore focus my study on farmers who practiced similar agriculture and thus may have shared similar experiences of the ELS scheme. Much of the North East falls under an Agri-Environmental Scheme; however, much of the land area in the region is predominantly upland, pastoral farming and as such falls under other Stewardship Schemes based on Upland or Environmentally Sensitive Areas (much of it being national parks – Northumberland, Yorkshire Dales, North York Moors, and the Lake District). The data collection therefore focussed on lowland areas administered under the ELS scheme, which again provided a relatively similar population sample where trends could be more easily identified and transferable.

I am from this area of the North East, which meant that I had the advantage of knowing the area and could easily find my way around the countryside.

5.2 Choice of semi-structured interviews

The study focusses on a smaller range of semi-structured interviews based on a small geographical area because they can yield a better quality of information for a qualitative study than large data sets that reveal relatively little about local settings (DeLeyser et al. 2014). This is because large data sets can be unreliable and subject to error and information gaps (DeLeyser et al. 2014, p.301). Larger data sets that focus on statistical analysis generalises findings and can lead to the loss of diversity in views and opinions, marginalising certain societal groups (Ibid).

I wanted to gather face-to-face interviews rather than telephone interviews because an in-person encounter allows the interviewee and interviewer to establish a rapport through small talk or symbolic exchanges like handshakes for example. Whereas telephone interviews lose much of the personal chemistry that is required to keep the interviewee interested and engaged in conversation (Irvine et al. 2012, p.90). As the interview questions are designed to be open and broad, it is necessary to keep the interest and attention of the interviewee and keep the conversation flowing for enough time to collect sufficient data that is able to be analysed in depth. Gillham (2005, p.105) suggests that telephone interviews are hard work to maintain quality conversation, giving greater credence to face-to-face interviews in yielding useful qualitative data. Furthermore, many of the respondents contacted personally requested a face-to-face interview as they did not have time or feel comfortable talking over the phone.

The benefit of face-to-face semi-structured interviews is that meaningful conversation is possible, where the interviewer is able to read body language and clarify responses through verbal and visual cues (Irvine et al. 2012, p.90). Raymond et al. (2010) note that farmers may be wary of 'experts' as they cannot relate on a personal level and may feel threatened or judged in their answers. Thus, it was important to establish a rapport with the farmers before would likely reveal their truthful feelings. Visiting the farmers in person also meant that a site visit to the farm was necessary and meant that the interview could be contextualised and the topic of conversation related to the activities happening on the farm.

5.3 Selection of respondents and interview process

The problem formulation stemmed from the notion that 'broad and shallow' Agri-Environmental Schemes, like the Entry-Level Stewardship Scheme in the United Kingdom, do not require significant changes to farming practices and thus do not significantly affect farmers' attitudes and perceptions towards nature and nature conservation. In order to effectively test this hypothesis, the selection of interviewees was firstly based on two criteria:

- 1) The respondents were active farmers
- 2) Respondents have participated in ELS

Since the study posits that social norms and subjective norms play a role in attitude formation, a third criteria was established in order to analyse how farmers relate to the knowledge and values present in agricultural advice:

- 3) Farmers receive agricultural advice

Originally the study aimed to encompass agricultural advisors as respondents to look at the relationship features between agricultural advisors and farmers. Advisors were chosen using the Natural England Agricultural Advisor Register. Advisors were selected based on whether they were active in the North East region and those who specifically tailored advice to Entry-Level Stewardship schemes. The advisors were used as intermediaries who forwarded the contact details of relevant farmers.

15 advisors were contacted, of which 10 agreed to be interviewed as part of the research project. Through these 10 advisors it was possible to get in touch with 10 farmers. Not all of these directly corresponded to the 10 separate advisors, for example 4 farmers were contacted through the information provided by 1 advisor. In total 6 farmers agreed to be interviewed out of the original 10.

After establishing contact via email, a date and time was organised for a face-to-face interview. In accordance with the choice of semi-structured interviews, the questions of the interview were designed to be open and broad, as to get the farmer talking without being prompted too much. The interviews process lasted between thirty minutes and one hour.

First some background questions regarding the respondents' farm were asked in order to establish that they fit the criteria of the study and to open a rapport with the interviewee. The more content focussed questions were centred on three themes:

- 1) Farmers' perceptions of nature and environment
- 2) Farmers' opinions of the ELS scheme based on experience
- 3) The farmers' relationship with their agricultural advisor

The first theme of question intended to draw out how farmers personally identified with nature and the environment, looking at what type of features they associated with these concepts and how they described their interest and relationship towards these concepts. The second theme was to specifically look at how farmers understood the schemes and their motivations for participation. This related to looking at what farmers value, as economic motivations suggest a less intrinsic approach to valuing nature, whereas environmental motivations reveal biospheric values that establish value in environmental conservation. Furthermore, since the schemes provide money for the provision of environmental goods, how farmers relate to this goal may give some indication as to their approach to environmental conservation. This second theme was also central in establishing what changes farmers made to their farms through the schemes and whether these changes had been received positively or negatively, which would give some indication as to their attitudes towards environmental objectives. The third theme was to specifically look at how the information relayed by the advisor was understood by the farmer and whether this knowledge contributed to the farmers own knowledge repertoire. Themes two and three in more general terms aimed to identify how the ELS scheme through both its implementation and the advice relating to implication affected farmers perceptions of the scheme.

5.4 An inductive-deductive approach

In empirical studies the links between theory and empirical material (or the "reality") is often blurred as theoretical perspectives chosen for particular studies will affect how the subject matter is interpreted, which will influence the way social phenomena are understood. In social science, based on interpretation, it is improbable that researchers go into the field without some formulation of a hypothesis or preconceptions about the relationship between certain actors and social phenomena. The centrality of language and knowledge in this study emphasises the preconception that there is a relationship between experience, knowledge and language that is context dependent (Gergen 1986). Hence, the way that the researcher makes links between language and phenomena is part of a wider theoretical constructivist perspective but the interpretation also contributes to the social construction of these realities (ibid).

A deductive approach starts from defining general principles or theory to derive predictions or interpret empirical data, whereas an inductive approach starts by interpreting specific empirical data to arrive at a more general construction (Maass et al. 2001 p.391). The research process for this paper has contained elements of both deduction and induction, which implies that an abductive approach is more appropriate. According to Harman (1965, pp.88-89) abduction is an "inference to the best explanation" and as such recognises that the empirical evidence is incomplete or only partial. Abduction therefore reveals only a general rule and is therefore fitting for social studies based on interpretation of language and knowledge. It is important that the empirical research is termed general, as different researchers may interpret the empirical evidence in different ways. Alternatively the same general rule may not apply to every participant in the study. The benefit of abduction according to Andersson (1986) is that it is creative and allows for new discoveries to be made through interpretation. It is about being pragmatic and suggesting that something

“may be”, which enables the researcher to form an explanatory hypothesis for certain social realities (Walton 2014, pp.8-9). In social science, it allows a better explanation of social realities than induction because it does not assume that every phenomenon can be explained by theory.

This research process started with a literature search on the effects of Agri-Environment Schemes on farmers’ behaviour and looking at the literature reviewing successes and pitfalls of the AES policies. The literature search provided numerous explanations of the effects of Agri-Environmental Schemes on the attitudes and behaviours of farmers and thus has influenced the theoretical underpinnings of the study and guided the problem formulation. Similarly, the interview process is based on pre-established questions that are guided to some extent by the literature and is consequently theoretically informed, meaning interviews will be inductively tested by certain theoretical assumptions. Thus the choice of questions can be argued to influence the answers.

However, the semi-structured nature of the interview means that it is possible that new information will be presented and that some answers may not be able to be explained by the theoretical assumptions of the study, following what Hanson (1958) terms the “logic of discovery”. Therefore, to fully explain some of the language, knowledge and attitudes, it is necessary to find new theoretical assumptions. Furthermore, discovery is possible due to the impossibility of connecting everything to theory and in that case the researchers own interpretations are present in the analysis. The challenge of abduction is applying existing theory whilst being able to apply new theoretical assumptions based on new evidence. It can be argued to be limited by its only partial explanation of certain phenomena or the plurality of explanations possible to explain the same phenomenon (Ibid).

5.5 Philosophical points of departure:

5.5.1 *Epistemological questions and validity*

Validity concerns how reliable the results of a study are and whether they can be reproduced by other researchers. Attitudes are made up of numerous values based on people’s subjective views of their social contexts. Assumptions made about particular perceptions towards the environment and the ELS schemes are therefore unique to the individual and the specific context and can therefore be questioned in their validity.

The reason for conducting the study in a particular regional area was to prevent large generalisations of knowledge. The farming community is not one unitary actor but made up of smaller groups who all have their own social and cultural identities. Moreover, individual level differences and personality traits affect the way farmers relate to nature, react to Agri-Environmental Schemes and advice from agricultural advisors. The focus of this study was therefore on a small number of farmers from a geographically defined area who were all participating in the same ELS scheme, which makes the results unique to this project. It is not possible to make generalisations about how the whole farming community perceives nature.

In-depth interviews have more validity due to the fact they engage with respondents in a way that allows them to express their true opinions (Irvine et al. 2012). This is in contrast to surveys or broad quantitative, statistical studies that focus on correlations in data sets. Evidently, personality will determine some of the findings and conclusions are made based on this assumption.

5.5.2 *The links between language and social phenomena*

Qualitative data analysis derives from phenomenological theoretical suppositions rather than that of the positivist such as Durkheim (1938, 1951) who search for the facts relating

to social phenomena. The phenomenologist seeks to understand how the world is experienced from the perspective of a particular actor and therefore social phenomena, such as 'conservation' and 'nature' are understood through a strictly interpretive approach (Taylor et al. 2015, p.14).

Analysing ideas and values is only possible through the way people structure discourses. This is done through communication, either written or spoken. Language is a tool that can be used to deconstruct discourses and show how actors construct meaning. Language as a discursive tool is not concerned with the identification of lexical items that people use but rather about how language is:

“...both built and (most importantly) sequentially ordered, attended to, taken up, resisted, amended, and so on as part of some locally meaningful social business being conducted. It is less how speakers construct their talk and more what they do with such constructions that matter. This means we are concerned with the social and rhetorical organization of language use.” (Korobov 2017, p.53).

Korbarov (2017) stresses that the communication style and language that is used are rhetorical devices used to demonstrate knowledge during social interactions. It is therefore a discursive tool that encapsulates a particular belief or value. Since qualitative methodologies produce data that is based on “people’s own written or spoken words and observable behaviour” (Taylor et al. 2015, p.17), these methods are a way of approaching the empirical world (Ibid). By identifying themes in language, through a process of interpretation one can discern relationships between language, knowledge and experience. The study of language and social phenomena is based on elements of post-modernism that is “...concerned with the immediate, the present, and have no agreed narrative for the future” (Gibbins and Reimer 1998, p.302). Through this approach it is understood that language is always context dependent (Gergen 1986).

5.5.3 *The researcher - Hermeneutics and interpreting interviews*

Since this study is interested in how farmers explain their experience of nature and Agri-Environmental Schemes, the language they use is the sole indicator towards what values and perceptions they express. However, this knowledge related to values does not exist independently; rather it is interpreted by the researcher. Based on what the farmers have said, the information can be interpreted using selected theoretical standpoints. This process of interpretation, in its broadest sense, is known as hermeneutics and thus hermeneutic-inspired analysis is conducted on the empirical results from the interviews.

Hermeneutic analysis centralises the importance of the context in which the interview takes place and also the context in which the farmer operates. In this way, the analysis is dependent on the interaction between the farmer and the environment in which they act, but also between the researcher and the farmer. In other words, the researcher’s understanding is applicable to that specific situation and their own personal feelings and ways of interpreting the world at that time (Wood 2014, p.2).

Facts only come into existence once phenomena are interpreted in a particular way. Researchers do not remain objective but rather as an engaged individual with their own preconceived views they can only understand what people mean through their own interpretation. Consequently, the researcher is not value-neutral but is affected by their preconceived views, which may influence the way interviews are interpreted. This qualitative type of study moves away from a positivist thinking, whereby information can be scientifically verified, towards an experiential exchange that may unearth unexpected interpretations (Vandermause 2008). As such, understanding is “...co-created between the researcher and the participant” (Vandermause and Fleming 2011, p.369), emphasising that the knowledge gained from the interviews is a social construction. In conducting both the interviews and analysis it is useful if the researcher remains as neutral as possible and not let personal opinions guide discussion.

5.6 Limitations

The limitations of this study are largely based around the lack of time and resources available to carry out the research. The study was limited to the comparison of attitudes of farmers from a pastoral background who participated in ELS. The data and analysis is therefore limited to specific typology and region of the UK, of which the findings cannot be translated to a UK-wide level. Similarly, the data does not facilitate a comparative study across different AES schemes, or between participants and non-participants of ELS. The research therefore carries little analytical weight in characterising differences in attitudes across different farming situations. The interviews were carried out once during October 2017 and therefore a temporal study of behavioural change was not possible. The results may also be affected by condition-related factors and therefore the farmer may not have expressed their true feelings. The inability of carrying out follow-up interviews further compounded this issue. Although not a limiting factor as such, the majority of interviewed farmers also participated in the higher tier scheme (Higher Level Stewardship) and may affect the results to some extent. In this respect the environmental criteria for HLS are more demanding and may therefore get farmers to engage with environmental values to a larger degree.

Although a literature review has been carried out and an analysis of contextual factors, it should be noted that not all contextual factors have been included. A number of authors emphasise the role of agricultural advisors in contributing to the knowledge of farming communities (Morris 2015; Lobley et al. 2014; Tsouvalis et al. 2000), and while this may be interpreted through the ‘perceived control’ variable of the Theory of Planned Behaviour to a limited extent, it has not played as prominent a role as would have been liked. The research therefore, takes a farmer-perspective approach rather than considering all actors present in a rural setting.

5.7 Ethical considerations

The fundamental right for people to know they are being researched should be central to the ethical considerations of any study (Ryen 2013). To satisfy this premise, the study acquired the informed consent of the participants. In this vein, the farmers were informed of the broad purpose of the study and how the material of the interviews is to be used. In order to avoid bias and prevent the interviewee from saying what they think the researcher wants to hear, some information is omitted from the project description given to the farmer. Thorne (1998) argues that the line between informed and uninformed is often blurred because there needs to be balance between revealing too much information and revealing too little and deceiving the interviewee. The farmers were told that the study aimed to gather information about farmers’ experience of the ELS scheme and their relationship with their agricultural advisor.

A second tenet of ethical research is confidentiality (Ryen 2013). The respondents were made aware that the interview would be recorded and that the recordings themselves would not be published. Concerning this specific study’s parameters, some of the information was a little sensitive, for example if farmers were particularly critical of the ELS scheme or their advisor. It is the case that the farmers know their advisors and it is also probable that some farmers know each other as the study is based on a relatively small geographic area. It was therefore essential to reassure the farmers that they would remain anonymous and to this end no names or details that can tie information back to a respondent was used. Further to this, no information in the study will be passed on to third parties. The transcripts and analysis have also been written in a way that identification of individuals is not possible.

As noted from a review of the literature in this field, it is the case that other studies have encompassed elements of this study concerning farmers’ perceptions towards the environment and Agri-Environmental Schemes. Therefore, it is important to note that the

transcripts and data analysis have been conducted based on the study's own interview questions and interview material gathered first hand by the researcher. Although findings may in some instances be similar to studies of the same phenomena, the data presented is not from third sources.

6 Empirical Findings

In this section detailing the results of the empirical data it will be discussed how the farmers relate to conservation-oriented agriculture through an interpretation of their attitudes towards farming in general and the ELS scheme. There aren't defined categories that farmers adhere to when talking about the nature, farming and AES and therefore farmers often express views that can be categorised into multiple themes. This section summarises some of the themes present in the interviews. These results will be analysed using the Theory of Planned Behaviour in the next chapter, which demonstrates farmers' intentions to carry out conservation-oriented agriculture based on their attitudes towards the schemes they have previously participated in.

6.1 Reasons for participation in scheme:

When discussing why farmers joined the Entry-Level Stewardship Scheme, farmers rationalised their choice with many different explanations. The data was coded into two broad categories, those who expressed economic rationale and those who expressed environmental rationale. No one farmer belonged solely to one category, as farmers were more pragmatic in the way they approached farm-management, rather than a theoretical approach that this paper takes. This form of coding simplifies a complex decision-making process, which as discussed in the previous sections is influenced by an amalgamation of farmer identity, farm-level management and socio-economic contextual factors. Further to this, the data is more skewed in the direction of the economic-oriented farmer, which can partly be seen as a result of the nature of running a farm. In other words, all farms are businesses and therefore economic viability must play some role in decision-making in order for the business to be successful. However, to reiterate, the point of dividing the results into these categories aims to highlight that farmers can run their business and take economic decisions based on environmental rationale, which would demonstrate that farming values can be changed from traditional productivist values based solely on utilitarian decisions.

6.1.1 *The economic-oriented farmer:*

One of the principle questions put forward was why the farmers chose to participate in ELS. A primary reason that was prevalent in the empirical data were economic factors both exogenous and internally on the farm. Factors out of the farmers' control can be seen to have influenced the farmers' decision to join the scheme, where business continuity was a main concern. In this case it can be interpreted that the changing farming economic landscape (in terms of the profitability of certain activities in the current economic climate) plays a central role in farmers' motivations for joining AES as a means to boost income. An older farmer who runs his family farm with his son says that:

“The trigger for doing it was that sugar beet had been the main crop on this farm for 80 years, the York factory closed and that made us stop and think, what are we going to grow? What are we going to do in the future? We had two members of staff who were coming to retiring age and we had to replace them. In all that mix we decided we were going to plant different crops and we were not going to replace staff members and we were going to sell our beef cattle, which wasn’t particularly profitable at the time. So we sold the beef cattle and kept the sheep” (Farmer 6).

Here, the farmers’ previous crops and cattle were no longer profitable due to circumstances out of their control and the scheme was seen to be a ‘stop-gap’ to manage these financial losses. He rationalised his motivations for scheme participation around how he could be maintain his business, showing that farm continuity through financial stability was a central factor in applying for subsidy through ELS. Similarly, Farmer 4 referenced the same external market factors but as a reason for not participating in the ELS scheme any longer, identifying that his sheep could bring a greater price at market, so he was focussed on production rather than maintaining land for conservation.

Farmer 6 goes on to financially rationalise his decision to participate in ELS/HLS, demonstrating that internal decisions at the farm-level were made based on what could achieve the most income and make the most savings:

“It was a time management issue, or employing someone to do it [manage the cows]. So therefore we had permanent pasture that needed something doing to it, some kind of grazing....so all that grassland went into the scheme [HLS]. No fertiliser, no herbicides, therefore production of grass just plummeted. So all we had to do was buy a few store cattle....and put them onto these marshy areas and flood plains and that was it for ten years. So we were paid by natural England to not do what the cattle used to be doing”.

In this case, there is no clear environmental motivation for maintaining extensive grassland; rather it was a decision based on how they could best make use of their resources in a financially efficient way. This is not to say that he did not value the environment at all, as participating the scheme can be interpreted as recognition of environmental values to some extent. This farmer suggested that not having to buy herbicides and fertilisers was positive and similarly not having to pay for grassland management was financially rewarding due to the fact that they were compensated by the money received through the scheme. Thus, it could be argued that his intention to carry-out conservation-oriented behaviour is based on the outcome of weighing the financial costs of non-implementation against implementation.

There is a clear link between economic rationale for scheme participation and productivist mentality in some of the reasons given by farmers in this study. Despite taking the land out of production, many of the farmers emphasise that farmland should be utilised in some way. Farmer 6 stresses that grass production plummeted, and underscored that the pasture “needed” something doing with it. This may show that they associate farmland with production for financial means. The idea that land must be productive is reinforced by farmer 2, who despite being very environmentally conscious, emphasised the need to utilise every area of their land in some way. Although most of the farmers recognised the benefits of non-productive land for wildlife, from a farm management perspective, they feel they should be compensated financially for providing non-productive land:

“For me, it makes sense if we’re getting payments, obviously it’s [farming] got to be economic as sort of environmental gain. If we’re getting payment for areas of land that maybe are not so productive, you know, why throw more and more resources at that trying to get it to produce when it can produce for the environment and for providing habitats”.

(Farmer 2).

Both farmers 2 and 4 weigh up the financial costs of making the land productive with the potential income they could receive from the ELS and HLS schemes. When talking about the income they received through subsidies, Farmer 2 said that their basic payment scheme

made up the majority of their income and the ELS/HLS money was an additional source of income:

“At the moment in December thirteen grand turns up in my bank account and that’s my basic farm payment...my subsidy, brown envelope, however you want to look at it. From an environmentalists’ perspective I get that for doing nothing payment....fundamentally it’s not very clear what I’m getting paid for”.

Here, it is clear that the farmer is trying to link the work they are doing on their farm with the money they receive from the schemes, suggesting that environmental conservation can be economically valued. Farmers 1 and 5 also associate participation in the scheme as a means of income support and this kind of rationale is reinforced by all of the other farmers in one way or another, Farmer 4 identifying that “*It [ELS and HLS] was worth a lot of money to the farm*”. In one way or another all of the farmers can be characterised as pragmatic, as they are not committed to one ideology (either productivist or environmentalist) but weigh the options that can give them the most business stability. Again, although many of the farmers express economic rationale as a reason for participation in the schemes it does not mean that they are uninterested or neglect nature, as participation in the scheme itself expresses that they think in environmental terms (even if just a little bit). It is therefore difficult definitively categorise certain farmers and to conclude that rationale is solely economic.

6.1.2 *The environmentally-oriented farmer*

Although most farmers were pragmatic in their reasoning for participating in ELS/HLS, 3 of the farmers could be argued to be more environmentally oriented than the others, expressing more of an ideological rationale for enacting conservation-oriented farming practices. They clearly identified themselves as environmentalists and participated in environmentally-focussed agricultural organisations such as the RSPB and ‘Campaign for the Farmed Environment’.

Farmers who were more environmentally-oriented recognised the ecological effects of their conservation practices. Farmer 1, who worked for the Campaign for the Farmed Environment, questions “*you want a barn owl, right? Just because you’ve stuck a box in a tree doesn’t mean you’ll get a barn owl. What you’ve got to do...is farm for voles. Because really what the barn owls need is voles*”. They are aware of how ecosystems function, rather than some of the other farmers who are just concerned with particular species. Similarly Farmer 5 identifies that farming in a conservation-oriented manner involves “*creating habitats, providing food and protecting species, creating safe spaces*”. However, in talking about knowledge of ecosystems, it presupposes that certain forms of knowledge translate into environmental values, i.e. if someone is aware of the relationship between habitat and species they care about its protection. Furthermore, analysing the interviews from the perspective of the interviewer marginalises certain forms of lay knowledge that may well have analytical validity in its own right (Boonstra et al. 2011, p.421). Consequently, it cannot be argued that farmers who hold knowledge about the environment hold more of an intention to pursue conservation-oriented agriculture or that environmentally-oriented farmers view nature in the same heterogeneous way. Rather, in this specific case, farmers who presented this knowledge generally engaged with the scheme more.

There was a clear distinction in the way that interviewees defined what a ‘good’ farmer is. Farmers who expressed environmental motivations for participation in ELS/HLS were often aware of the negative externalities of what is associated with productivist farming practices. Farmer 5 identified hedge trimming and “manicured” fields as symbols of environmentally unfriendly practices. Likewise Farmer 1 equated the ploughing out of field margins with those farmers who were only interested in maximising yields and again stressed the importance of recognising the links between the environmental options

implemented through the Stewardship schemes and increased biodiversity. This particular farmer out-rightly distanced himself from what he deemed a “technical” approach to farming, emphasising that he felt nature had more of an intrinsic value to him. Farmers 1, 2 and 3 all associated with more environmentally friendly agriculture with rough edges and untidiness and used these descriptions to justify their own practices, acknowledging that other productivist farmers would find it unacceptable. It is difficult to definitively judge whether the farmers held intrinsic values towards nature or the environment, as the interview questions were not directed towards values per se but rather values are interpreted by the interviewer. Similarly, people do not generally explicitly talk about their intrinsic values or necessarily think about how they influence their decision-making, as they are underlying pre-dispositions.

As mentioned previously, there was no one reason given for joining the scheme, as farmers talked about a wide range of factors that influenced their practices. However, these three farmers explicitly mentioned that they farmed to a certain extent for the environment. Farmer 5, when asked why they joined the scheme said *“we wanted to continue to protect the environment but needed a little bit of financial help to do it”* and that she *“prefer[s] looking after the environment and working within the parameters of being an environmentalist...”* (Farmer 5). In essence, she states that environmental reasoning was the main reason for applying but as emphasised earlier, the farmer cannot be solely categorised as environmental.

6.2 Effects of the scheme:

In order to assess the ‘perceived behavioural control’ aspect of the Theory of Planned Behaviour, it must be understood whether farmers feel they have the necessary resources in order to implement said behaviour. This can be understood by looking at how farmers understood the effects of the scheme on their farm management.

6.2.1 Effects on farming practices:

In line with the literature that denotes Entry Level Stewardship as a ‘broad and shallow’ scheme, which does not significantly require farmers to change their practices, it was found that this hypothesis holds some truth. Farmer 1 says that *“we have gone for a much more integrated approach across the farm business, you know, we haven’t had to make radical changes in terms of livestock numbers or anything”*. The results demonstrate that none of farmers felt that the current structure of the ELS scheme required significant alterations or investments in their farm-management practices. This trend in the results correlated with those farmers who had naturally progressed into the ELS/HLS schemes from previous schemes and therefore had been implementing environmental management in some form already. This could explain why farmers felt that they had not made significant changes but that further changes would require additional resources (which will be discussed below).

Knowledge resources were found to be a factor contributing to the difficulty in implementing changes on farm-level. Farmer 4 emphasised that he had to get used to the changes that were different to how he used to manage the farms. When asked about the changes to his practices he described them as insignificant but emphasised that *“I had to not graze various areas and use minimal fertilisers on certain areas too”*. As a sheep farmer who let his sheep graze all of their land, not grazing certain areas seemed to be something he had to consciously remember to do. Farmer 6 also made reference to a knowledge gap, saying *“Getting our heads around not cutting hedges, having a scheme for cutting hedges only every two years, possibly every three years, whereas we were used to cutting hedges every year”*. It seems that this process went against the instincts and previous practices of the farmer, and he further highlighted that without the help and support of his agricultural advisor who drew up his application, his changes may have not

have met the requirements of the environmental scheme. All of the farmers interviewed received advice from agricultural advisors, which can be seen to contribute to their knowledge resources and may explain why some farmers found the implementation phase of the scheme easier.

Many farmers made reference to an increased amount of work (labour effort) and time it takes to tend to the land under the Agri-Environmental Schemes. Although enthusiastic about environmentally friendly farming, Farmer 1 still reiterated that some of the scheme's options required greater resources, saying:

“Probably on the arable options I know the farming and bird package and stuff, I mean that is probably the biggest headache. The problem with that is, it is just small little bits...and actually it's just the work of doing it because you have to sow it every year...it takes flippin' ages! If I wasn't interested, it wouldn't be worth the hassle”.

Another farmer highlighted that implementing a lot of different options required different management techniques, which meant that fields took longer to tend to than that of farmers who have large, undivided plots of land. In describing these difficulties, Farmer 2 said that she lacked the equipment that allowed her to work on smaller scales more easily.

A theme amongst the interviewed farmers was the financial resources required to implement the environmental options of the schemes. Without the schemes, it seems (even among the environmentally-leaning) that the cost of implementing environmental options is too expensive. The results may have been skewed by the way the farmer interpreted how their answers would impact future schemes. Even though, the interview was posited as an academic paper, some of the farmers may have placed greater emphasis on financial payments if they thought the paper might influence policy in some way. It therefore cannot be concluded that there is a valid correlation between the financial cost of scheme implementation and farmers' perceptions of the scheme.

When asked about the extent of the changes made on their farm, Farmer 6 stressed “*we couldn't have afforded it*” without the financial support of the ELS and HLS agreements. Farmer 1 seemed to be frustrated by the amount of environmental goods they could get from his land in comparison with the financial resources they had their disposal:

“This is a lowland farm, so it's about as environmental as it's going to get...I can never see me getting sixteen grand off them for environment [talking about basic payments]...and I don't know how they'd value it, certainly in income forgone I would have to hand the whole farm over to a nature reserve type thing....but even then sixteen grand wouldn't be enough”.

It can be interpreted from this that the farmer does not take into consideration the wider effects of ecosystem services in saving money, such as pest control and pollination. It reiterates what has been discussed in the literature, where farmers only think in the short-term, and the potential savings in the long-term from environmental protection are somewhat absent from farm-level decision making (Kuhfuss et al. 2016). It further demonstrates that the farmer thinks about their own financial farming situation, which problematises how farmers can be encouraged to think about public goods, something that goes beyond their own personal financial situation.

6.2.2 *Environmental effects:*

It is difficult to determine how farmers view the environmental effects of their practices, as generally small-scale farmers see their farming as good for the environment because it is more extensive (Kleijn and Sutherland 2003). In a study on Swedish farmers, Boonstra et al. (2011) highlight that farmers have a general interest in nature but distinguish their interest from specific environmental knowledge. It may therefore be the case that farmers may express that their actions are environmental because of their self-identity as someone who is interested in nature. It may therefore be the case that farmers perceive their farming

as having positive environmental effects even if they do not drastically change their behaviour as part of the scheme.

Although many farmers felt they initially lacked the resources to carry out environmentally-oriented farming as required by the scheme, when asked about the effect of the scheme at farm-level, many farmers saw their actions as being successful for wildlife. Farmer 5 clearly links the work they have done implementing a six-meter grass margin with environmental gains, saying:

“Of all the measures we have put in, one of the easiest and best to help wildlife is the six meter grass margin around the field. It makes such a tremendous difference between having very little wildlife to suddenly having pheasants, partridge, hare, deer, barn owls! That was the first barn owl we’ve had on the farm since 1952...and that’s the grassy margins that bring the voles”.

In essence, this farmer was happy about the effects of the scheme on her land, as she also had a visitors and educational centre for the environment on her farm, as well as running a community orchard. These positive environmental gains gave her other work more credibility and also allowed her guests to physically see species diversity on her land. Species diversity was seen as a resource to her farm and her enthusiasm for these environmental gains explained why she put the effort into carrying out conservation-oriented behaviour as part of both the ELS and HLS schemes.

Farmer 1 demonstrated that he was surprised by the levels of change that the environmental option of not grazing land initiated:

“We got to about late June and...I was going to let them in [the cows to the field] and...I can still visualise it...I opened the gate and I sort of walked in and had a look at what’s coming in here...and like bloody hell there’s all these different ragged robins and stuff was all out in flower...and I ended up walking back up and shutting the gate and I thought, right you [the cows] can stay out!”.

Here, the farmer was surprised at the positive effects the scheme has had on the environment and has consciously made a decision to change his usual practices, even though he wasn’t required to. It demonstrates that he now sees the environmental gains from the farm-level changes as a resource rather than a burden. It could be interpreted here that the easy experience of implementing options along with the visible environmental returns leads to a more positive view of environmental behaviour, maybe because they can see the return on their financial investment.

Farmers only talked about the environmental effects that were physically visible, which was often related to the presence of different species. It demonstrates that farmers may associate these physical changes with the money they receive as compensation for the changes to their farm-management through the scheme. However, this presents a gap in the data where the schemes have had environmental effects that have gone unnoticed and therefore uncompensated. To this end, the lack of knowledge about the environmental effects of schemes may have a negative effect on the perceptions of the schemes if farmers do not understand what they are being paid for.

6.3 Reason for continuation/discontinuation of scheme:

Out of the farmers interviewed, half said they would seek to join the next scheme, whereas the other half expressed no interest in future Agri-Environment Schemes as they are currently structured.

6.3.1 Too prescriptive:

When asked whether they would continue with the next Agri-Environment Scheme once their ELS/HLS agreements have expired, for those who answered that they would not

participate there was a distinct responses related to the inflexibility of the scheme. That is they had to meet certain environmental criteria and were assessed on that basis. Farmer 4 stated matter-of-factly:

“They’re too prescriptive, they’re too focussed on one thing...they’ve made it competitive, which I find...you know, I think I could compete and win but I don’t see why I should have to compete. They’re more focussed on outcomes and I can understand that”

He made reference to feeling restricted in what he could do on his farm. He stressed the scheme took ownership away from his land and that he wanted to be able to put his sheep where he liked. It was suggested that he would return to more production-focussed sheep farming after the scheme expired. Likewise, Farmer 6 expressed a desire to put his land back into arable farming and use more herbicides, which the previous scheme prohibited. He justifies his choice by emphasising that the bird plot areas “*are full of rubbish. It lasts two years, we got very little barely coming through it was all wheat*”. Again, this is reference to the poor profitability of crops grown under environmental management, where the prevalence of weeds killed his desired wheat crop. It could be argued that the farmers feel the schemes prescriptions were not in line with their more productivist thinking. It could be interpreted that farmers who have not experienced any environmental effects (or do not recognise environmental gains) may hold a more negative attitude towards scheme participation.

Although not mentioned as a direct reason for non-participation, the fear of financial penalties was often cited as a negative element of ELS and HLS. Even though Farmers 2 and 5 said they are continuing with the next scheme, they expressed dissatisfaction with the intrusive and unnecessarily detailed inspections, calling them “*...very picky over things that are immaterial*” (Farmer 5). Despite not having any inspections, Farmer 6 stated that he had heard from other farmers that “*inspectors are too meticulous with measurements and it puts farmers off. They should have a more easy-going attitude. The fear of being penalised...that’s the problem*”. Environmental prescriptions, as mentioned previously, are considered somewhat resource intense and farmers see environmental gains in material things rather than measurements. Farmer 2 expressed concern over the direction of the new schemes, suggesting they would be too meticulously conservation-oriented due to the influence of environmental bodies like the RSPB. There was considerable emphasis on the inspections and the fact that the Rural Payments Agency (RPA) did not recognise the environmental work the farmers were doing and were too narrowly focussed on measurements. Again, this points to the way farmers experience nature, which may be different to that of a payments officer who has strict scientific guidelines or the conservationist who is interested in species numbers.

6.3.2 No options for them to choose from:

The farmers who seemed more environmentally conscious wanted to join the next generation of schemes, however, felt they could not meet the criteria necessary to join. Farmer 5 emphasised that being a small-scale mixed arable/cattle farm put them at a disadvantage as she felt the new scheme was aimed at larger, arable farms. This particular farm had been accepted onto the ELS/HLS scheme through their tenant:

“Getting onto HLS was really, really hard...unless you’ve got something special...like the coastal farms...we don’t have anything like that. We were desperate and couldn’t [get onto the scheme] until our tenant farmer found a corn bunting in one of the farms that he worked on...”

It should be mentioned that corn buntings are a target-species of the schemes. This particular farmer saw their practices as very environmentally focussed and their intention to carry out conservation behaviour as part of the scheme they feel is down to luck.

This was not the case in all the interviews. Farmer 3 said:

“There are no options that really fits my farm without costing something that’s going to cost me more than what I get back...I’m happy to break even on things....the hedging work, I didn’t make any money on that but it got me a new hedge”.

Here, the farmers’ intention to carry out conservation-oriented behaviour in the future seems to be based on the expectation that schemes will be fitted around the needs of the farmer. There is a clear emphasis on the financial resources needed to make changes in order to be accepted onto the scheme. This demonstrates that this farmer’s willingness to carry out environmentally-oriented agriculture may be based on financial capacity rather than values related to conservation. This finding illustrates that it is difficult to separate environmental and economic rationale, as even environmentally-oriented farmers need to make their business viable in order to make a living. Therefore, it is not possible to definitively categorise the motivations of farmers.

6.3.3 Will farmers maintain changes?

All of the farmers expressed a desire to maintain most of the changes they have made as part of the ELS/HLS schemes, regardless of whether they will participate in the next scheme or not. However, it was apparent that some of the options would remain simply because it would require too much work to remove. Farmer 3 emphasises “...the hedges will be there for the rest of my life, there’s no way I’d do anything to that”, demonstrating that the changes he has made have become embedded after the 5 and 10 year periods of the ELS and HLS schemes respectively. It is difficult to assess whether these farmers have an intention to maintain environmentally-oriented behaviour out of free will or whether they will maintain changes out of pragmatism.

Further to this, two farmers stated that they would remove some of the environmental options implemented as part of the stewardship schemes. Farmer 6 said that he would remove the bird seed mix but would keep the field margins and continue not to use fertiliser on his grassland. However, it was uncertain whether he would actually keep the grassland since it would no longer be paid for under the HLS scheme. It can be noted that farmers seemed to suggest that they intended to maintain environmentally-oriented behaviour if they received financial rewards for doing so. This is evident from Farmer 5 who says, “financially it [ELS/HLS] have enabled us to put in all the wildlife measures we’d like to put in without going bankrupt”, directly linking conservation behaviour with financial payments.

This section has demonstrated that it is difficult to distinguish between how farmers see money received from the schemes versus money from received from production. It is an interesting point of discussion that farmers generally see conservation work as more burdensome than an equal amount of work required for the same amount of money from production. It relates to how farmers value their land and may be related to their identity as a productivist farmer. In this case, farming for produce is something that comes naturally rather than farming for conservation, which may not be part of their value repertoire. In this case, as in the study by Boonstra et al. (2011), farmers value conservation practices as part of a wider farm management agenda.

6.4 Influence of others:

All of the farms interviewed were family farms and as such the views of family members and significant others were supportive of the decisions made on farm. In half of the interviews, the farmers’ spouses were also present and were found to share similar views as the main interviewee. Farmers tended to be proud of their environmental achievements, which meant that the opinions of other farmers were not so important to their work.

However, it is not possible to determine if farmers are influenced by others or whether they have a genuine interest in environmental work.

When asked how they perceive their neighbours' attitude to the changes they have made as part of ELS/HLS, Farmer 1 answered, "my neighbouring farmers are all about business, business and the environment doesn't really come into it". He therefore suggested that they had very little in common, which means that they do not feel influenced by each other's opinions. Similarly, for Farmer 4 who was not particularly environmentally-oriented, he said he had talked to people at the farmers' market that were enthusiastic about the scheme and would be applying for the next scheme, however, he claimed that these opinions had not influenced his decision to not participate. It may be that he was too proud to admit that he was influenced by others and wanted to be perceived in a certain way by the interviewer, thus it is difficult to interpret the validity of this statement.

There was a profound difference in those farmers who actively pursued conservation-oriented agriculture as part of the Stewardship schemes to those who took part in the schemes but lacked an interest in the environment. As mentioned previously, farmers who were more aware of the environmental externalities of productivist farming seemed to take a more negative view of the poor environmental quality of their neighbours' farm:

"As a field to farm it was dreadful...they had it drained and sowed crops in it. He would sow it as far as he could, right to the hedges, right over everything and as maximum yield as possible...and the hedges were cut to an inch of their lives" (Farmer 5).

Rather than being influenced by social norms surrounding productivist agriculture, it seems that some of the farmers judge farming based on norms and values surrounding producing environmental goods and nature conservation. This could also be seen as farmers abiding by the rules of the scheme rather than norms and values based on conservation. The same farmer directly draws a distinction between what is traditionally considered a 'good farmer' and a farmer that pursues more environmentally-friendly agriculture:

"Some people like the countryside to look very manicured and you could say the very 'good' farmers are very intensive...whereas a bit more organic, sort of wildlife areas, it's a bit more hairy, a bit more unkempt" (Farmer 5).

To the same extent, Farmer 1 recognised that "rough edges and untidiness is really good for nature" and looked upon his neighbours in a negative way, saying "he was quite keen with his little sprayer". The farmer therefore equates pesticide use with poor farming in terms of environmental quality. The symbols of the 'good farmer' in a productivist sense have therefore seemed to become more negatively received in the community of conservation-oriented farmers who have implemented changes under the Stewardship schemes.

All farmers interviewed received advice from either an agricultural advisor or a land agent, which can be seen to influence the way farmers approach the schemes and therefore the type of environmental options they choose to implement on their farms. Here, agricultural advisors refer to those advisors specifically focussed on the environment and conservation, often employed at cheaper rates than those of land agents. In this case, the agricultural advisors were all affiliated with Natural England (the body responsible for ELS/HLS oversight) and were associated with environmental organisations such as the Farm and Wildlife Advisory Group. Land agents on the other hand are generally real estate consultants who do not specialise in environmental consultancy but rather focus on how to make land the most profitable.

When asked how advisors had helped with the scheme, four out of the six farmers stated that an agricultural advisor had drawn up the scheme for them. The other two farmers said the same thing but that a land agent had done the same work. Farmer 2 said that the advisor had done an "*amazing job*" at drawing up the scheme and Farmer 5 reiterated that "*they knew how to best get in all the environmental options we wanted and suggested things that we hadn't thought of before...like managing certain hedges for different bird species*".

Here, there is a link between the knowledge the advisor has provided and the environmental options that the farmer has implemented, showing that the knowledge of the advisor may have been transferred to the farmer. However, those who hire the services of agricultural advisors may have more of an interest in environmental issues since they know the advisor specialises in environmental consultancy. Therefore, there cannot be a link drawn between the influence of the advisor and the practices of the farmer and it may be the case that their values and attitudes converge rather than influence each other.

There is a distinction in the orientation of farmers who employ land agents, where attitudes towards environmental issues may be less prevalent than those who employ agricultural advisors. Again, this may be due to personal attitudes rather than the influence of the advisor, however, it has been stated by the farmers that the advisors have played a role in their decision-making. The two farmers who employed land agents were more economically-oriented and expressed less of an interest in conservation. When asked about the influence of the land agent, Farmer 3 stated *“they advised me on how I could get the most money from the schemes”*. Similarly, Farmer 4 said *“they knew how to make most use out of my land”*, specifically referring to getting the balance between production and non-production right. Although not conclusive, it could be the case that these farmers received very little environmental knowledge from these agents, which could be a contributing factor as to why their attitudes and values are less environmentally-oriented than those advised by the agricultural advisors.

7 Analysis/Discussion

The research questions that this study intends to answer are:

- What are the reasons farmers choose to participate in ELS?
- How do farmers engaged in ELS relate to conservation-oriented agriculture?
- What role do values and identity play in reasons for participation?

In order to address these questions, this section employs the Theory of Planned Behaviour to evaluate whether farmers have the intention of pursuing conservation-oriented behaviour. Intentions are determined by three socio-psychological constructs; firstly an analysis of farmers' attitudes towards the Entry Level Stewardship scheme and related behaviour; perceived behavioural control; and subjective norms (Borges et al. 2014). The Theory of Planned Behaviour seeks only to portray general attitudes in human behaviour and does not account for "specific actions in specific situations", which is often guided by more immediate concerns and considerations (Ajzen 1991, p.181). The results show broad correlations between farmers' attitudes but in line with Ajzen's (1991) theory does not provide direct explanatory power of behavioural intentions on such a small and specific sample. Likewise, the results were varied and therefore the conclusions drawn are based on interpretation of some of the trends.

This section will further address some hypotheses found in the literature on ELS and its effects on farmers' behaviour, namely that:

- The 'broad and shallow' nature of ELS does not require farmers to make significant changes, which means they are not influenced to drastically change their practices to more conservation-oriented agriculture.
- The financial incentives of schemes result in the connection of environmental goods with financial reward. Thus in the absence of schemes, conservation-related behaviour will not exist.

7.1 Attitudes towards behaviour

To discern farmers' attitudes to conservation-oriented behaviour as detailed by ELS/HLS, it must be understood whether the farmer has a favourable or unfavourable evaluation of the behaviour associated with the scheme parameters (Ajzen 1991, p.188). Using the results from how farmers' perceive the impact of the schemes on their farm, as well as their reasoning for future participation/non-participation, it is possible to make gauge how certain attitudes are developed through feelings towards these specific aspects of the scheme.

There was a correlation between economic rationale for joining the scheme and a productivist approach to agriculture. Although many farmers expressed an interest in the environment and conservation, it is evident that a tendency towards behaviour that brings the greatest financial reward is favoured. It is further demonstrated that the economic –

oriented farmer expresses greater antipathy towards the strict environmental criteria that the schemes are evaluated by, which financially penalises farmers for non-compliance. The restrictions of the scheme prevent farmers from utilising their land in a productive way, which in some cases was the reason for non-participation after scheme expiration. It demonstrates that some farmers evaluate conservation-oriented agriculture in a negative way because of the impact on economic gains. In line with Ingram et al. (2012), it can be established that the rationalisation of farm-level activities through a business management approach means that environmental measures are unfavourable due to their poor income-generating possibilities.

Although many farmers recognised the ecological effects of the environmental measures of the scheme, farmers generally did not associate the environment with economic gain, and as such the principle of Payment for Ecosystem Services was largely absent. Money from the scheme was seen more as a means to substitute income forgone from putting land into production. It could be interpreted that farmers value money from production over money from ecosystem services and this may be because for changes to become embedded they must first be visible (Saunders 2016, p.4). The relative invisibility of changes, such as increased wild fauna and flora populations, means that the perceived lack of change for the increased work amount of work is negatively received; whereas the same amount of effort for more production results in tangible physical and economic resources. Farmers tend to see the short-term gains rather than the long-term effects of schemes, which partly contribute to explaining why attitudes and behaviours are slow to change (Kuhfuss et al. 2016).

The conservation-oriented measures of the scheme were only favourable in cases where the income received for participation outweighed the amount of income they could receive if the land was reverted to production. Again, economic motivations for behaviour rather than environmentally-motivated behaviour reiterates that intentions to carry out conservation-oriented agriculture in the future is limited if farmers are not participating in AES (Ingram et al. 2012). The rationales for joining the schemes are related to financial incentives in every case, which emphasises the connection between the provisions of environmental goods with financial reward. Likewise, in some cases the reasons for maintaining environmental options is linked to the cost of removal. This goes some way to validating the hypothesis that intentions to implement conservation-oriented agriculture is not solely based on the intrinsic value of nature itself but rather farmers only have a favourable view of conservation-oriented practices if they are financially rewarded (Darragh and Emery 2017).

However, in two of the six cases farmers were enthusiastic about the outcomes of enacting environmental options on their farms. Farmers who expressed a greater interest in nature and the environment viewed conservation-behaviours in a more positive way, directly linking their own behaviour with increases in species diversity and species populations. Since most farmers recognise that more complex environmental options require more financial resources, it can be argued that farmers have a greater intention to enact conservation behaviour in order to achieve visible results and therefore a return on their investment (Herzele et al. 2013). Although, thinking in an environmental way, the motivations for behavioural choices can still be linked to economic incentives, which was an overriding consideration expressed in the results. This reiterates studies by Sutherland and Darnhofer (2012) who find that farmers who diversify their farming practices often employ symbols from multiple fields, i.e. both productivist and environmentalist because of their pragmatic approach to farm management.

7.2 Perceived behavioural control

Most farmers said they have not made significant changes to their farm practices, which reiterates the hypothesis that ELS is not sufficiently demanding of farmers and does not induce radical change in favour of the environment (Hodge and Reader 2009; Wilson and Hart 2001; Morris and Potter 1995). This study does not seek to understand the environmental effects of ELS but rather explores farmers' attitudes to environmental behaviour as prescribed by the schemes (even if these prescriptions do not improve environmental quality). The results do, however, demonstrate that farmers feel they have the required resources to pursue conservation-oriented behaviour as required by the scheme. It suggests that if schemes remained the same farmers would most likely hold an intention to pursue conservation land management practices through future participation.

It can be interpreted from the results that participation in ELS/HLS has increased farmers' knowledge of ecological systems and wildlife. The greater awareness of different species present on farmland, as well as the recognition of the interconnection within ecosystems, for example between habitat, food provision and species populations, demonstrates that the schemes have increased farmers' perceived behavioural control through the provision of knowledge resources. Bandura (1982, 1992) explains that people's intention to carry out behaviour is related to how confident they are in their ability to carry out a particular behaviour. Certain knowledge resources are not available to the farmer in circumstances external to the Entry Level Stewardship Scheme, as the results highlight that knowledge is provided through implementing environmental options and seeing the physical results, as well as through the advice of agricultural advisors. It can be argued that intentions to carry-out conservation-oriented agriculture are greater through scheme participation, as farmers are equipped with knowledge resources that increase perceived behavioural control and ability to improve their farming activities.

In contrast, the results also demonstrate that many farmers who are not participating in future AES associate the environmental criteria of the scheme with higher implementation costs. Since it has been established that most farmers exhibit a pragmatic approach to farm management-practices, economic considerations weigh heavily on their decisions to practice certain farming styles. This highlights that many farmers do not feel they are able to commit enough resources to conservation-oriented behaviour, i.e. setting land aside from production, because it affects their ability to remain financially viable. It demonstrates that farmers do not feel that they can "...execute courses of action required to deal with prospective situations" (Bandura 1982, p.122). In the context of a turbulent economic environment, intentions to commit financial resources to conservation behaviour are not favoured.

The results highlighted a common feeling that conservation-oriented agriculture required additional physical and time resources. The intention to carry out certain behaviour is based on motivational factors that demonstrate how much effort people are willing to put into exerting a particular behaviour (Ajzen 1991, p.181). All farmers referenced in one way or another that implementing environmental options on their farms as part of the schemes meant that it took more time to farm their produce, showing that being productive was of greatest value. Most farmers accepted the additional resources needed because they recognised that they were correlated with increased environmental gains. However, some farmers directly related the burdensome nature of the behaviour with the reason for their intentions not to continue with certain conservation-oriented behaviour. Similarly, conservation-oriented agricultural practices were seen to counter the instincts and practices of the farmers, and in some cases it was evident that farmers were not motivated to exert additional effort towards something that was counter-intuitive to them. Despite demonstrating that conservation-oriented behaviour may be limited, this result emphasises that behaviour is rooted in identity, where experience and values related to productivist farming may have a considerable influence on decision-making (Saunders 2015; Best 2010).

Like other studies (Beedell and Rehman 1999; van Krom 2016; Morris 2005) it has been established that ELS has had an influence on the way that farmers relate to conservation-oriented agriculture. The study has been small and it is difficult to draw concrete conclusions, however, it is possible to identify that farmers engaged with the scheme have done so for largely economic reasons. This being so, the fact that many farmers feel the schemes have provided them with knowledge and financial resources, and that most farmers have stated they will maintain the changes they have implemented, demonstrates that farmers now think about conservation in their farming practices and decision-making. Although not able to conclusively determine that participation in ELS has an impact on farmers attitude, it can be seen that values and identities have become influenced by pro-environmental thinking and land-management practices to a certain extent (whether for financial gain or not). It demonstrates that farming identities or cultures are not static and that new values and 'rules of the game' often emerge through interaction with new forms of knowledge (Sutherland and Darnhofer 2012).

7.3 Subjective norms

This aspect of the Theory of Planned Behaviour relates to the perceived social pressure to carry out certain behaviours (Ajzen 1991, p.188). It is possible to discern how farmers were influenced by subjective norms through their experience of farming and what values and norms are important to their work.

Farmers who received advice from agricultural advisors expressed more positive attitudes towards the environmental options pursued under the scheme and generally appreciated conservation practices more than those farmers who received advice from a land agent. There cannot be a direct link tied between the influence of the agricultural advisor and the farmers' attitudes, however, agricultural advisors who are generally funded by conservation and environmental groups and have specific expertise in environmental science and conservation will inevitably give advice from a conservation-oriented perspective. Therefore, it is not surprising that more environmentally-aware farmers are associated with these agricultural advisors and that there is a small correlation between positive attitudes towards conservation-oriented agriculture and subjective norms from environmentally-oriented advisors. As referenced in the previous section, farmers who lack the perceived behaviour control, such as knowledge resources, could be more influenced by conservation-oriented thinking if the farmers feel it equips them with significant knowledge to succeed at the intended behaviour.

From a socio-psychological perspective, farmers adopt practices consistent with their values and past experience because they are compatible with their knowledge (Wilson and Hart 2001). Therefore, through the provision of knowledge by an agricultural advisor, certain subjective norms about conservation-oriented practices may permeate the values of the farmer (Tsouvalis et al. 2000). Even if farmers do not implement suggested environmental management practices because they believe in the environment, over time they may be convinced and influenced by actually enacting pro-environmental behaviour as set out by their advisor (Bager and Proost 1997, p.91-92). No conclusive evidence can be identified, however, those farmers who were advised by agricultural advisors and had their schemes drawn up by said people, were generally more aware of the positive effects of certain environmental options. One such example from the data was the link between grassy margins and positive environmental impacts that was prevalent among a number of environmentally-oriented farmers. One explanation could be that the provision of information increased the knowledge of the farmer that enabled them to confidently practice this behaviour. At the same time, the awareness of the positive effects may have had an influence on the values and attitudes of the farmer towards conservation.

Based on the fact that all interviewed farmers have participated in ELS, it is assumed that they express some preference for scheme participation. Whether the farmer is environmentally or economically oriented, the results show that farmers do not necessarily feel pressured or influenced by the practices of other farmers in their community. It is possible that the results are skewed somewhat by the way the farmers wish to be perceived by the interviewer, expressing a degree of ownership and independence. However, with specific reference to the effect of subjective norms on farmers' intentions to carry out conservation-oriented agriculture, the results demonstrate that farmers are more influenced to do conservation work based on the recognition of the negative effects of productivist agriculture.

All farmers demonstrated recognition of the environmental effects of their farming and took pride in the quality of their land. It shows that they recognised themselves as stewards of the environment (no matter how they interpreted conservation-oriented agriculture) and therefore looked unfavourably on activities that negatively affected the quality of their land. Although some farmers expressed a desire for production, none of the farmers said that they would completely revert to behaviour previous to joining the scheme. Therefore, their intention to carry out conservation-oriented agriculture is not affected by others who favour productivist agriculture. There is even an aspect of friction between the more environmentally conscious farmers and conventional farmers, demonstrating that not all farmers are part of a homogenous group of farmer characterised by the productivist 'good farmer'. This could suggest that social norms have shifted to incorporate environmental values, at least if scheme participants are classified as one social group. Due to the fact that there has been a wide-scale uptake of AES, it could be possible that exposure to environmental values have forced farmers to rethink their relationship with nature (Lowe et al. 1999). Even if environmental values only play a small role in decision-making, they still form a part of agricultural identity. However, it is not possible to directly draw this conclusion from the results.

8 Conclusion

The aim of this study has been to understand the attitudes of farmers towards conservation-oriented agriculture based on their participation in the Entry Level Stewardship scheme. Based on this, the study has further looked at whether farmers hold intentions to pursue conservation oriented agriculture. The research situates itself at the juncture of an ‘agricultural transition’, where a policy shift that aims to promote a move away from productivism towards a post-productivist farming landscape that is more concerned with the provision of environmental goods. Through identifying reasons for participation and perceptions towards conservation-oriented agriculture, the thesis places itself within the ongoing discussion of whether identity plays an important role in how agricultural practices are pursued among smallholders and to what extent these identities are concerned with environmentally-focussed agriculture.

The results of the interviews are mixed but nonetheless shed light upon new environmental attitudes and values that are beginning to shape the way farmers in the North East of the UK pursue agriculture. Although the study does not compare non-participants in AES, neither does it compare different agricultural vocations, it does demonstrate the positive influence of the Entry-Level and Higher-level Stewardship Schemes on the way farmers view and employ conservation-oriented agricultural practices. Despite setting out to understand the influence specifically of Entry-Level Stewardship as a ‘broad and shallow’ scheme, it was found that farmers most frequently adopt ELS in addition to other schemes such as HLS. It was therefore impossible to analyse the sole influences of ELS on farmers’ intentions to carry out conservation-oriented agriculture because they pursued more than one scheme.

The results have illustrated that farmers take a pragmatic approach to decision-making at farm-level. Although no one reason for participation in ELS was found to dominate farmer rationale, economic-oriented thinking dominated. However, the results further demonstrated that environmentally-oriented rationale was also used to justify scheme participation, emphasising that some farmers valued the environment in some way (even if economic rationale was present). The research reinforces the findings that farmers attach importance to financial reward for the production of environmental goods, where income from ELS is an important factor in the decision to join the scheme, tying the intrinsic values of nature to economic incentives (Darragh and Emery 2017; Reed et al. 2014).

Through the Theory of Planned Behaviour it was possible to demonstrate farmers’ attitudes towards conservation-oriented agriculture. It was found that most farmers expressed a positive attitude towards conservation-oriented agriculture when income from ELS outweighed the cost it would take to make land productive. Similarly, farmers were more positive to environmentally-focussed practices when they were able to see tangible results and thus a return on their time, labour and financial expenditure. In addition, farmers expressed that they were able to pursue conservation-oriented agriculture as required by the schemes with relative ease, and in some cases even gained knowledge resources from participation, which further established positive attitudes towards ELS. The finding that farmers made few changes to their farming practices also corroborates findings by Hodge

and Reader (2010) that the broad and shallow nature of ELS does not achieve huge changes in favour of conservation-oriented agriculture. Subsequently, farmers are not required to significantly rethink their values and beliefs. The subjective norm parameter of the theory emphasised that those farmers who received advice from agricultural advisors may be more inclined to value the environment. Similarly, farmers who demonstrated this inclination towards environmentally-friendly practices were more adverse in their view of production-oriented practices of other farmers. Although non-conclusive, it demonstrates that farmers who express more positive attitudes towards conservation-oriented practices under the AES hold more of an intention to pursue this behaviour.

Although the three variables of the Theory of Planned Behaviour all contribute to understanding farmers' intentions to pursue conservation land management practices, attitudes and perceived behavioural control hold the most explanatory power. This is partly due to the limitations surrounding the results related to subjective norms. Still, the results are not conclusive in directly determining farmers' intentions to carry out conservation-oriented agriculture, however, they do corroborate that farmers' decision-making processes are influenced by values and identity to some extent. It demonstrates that motivational factors go beyond farm-level characteristics and demographics, suggesting that practices are rooted in attitudes and beliefs (Fish et al. 2003). Although the paper is statistically absent of a conclusion, what the paper does emphasise is the influence of values, attitudes and identity on behaviour, which has been much-neglected by other literature.

The thesis finds that farmers' reasons for participating in the Entry-Level Stewardship Scheme vary, with rationale being characterised by pragmatism. Some farmers were found to be more economically-oriented, whereas others were more focussed on the environment (within the context of running the farm as a business). Attitudes towards ELS were largely positive when income from the schemes outweighed the cost of putting land into production and if farmers noticed a return on their investment (both in terms of financial resources as well as time and effort) for example through species diversity. It was found that farmers generally had to make few changes to their practices, which suggests that they can easily carry out conservation-oriented agriculture as required by the scheme. Finally, subjective norms were difficult to distinguish; however, generally speaking farmers who received advice from agricultural advisors were more likely to view conservation-oriented agriculture in a more positive way.

This final summary of findings highlights that although this study only provides a narrow look into a small sample, this thesis provides the groundwork for further studies into farmer behaviour. It contributes to understanding how farmers feel about AES in the UK and how they interpret the aims of the policy, which can help to improve the future development of AES. Specifically from a policy perspective, how can schemes work with this new multifunctional idea of 'rural', where relationships between farmers, the public and rural actors is significantly in flux. Similarly, schemes should consider moving away from their focus on simply affecting agricultural production to take a more holistic view of agriculture where farmers' values and identity are seen as the key to far-reaching change.

9 Bibliography

9.1 Written sources

- Ajzen, I. and Fishbein, M., 1980. A theory of reasoned action. *Understanding attitudes and predicting social behaviour*.
- Ajzen, I., 2011. The theory of planned behaviour: reactions and reflections.
- Ajzen, Icek, 1991, The theory of planned behavior, *Organizational Behavior and Human Decision Processes*, 50 (2): 179-211.
- Anderson, D. R. (1986). "The Evolution of Peirce's Concept of Abduction." *Transactions of the Charles S. Peirce Society* 22 (2): 145–164.
- Bager, T., Proost, J., 1997. Voluntary regulation and farmers' environmental behaviour in Denmark and the Netherlands. *Soc. Ruralis* 37, 79–96.
- Baker, D.J., Freeman, S.N., Grice, P.V. & Siriwardena, G.M. (2012).Landscape-scale responses of birds to agri-environment management: a test of the English Environmental Stewardship scheme. *Journal of Applied Ecology*, 49, 871–882.
- Bandura, A. (1982). Self-efficacy mechanism in human agency.*American Psychologist*, 37 (2), 122–147.
- Batary, P., Andras, B., Kleijn, D. & Tschardtke, T. (2010a) Landscape-moderated biodiversity effects of agri-environmental management: a meta-analysis. *Proceedings of the Royal Society B-Biological Sciences*, 278, 1894–1902.
- Batáry, P., Dicks, L.V., Kleijn, D. and Sutherland, W.J., 2015. The role of agri-environment schemes in conservation and environmental management. *Conservation Biology*, 29(4), pp.1006-1016.
- Beedell, J. and Rehman, T., 2000. Using social-psychology models to understand farmers' conservation behaviour. *Journal of rural studies*, 16(1), pp.117-127.
- Bennett, E.M., Peterson, G.D. and Gordon, L.J., 2009. Understanding relationships among multiple ecosystem services. *Ecology letters*, 12(12), pp.1394-1404.
- Best, H., 2010. Environmental concern and the adoption of organic agriculture. *Society and Natural Resources*, 23(5), pp.451-468.
- Boatman, N.D., Parry, H.R., Bishop, J.D. and Cuthbertson, A.G., 2007. Impacts of agricultural change on farmland biodiversity in the UK. *Hester RE, and Harrison RM (eds), Biodiversity under threat, RSC Publishing, Cambridge, UK 2007*, pp.1-32.
- Boldero, J., 1995. The prediction of household recycling of newspapers: The role of attitudes, intentions, and situational factors. *Journal of Applied Social Psychology*, 25(5), pp.440-462.
- Boonstra, W.J., Ahnström, J. and Hallgren, L., 2011. Swedish farmers talking about nature—a study of the interrelations between farmers' values and the sociocultural notion of naturintresse. *Sociologia Ruralis*, 51(4), pp.420-435.
- Borges, J.A.R., Lansink, A.G.O., Ribeiro, C.M. and Lutke, V., 2014. Understanding farmers' intention to adopt improved natural grassland using the theory of planned behavior. *Livestock Science*, 169, pp.163-174.
- Bourdieu, P., 1986. The force of law: Toward a sociology of the juridical field. *Hastings LJ*, 38, p.805.
- Brouwer, F. and Lowe, P., 1998. CAP and the Rural Environment in Transition: a Panorama of National Perspectives. CAP Reform and the Environment.
- Buller, H., G.A. Wilson and A. Höll eds (2000) *Agri-environmental policy in the European Union*. Routledge.
- Burton, R.J. and Paragahawewa, U.H., 2011. Creating culturally sustainable agri-environmental schemes. *Journal of Rural Studies*, 27(1), pp.95-104.

- Burton, R.J., 2004. Seeing through the 'good farmer's' eyes: towards developing an understanding of the social symbolic value of 'productivist' behaviour. *Sociologia Ruralis*, 44(2), pp.195-215.
- Busck, A.G. and Kristensen, S.B.P., 2014. From agriculture to nature—a study of drivers of land use change in a peri-urban landscape. *Geografisk Tidsskrift-Danish Journal of Geography*, 114(1), pp.41-58.
- Cairol, D., Coudel, E., Knickel, K., Caron, P. and Kröger, M., 2009. Multifunctionality of agriculture and rural areas as reflected in policies: the importance and relevance of the territorial view. *Journal of Environmental Policy & Planning*, 11(4), pp.269-289.
- Carolan, M.S., 2006. Social change and the adoption and adaptation of knowledge claims: Whose truth do you trust in regard to sustainable agriculture?. *Agriculture and human values*, 23(3), pp.325-339.
- Cheung, S.F., Chan, D.K.S. and Wong, Z.S.Y., 1999. Reexamining the theory of planned behavior in understanding wastepaper recycling. *Environment and behavior*, 31(5), pp.587-612.
- Coleman, D., Crabtree, B., Froud, J. and O'Carroll, L. (1992) *Comparative Effectiveness of Conservation Mechanisms*. Department of Agricultural Economics, Manchester University.
- Cunha, A. and Swinbank, A., 2011. An inside view of the CAP reform process: explaining the MacSharry, Agenda 2000, and Fischler reforms. Oxford University Press.
- Darragh, H.S. and Emery, S.B., 2017. What Can and Can't Crowding Theories Tell Us about Farmers' 'Environmental' Intentions in Post-Agri-Environment Scheme Contexts?. *Sociologia Ruralis*.
- Davey, C., Vickery, J., Boatman, N., Chamberlain, D., Parry, H. and Siriwardena, G., 2010. Regional variation in the efficacy of Entry Level Stewardship in England. *Agriculture, ecosystems & environment*, 139(1), pp.121-128.
- De Groot, J.I. and Steg, L., 2009. Morality and prosocial behavior: The role of awareness, responsibility, and norms in the norm activation model. *The Journal of social psychology*, 149(4), pp.425-449.
- De Krom, M., 2017. Farmer participation in agri-environmental schemes: regionalisation and the role of bridging social capital. *LAND USE POLICY*, 60, pp.352-361.
- De Snoo, G.R., Herzon, I., Staats, H., Burton, R.J., Schindler, S., van Dijk, J., Lokhorst, A.M., Bullock, J.M., Lobley, M., Wrba, T. and Schwarz, G., 2013. Toward effective nature conservation on farmland: making farmers matter. *Conservation Letters*, 6(1), pp.66-72.
- DEFRA. 2017. Regional level aggregate farm accounts for England. Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/651293/agriaccounts_regstatsnotice-12oct17.pdf [Accessed 12/11/17].
- DeLyser, D. and Sui, D., 2014. Crossing the qualitative-quantitative chasm III: Enduring methods, open geography, participatory research, and the fourth paradigm. *Progress in Human Geography*, 38(2), pp.294-307.
- Department for Environment, Food and Rural Affairs (DEFRA). 2016. Agriculture in the United Kingdom 2016. Crown Copyright: UK.
- Diefenbach, T., 2009. Are case studies more than sophisticated storytelling?: Methodological problems of qualitative empirical research mainly based on semi-structured interviews. *Quality & Quantity*, 43(6), pp.875-894.
- Djurfeldt, G. and Waldenström, C., 1999. Mobility patterns of Swedish farming households. *Journal of Rural Studies*, 15(3), pp.331-344.
- Dobbs, T.L. and Pretty, J., 2008. Case study of agri-environmental payments: The United Kingdom. *Ecological Economics*, 65(4), pp.765-775.
- Dwyer, J., Ward, N., Lowe, P. and Baldock, D., 2007. European rural development under the Common Agricultural Policy's 'Second Pillar': institutional conservatism and innovation. *Regional Studies*, 41(7), pp.873-888.
- El Khachab, C., 2013. The Logical Goodness of Abduction in CS Peirce's Thought. *Transactions of the Charles S. Peirce Society: A Quarterly Journal in American Philosophy*, 49(2), pp.157-177.
- Erjavec, K. and Erjavec, E., 2015. 'Greening the CAP'—Just a fashionable justification? A discourse analysis of the 2014–2020 CAP reform documents. *Food Policy*, 51, pp.53-62.
- Falconer, K., 2000. Farm-level constraints on agri-environmental scheme participation: a transactional perspective. *Journal of Rural Studies* 16, 379–394.

- Fehr, E. Fischbacher, U. 2004. Social norms and human cooperation. *Trends in Cognitive Sciences*: 8, pp.185-190.
- Fielding, K.S., McDonald, R. and Louis, W.R., 2008. Theory of planned behaviour, identity and intentions to engage in environmental activism. *Journal of environmental psychology*, 28(4), pp.318-326.
- Firbank, L.G., Petit, S., Smart, S., Blain, A. and Fuller, R.J., 2008. Assessing the impacts of agricultural intensification on biodiversity: a British perspective. *Philosophical Transactions of the Royal Society of London B: Biological Sciences*, 363(1492), pp.777-787.
- Fish, R., Seymour, S. and Watkins, C., 2003. Conserving English landscapes: land managers and agri-environmental policy. *Environment and Planning A*, 35(1), pp.19-41.
- Florini, A., 1996. The evolution of international norms. *International Studies Quarterly*, 40(3), pp.363-389.
- Gergen, K.J., 1986. Correspondence versus autonomy in the language of understanding human action. *Metatheory in social science*, pp.136-162.
- Gibbins, J. R. Reimet, B. 1998. Postmodernism [Chapter]. In: Van Deth, J. Scarbrough, E. The Impact of Values. 1988. Oxford Scholarship online.
- Gillham B (2005) *Research Interviewing: The Range of Techniques*. Berkshire: Open University Press.
- Greiner, R., 2015. Motivations and attitudes influence farmers' willingness to participate in biodiversity conservation contracts. *Agricultural Systems*, 137, pp.154-165.
- Grossman, M.R., 1996. Farmers and the Environment Under the Common Agricultural Policy of the European Union: The Agro-Environmental Measure in the United Kingdom. *U. Tol. L. Rev.*, 28, p.663.
- Han, H., 2015. Travelers' pro-environmental behavior in a green lodging context: Converging value-belief-norm theory and the theory of planned behavior. *Tourism Management*, 47, pp.164-177.
- Hanley, N., Whitby, M., Simpson, I., 1999. Assessing the success of agri-environmental policy in the UK. *Land Use Policy* 16, 67–80.
- Hanson, N. R. (1958). *Patterns of Discovery: An Inquiry into the Conceptual Foundations of Science*. Cambridge University Press, Cambridge.
- Harlow S., Cummings R. & Aberasturi S. M. (2007) Karl Popper and Jean Piaget: A rationale for constructivism. *The Educational Forum* 71(1): 41–48. Fulltext at <http://cepa.info/3847>
- Harman, G. 1965. The Inference to the Best Explanation. *Philosophical Review*: 74, pp.88-95.
- Hattam, C. 2006. Adopting organic agriculture: an investigation using the Theory of Planned Behaviour. *International Association of Agricultural Economics Conference* (2006)
- Hejnowicz, A.P., Rudd, M.A. and White, P.C.L., 2016. A survey exploring private farm advisor perspectives of agri-environment schemes: The case of England's Environmental Stewardship programme. *Land Use Policy*, 55, pp.240-256.
- Hodge, I. and Reader, M., 2010. The introduction of Entry Level Stewardship in England: extension or dilution in agri-environment policy?. *Land Use Policy*, 27(2), pp.270-282.
- Huttunen, S. and Peltomaa, J., 2016. Agri-environmental policies and 'good farming' in cultivation practices at Finnish farms. *Journal of Rural Studies*, 44, pp.217-226.
- Ingram, J., 2008. Agronomist–farmer knowledge encounters: an analysis of knowledge exchange in the context of best management practices in England. *Agriculture and Human Values*, 25(3), pp.405-418.
- Ingram, J., Gaskell, P., Mills, J. and Short, C., 2012. Incorporating agri-environment schemes into farm development pathways: A temporal analysis of farmer motivations. *Land use policy*, 31, pp.267-279.
- Irvine, A., Drew, P. and Sainsbury, R., 2013. 'Am I not answering your questions properly?' Clarification, adequacy and responsiveness in semi-structured telephone and face-to-face interviews. *Qualitative Research*, 13(1), pp.87-106.
- Jiang, M., Bullock, J.M. and Hooftman, D.A., 2013. Mapping ecosystem service and biodiversity changes over 70 years in a rural English county. *Journal of Applied Ecology*, 50(4), pp.841-850.

- Johansen, P.H. and Nielsen, N.C., 2012. Bridging between the regional degree and the community approaches to rurality—A suggestion for a definition of rurality for everyday use. *Land use policy*, 29(4), pp.781-788.
- Kaiser, F.G., Hübner, G. and Bogner, F.X., 2005. Contrasting the theory of planned behavior with the value-belief-norm model in explaining conservation behavior. *Journal of applied social psychology*, 35(10), pp.2150-2170.
- Kinsella, J., Wilson, S., Jong, F., Renting, de.H., 2000. Pluriactivity as a livelihood strategy in Irish farm households and its role in rural development. *Sociologia Ruralis* 40, 481–496.
- Kleijn, D. and Sutherland, W.J., 2003. How effective are European agri-environment schemes in conserving and promoting biodiversity?. *Journal of applied ecology*, 40(6), pp.947-969.
- Kleijn, D., Baquero, R.A., Clough, Y., Diaz, M., Esteban, J.D., Fernández, F., Gabriel, D., Herzog, F., Holzschuh, A., Jöhl, R. and Knop, E., 2006. Mixed biodiversity benefits of agri-environment schemes in five European countries. *Ecology letters*, 9(3), pp.243-254.
- Kleijn, D., Kohler, F., Báldi, A., Batáry, P., Concepción, E.D., Clough, Y., Díaz, M., Gabriel, D., Holzschuh, A., Knop, E. and Kovács, A., 2009. On the relationship between farmland biodiversity and land-use intensity in Europe. *Proceedings of the Royal Society of London B: Biological Sciences*, 276(1658), pp.903-909.
- Klöckner, C.A., 2013. A comprehensive model of the psychology of environmental behaviour—A meta-analysis. *Global Environmental Change*, 23(5), pp.1028-1038.
- Korobov, N., 2017. Theorizing Language and Discourse for the Interactional Study of Identities. *Integrative Psychological and Behavioral Science*, 51(1), pp.51-61.
- Kuhfuss, L., Préget, R., Thoyer, S., Hanley, N., Le Coent, P. and Désolé, M., 2016. Nudges, Social Norms, and Permanence in Agri-environmental Schemes. *Land Economics*, 92(4), pp.641-655.
- Lobley, M. and C. Potter (1998) Environmental stewardship in uk agriculture: a comparison Scheme in south east England. *Geoforum* 29 (4) pp. 413–432.
- Lobley, M. and Potter, C., 2004. Agricultural change and restructuring: recent evidence from a survey of agricultural households in England. *Journal of rural studies*, 20(4), pp.499-510.
- Lobley, M., Saratsi, E., Winter, M. and Bullock, J., 2013. Training farmers in agri-environmental management: the case of Environmental Stewardship in lowland England. *International Journal of Agricultural Management*, 3(1), pp.12-20.
- Lowe, P., Ward, N., Potter, C., 1999. Attitudinal and institutional indicators for sustainable agriculture. In: Brouwer, F., Crabtree, B. (Eds.), *Environmental Indicators and Agricultural Policy*. CABI, Wallingford, pp. 263–278.
- Maass, A., Colombo, A., Colombo, A. and Sherman, S.J., 2001. Inferring traits from behaviors versus behaviors from traits: The induction–deduction asymmetry. *Journal of Personality and Social Psychology*, 81(3), p.391.
- Marsden, T. and Sonnino, R., 2008. Rural development and the regional state: Denying multifunctional agriculture in the UK. *Journal of Rural Studies*, 24(4), pp.422-431.
- Meijer, S.S., Catacutan, D., Ajayi, O.C., Sileshi, G.W. and Nieuwenhuis, M., 2015. The role of knowledge, attitudes and perceptions in the uptake of agricultural and agroforestry innovations among smallholder farmers in sub-Saharan Africa. *International Journal of Agricultural Sustainability*, 13(1), pp.40-54.
- Moonen, A.C. & Marshall, E.J.P. (2001). The influence of sown margin strips, management and boundary structure on herbaceous field margin vegetation in two neighbouring farms in Southern England. *Agric. Ecosyst. Environ.*, 86, 187–202
- Morris, C. and Potter, C., 1995. Recruiting the new conservationists: farmers' adoption of agri-environmental schemes in the UK. *Journal of rural studies*, 11(1), pp.51-63.
- Morris, C., 2006. Negotiating the boundary between state-led and farmer approaches to knowing nature: an analysis of UK agri-environment schemes. *Geoforum*, 37(1), pp.113-127.
- Natural England. 2009. Agri-environment schemes in England 2009 A review of results and effectiveness. Available from: <http://publications.naturalengland.org.uk/category/35001> [Accessed 22/10/17].

- Natural England. 2013. Entry Level Stewardship: Environmental Stewardship Handbook, Fourth Edition – January 2013. Available from: www.naturalengland.org.uk [Accessed 27/09/17].
- O'Connor, D., Renting, H., Kinsella, J., Gorman, M., 2006. Driving Rural Development: Policy and Practice in Seven EU Countries. European Perspectives on Rural Development. Royal Van Gorcum.
- Pavlis, E.S., Terkenli, T.S., Kristensen, S.B., Busck, A.G. and Cosor, G.L., 2016. Patterns of agri-environmental scheme participation in Europe: indicative trends from selected case studies. *Land Use Policy*, 57, pp.800-812.
- Pearce, R., 2013. A new language for culture, identity and values. *The International Schools Journal*, 32(2), p.8.
- Prager, K., Reed, M. and Scott, A., 2012. Encouraging collaboration for the provision of ecosystem services at a landscape scale—rethinking agri-environmental payments. *Land use policy*, 29(1), pp.244-249.
- Price, J.C. and Leviston, Z., 2014. Predicting pro-environmental agricultural practices: the social, psychological and contextual influences on land management. *Journal of Rural Studies*, 34, pp.65-78.
- Pywell, R.F., Heard, M.S., Bradbury, R.B., Hinsley, S., Nowakowski, M., Walker, K.J. & Bullock, J.M. (2012) Wildlife-friendly farming benefits rare birds, bees and plants. *Biology Letters*, 8, 772–775.
- Quillérou, E., Fraser, R. and Fraser, I., 2011. Farmer compensation and its consequences for environmental benefit provision in the Higher Level Stewardship Scheme. *Journal of Agricultural Economics*, 62(2), pp.330-339.
- Quinn, J.E., 2013. Sharing a vision for biodiversity conservation and agriculture. *Renewable agriculture and food systems*, 28(1), pp.93-96.
- Raymond, C.M., Fazey, I., Reed, M.S., Stringer, L.C., Robinson, G.M. and Evely, A.C., 2010. Integrating local and scientific knowledge for environmental management. *Journal of environmental management*, 91(8), pp.1766-1777.
- Raymond, C.M., Reed, M., Bieling, C., Robinson, G.M. and Plieninger, T., 2016. Integrating different understandings of landscape stewardship into the design of agri-environmental schemes. *Environmental Conservation*, 43(4), pp.350-358.
- Reed, M.S., Moxey, A., Prager, K., Hanley, N., Skates, J., Bonn, A., Evans, C.D., Glenk, K. and Thomson, K., 2014. Improving the link between payments and the provision of ecosystem services in agri-environment schemes. *Ecosystem Services*, 9, pp.44-53.
- Rein, M. & Schon, D. (1993). Reframing policy discourse. in F. Fisher and J. Forester (Eds.). *The Argumentative Turn in Policy Analysis and Planning*. Durham, NC: Duke University Press. 145-166.
- Renting, H., Rossing, W.A.H., Groot, J.C.J., Van der Ploeg, J.D., Laurent, C., Perraud, D., Stobbelaar, D.J. and Van Ittersum, M.K., 2009. Exploring multifunctional agriculture. A review of conceptual approaches and prospects for an integrative transitional framework. *Journal of environmental management*, 90, pp.S112-S123.
- Riley, M., 2016. How does longer term participation in agri-environment schemes [re] shape farmers' environmental dispositions and identities?. *Land Use Policy*, 52, pp.62-75.
- Runhaar, H.A.C., Melman, T.C., Boonstra, F.G., Erisman, J.W., Horlings, L.G., de Snoo, G.R., Termeer, C.J.A.M., Wassen, M.J., Westerink, J. and Arts, B.J.M., 2017. Promoting nature conservation by Dutch farmers: a governance perspective. *International Journal of Agricultural Sustainability*, 15(3), pp.264-281.
- Ryen, A. 2013. Chapter 14: Ethical issues. In: C. Seale, G. Gobo, J. F. Gubrium, D. Silverman. 2013. *Qualitative Research Practice*. Sage Publications: London.
- Saunders, F.P., 2016. Complex shades of green: gradually changing notions of the 'good farmer' in a Swedish context. *Sociologia Ruralis*, 56(3), pp.391-407.
- Schroeder, L.A., Isselstein, J., Chaplin, S. and Peel, S., 2013. Agri-environment schemes: Farmers' acceptance and perception of potential 'Payment by Results' in grassland—A case study in England. *Land Use Policy*, 32, pp.134-144.
- Schwartz, S.H., 1997. *Values and culture*. Routledge.

- Sheeran, P., Gollwitzer, P. M., & Bargh, J. A. (2013). Nonconscious processes and health. *Health Psychology*, 32, 460–473. doi:10.1037/a0029203
- Sniehotta, F.F., Pesseau, J. and Araújo-Soares, V., 2014. Time to retire the theory of planned behaviour.
- Sutherland, L.A. and Darnhofer, I., 2012. Of organic farmers and ‘good farmers’: changing habitus in rural England. *Journal of Rural Studies*, 28(3), pp.232-240.
- Sutherland, L.A., Gabriel, D., Hathaway-Jenkins, L., Pascual, U., Schmutz, U., Rigby, D., Godwin, R., Sait, S.M., Sakrabani, R., Kunin, W.E. and Benton, T.G., 2012. The ‘Neighbourhood Effect’: A multidisciplinary assessment of the case for farmer co-ordination in agri-environmental programmes. *Land Use Policy*, 29(3), pp.502-512.
- Taylor, S. J. Bogdan, R. DeVault, M. 2015. Introduction to Qualitative research Methods: A Guidebook and Resource. John Wiley & Sons Inc.
- Thorne, S. 1988. Ethical and representational issues in qualitative secondary analysis. *Qualitative Health Research*: 8(4), pp. 547-54.
- Tsouvalis, J., Seymour, S. and Watkins, C., 2000. Exploring knowledge-cultures: precision farming, yield mapping, and the expert–farmer interface. *Environment and Planning A*, 32(5), pp.909-924.
- Tuck SL, Winqvist C, Mota F, Ahnström J, Turnbull LA, Bengtsson J. 2014. Land-use intensity and the effects of organic farming on biodiversity: a hierarchical meta-analysis. *Journal of Applied Ecology*, 51:746–755.
- Union (Aldershot: Ashgate)
- Van der Ploeg, J.D., Renting, H., Brunori, G., Knickel, K., Mannion, J., Marsden, T., De Roest, K., Sevilla-Guzmán, E. and Ventura, F., 2000. Rural development: from practices and policies towards theory. *Sociologia ruralis*, 40(4), pp.391-408.
- Van Deth, J.W. and Scarbrough, E. eds., 1998. *The impact of values* (Vol. 4). Oxford University Press.
- van Dijk, W.F., Lokhorst, A.M., Berendse, F. and de Snoo, G.R., 2015. Collective agri-environment schemes: How can regional environmental cooperatives enhance farmers’ intentions for agri-environment schemes?. *Land Use Policy*, 42, pp.759-766.
- Van Herzele, A., Gobin, A., Van Gossum, P., Acosta, L., Waas, T., Dendoncker, N. and de Frahan, B.H., 2013. Effort for money? Farmers' rationale for participation in agri-environment measures with different implementation complexity. *Journal of environmental management*, 131, pp.110-120.
- Vanclay, F. and Enticott, G., 2011. The role and functioning of cultural scripts in farming and agriculture. *Sociologia Ruralis*, 51(3), pp.256-271.
- Vanclay, F. Howden, P. Mesiti, L. Glyde, S. 2006. The social and intellectual construction of farming styles. Testing Dutch ideas in Australian agriculture. *Sociologia Ruralis*: 46: pp.61-82.
- Vandermause, R.K. and Fleming, S.E., 2011. Philosophical hermeneutic interviewing. *International Journal of Qualitative Methods*, 10(4), pp.367-377.
- Vandermause, R.K., 2008. The poiesis of the question in philosophical hermeneutics: Questioning assessment practices for alcohol use disorders. *International Journal of Qualitative Studies on Health and Well-Being*, 3(2), pp.68-76.
- Walton, D. 2014. *Abductive Reasoning*. University of Alabama Press.
- Ward, N. (1999) The 1999 reforms of the common agricultural policy and the environment, *Environmental Politics*, 8:4, 168-173, DOI: 10.1080/09644019908414499.
- Ward, N. and Lowe, P., 2004. Europeanizing rural development? Implementing the CAP's second pillar in England. *International Planning Studies*, 9(2-3), pp.121-137.
- Ward, N. and Lowe, P., 2004. Europeanizing rural development? Implementing the CAP's second pillar in England. *International Planning Studies*, 9(2-3), pp.121-137.
- Ward, N., 1999. The 1999 reforms of the common agricultural policy and the environment.
- Wendt, A., 1992. Anarchy is what states make of it: the social construction of power politics. *International organization*, 46(2), pp.391-425.
- Whitby, M. ed. (1996) *The European environment and cap reform: policies and prospects for conservation* (Wallingford: cabi)

- Wilson, A., Vickery, J. and Pendlebury, C., 2007. Agri-environment schemes as a tool for reversing declining populations of grassland waders: mixed benefits from environmentally sensitive areas in England. *Biological Conservation*, 136(1), pp.128-135.
- Wilson, G.A. and Hart, K., 2001. Farmer Participation in Agri-Environmental Schemes: Towards Conservation-Oriented Thinking?. *Sociologia ruralis*, 41(2), pp.254-274.
- Wilson, G.A., 1997. Factors influencing farmer participation in the environmentally sensitive areas scheme. *Journal of environmental management*, 50(1), pp.67-93.
- Wilson, G.A., 2001. From productivism to post-productivism... and back again? Exploring the (un) changed natural and mental landscapes of European agriculture. *Transactions of the institute of British Geographers*, 26(1), pp.77-102.
- Wolff, A., Paul, J.P., Martin, J.L. & Bretagnolle, V. (2001) The benefits of extensive agriculture to birds: the case of the little bustard. *Journal of Applied Ecology*, 38, 963-
- Wood, T. 2014. Elements of Hermeneutic Pragmatics: Agency and Interpretation. Peter Lang AG
- Woods, M., 2007. Engaging the global countryside: globalization, hybridity and the reconstitution of rural place. *Progress in Human Geography*, 31(4), pp.485-507.
- Wynne-Jones, S., 2013. Connecting payments for ecosystem services and agri-environment regulation: An analysis of the Welsh Glastir Scheme. *Journal of rural studies*, 31, pp.77-86.
- Zeweld, W., Van Huylenbroeck, G., Tesfay, G. and Speelman, S., 2017. Smallholder farmers' behavioural intentions towards sustainable agricultural practices. *Journal of environmental management*, 187, pp.71-81.
- Zhang, W., Ricketts, T.H., Kremen, C., Carney, K. and Swinton, S.M., 2007. Ecosystem services and dis-services to agriculture. *Ecological economics*, 64(2), pp.253-260.

9.2 Interviews

Farmer 1 – 23/10/17
 Farmer 2 – 24/10/17
 Farmer 3 – 25/10/17
 Farmer 4 – 26/10/17
 Farmer 5 – 27/10/17
 Farmer 6 – 30/10/17