The potentials for agroecology and food sovereignty in the Scottish uplands

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The Potentials for Agroecology and Food Sovereignty in the Scottish Uplands

by

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Summary

Agroecology and food sovereignty movements have identified the urgent need to transform current capitalist and industrialist food systems in order to address their ecological and social dysfunctions. While these movements entail some counter-capitalist aspects, they encapsulate a variety of interpretations of the political factors preventing the transformation of these food systems. This thesis contributes greater clarity about the political dynamics underpinning the unsustainability and inequalities of current and former food systems in the Scottish uplands, in order to contribute to the development of more effective strategies to counteract these dynamics.

Through a political ecology analysis of the agrarian history of the Scottish uplands from before the advent of capitalism in the 18th century and through to the current land reform movement, this thesis demonstrates that the transition to capitalist social property relations precipitated a departure from diverse and sustainable food systems in the region. Additionally, through the application of Gramscian informed Regulation Theory, this thesis argues that the current framing of the uplands as a 'marginal' agricultural area and a 'cultural landscape' legitimates the utilisation of agricultural land in the lowlands in Scotland and abroad as zones of 'productivist' agriculture. The 'marginal' status of the uplands also prevents the (re)emergence of diverse ecological food systems in what is a substantive area of agricultural land. This has significant implications beyond Scotland, as most of the agricultural land in Europe is also considered 'marginal,' via classification as 'Less Favoured Areas,' or 'Areas of Natural Constraint.' This thesis argues that the status of the UK (and Europe) as a 'core' part of the global capitalist system, with an ability to import food from the 'periphery,' has led to and sustained this binary view of marginal versus productive land.

This thesis identifies the political factors which constrain alternative imaginaries of the uplands and the reasons why its land reform movement, while partly counter-hegemonic, has not led to a greater realisation of agroecological food systems. These findings imply that in order to succeed in facilitating the realisation of agroecology and food sovereignty principles, food movements must go beyond ecological production and localism to engage in counter-capitalist approaches. Specifically, they must simultaneously address the commodification of land and food while realigning trade policies with principles of ecological sustainability and social equity. Such an integration of food-specific counter-capitalist approaches could help ensure that a departure from capitalist social property relations—as in the case of the Scottish land reform movement—does not serve as a mere regulation of capitalist hegemony but instead leads to a widespread transformation of food systems.

Contents

Figures

Acronyms and Abbreviations

ABC – Agricultural Biotechnology Council

BBC – British Broadcasting Corporation

BPS – Basic Payment Scheme

CAP – Common Agriculture Policy

CDA – Critical Discourse Analysis

ECVC – European Coordination Via Campesina

EEA – European Economic Area

EEC – European Economic Community

EFD – Environment and Forestry Directorate of the Scottish Government

ETC Group – Action Group on Erosion, Technology and Concentration

FAO – Food and Agriculture Organization of the United Nations

LFA – Less Favoured Area

LFASS – Less Favoured Area Support Scheme

LRPG – Land Reform Policy Group

LRRG – Land Reform Review Group

LVC – La Via Campesina

LWA – Land Workers' Alliance

NFU – National Farmers' Union

NFUS – National Farmers' Union Scotland

NSA – National Sheep Association

QMS – Quality Meat Scotland

RSPB – Royal Society for the Protection of Birds

SCF – Scottish Crofting Federation

SLC – Scottish Land Commission

SNH – Scottish Natural Heritage

SNP – Scottish National Party

SRUC – Scotland's Rural College

UN – United Nations

WHO – World Health Organization of the United Nations

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Chapter 1: Relevance of the Scottish Uplands to Food Sovereignty and Agroecology debates

Introduction: The relevance and limitations of food sovereignty and agroecology

Agroecology and food sovereignty are two interrelated global social movements which seek to address the environmental and social dysfunctions of current food and agricultural systems. Both movements are relatively recently formed and have rapidly become influential in food and agricultural discourse. The concept of agroecology has been integrated into the UN's Food and Agriculture Organisation (FAO, 2018), and was advocated to the UN Human Rights Council by Olivier De Schutter, the former UN Special Rapporteur on the Right to Food (De Schutter, 2010). Agroecological approaches were cited as important for improving the resilience of food systems in the 2009 International Assessment of Knowledge, Science and Technology for Development report (IAASTD, 2009). The food sovereignty movement has been considered as one of the most significant transnational movements globally and spans the Global South and Global North (Borras, 2009, Martínez-Torres and Rosset, 2010, Borras et al., 2015, Desmarais, 2008). Food sovereignty has recently adopted agroecology as one of its aims and has perceived it as a 'path to food sovereignty.' Politically-oriented advocates of agroecology have likewise embraced food sovereignty as an avenue for the realisation of agroecological food systems (ECVC, 2018:20, Vandermeer and Perfecto, 2012, Holt Giménez and Shattuck, 2011, Pimbert, 2015, Levidow, 2015).

The current agroecology movement emerged in the 1960s based on a perceived need to better integrate ecological principles within agricultural holdings (Wezel et al., 2009, Méndez et al., 2013). The principles of agroecology have arguably been applied by indigenous communities for thousands of years (Altieri, 1995) and the need for a return to a more integrated management of resources on farms had been called for by intellectuals from the 18th century, who had witnessed the depletion of soil nutrients after the commencement of capitalist agriculture (Foster and Magdoff, 2000, Foster, 1999). Agroecology as it emerged from the 1960s provided 'alternatives' to or resisted agricultural practices based on the use of agri-chemical inputs (e.g. pesticides, inorganic fertilisers), mechanisation and monocultures, as these practices were found to deplete soils, reduce agrobiodiversity, pollute waterways and cause other environmental damages (Gomiero et al., 2011, Pimentel, 2006,

Pimentel et al., 1997). Instead, agroecological practices refer to approaches which enhance ecosystems (e.g. soil matter, biological activity, plant and animal species and genetic resources) rather than degrade them, through minimising inputs and fostering beneficial ecological interactions (Altieri and Toledo, 2011a, Gliessman, 1998, Wezel et al., 2009, Altieri, 1983).

More recently, some advocates of agroecology have begun to explicitly incorporate the social aspects of food and agriculture in what has been coined to be a 'food systems' and/or 'political' interpretation of agroecology. This considers not just production but also consumption, including issues such as the wellbeing of producers, dietary diversity for consumers, control over resources and other key issues (Gliessman, 2014, Francis et al., 2003, Rosset and Altieri, 2017, Pimbert and Lemke, 2018). Within the growing interpretation of agroecology as a social or political movement rather than just a set of techniques or practices (Wezel et al., 2009, Rivera-Ferre, 2018, Rivera-Ferre et al., 2013, Levidow et al., 2014, Holt-Giménez and Altieri, 2013), agroecology has been framed by some advocates and scholars as counter-capitalist (see e.g. (Giraldo and Rosset, 2018, Rosset and Altieri, 2017, Friedmann, 2016, van der Ploeg, 2009). However, there are also signs that agroecology is becoming 'mainstreamed' and reduced to its technical components, which are seen to be able to sit alongside of or within capitalist and/or industrial agriculture (Pimbert, 2015, Méndez et al., 2013, Levidow, 2015). It is argued that this incorporation or cooptation of agroecological techniques will not result in the transformations needed to ensure that food systems are ecologically sustainable while fulfilling human dietary, social and cultural needs, but instead will result in a 'greenwashed' capitalism (Giraldo and Rosset, 2018:548, Rivera-Ferre, 2018:16).

Food sovereignty emerged as a social movement in the 1990s, comprising farmers, peasants and non-governmental organisations advocating for greater social justice in the food system, particularly pointing to low wages and incomes for food producers, imbalances of power and lack of democratic control within food systems, lack of support for indigenous agriculture, the neoliberal governance of the food system and the inadequacy of policies oriented towards 'food security' to address these issues (Patel, 2009, Edelman et al., 2014, McMichael, 2014, ECVC, 2018, LVC, 2007a). Much of the food sovereignty discourse challenges capitalism, for example, pointing to the need for 'new social relations free of oppression and inequality,'

challenging the commodification and privatisation of resources (including but not limited to land), and calling for a democratisation of trade (LVC, 2007a, McMichael, 2014). Despite this counter-capitalist orientation, a number of actors and strategies within the food sovereignty movement could be considered to be compatible with capitalism.

The food sovereignty movement has largely identified itself as a 'peasant' movement and has often championed small scale and/or peasant producers (LVC, 2015, ECVC, 2018, LVC, 2007a, van der Ploeg, 2014a). This has attracted criticism from some Marxist scholars. Bernstein (2014) points out that the term 'peasants' can amalgamate multiple classes, including those who have internalised commodity relations (1044). Bernstein (2014) and Brass (2015), have also argued that some of the demands of producers in the food sovereignty movement could be seen as primarily backlashing against neoliberalism, rather than capitalism *per se*. However, Bernstein (2014) and Brass (2015) do not acknowledge the critical need for changes to agro-food systems in light of mounting environmental and social problems; instead, Bernstein (2014) for example points to the benefits of capitalist agriculture's 'extraordinary development of productivity' (1040). While these scholars have largely dismissed the food sovereignty and agroecology movements, critical friends of food sovereignty and agroecology such as Patel (2009) and Tilzey (2018) have acknowledged the potential problems of conflating class interests and differing strategies within the movement while also acknowledging the potentials of and need for these social movements and the agroecological principles that they embody.

This dissertation follows more of the track of the 'critical friend' (or 'critical participant,' see Chapter 2, Section 4 for positionality) of the agroecology and food sovereignty movements in that it acknowledges the need for the principles of agroecology and food sovereignty to be implemented but also challenges the approaches and framings of the movement, in order to support its development. Specifically, it is based on a premise that mainstream agricultural practices are causing severe damage to ecologies across the earth, including pollution to waterways (Daniel et al., 1998, Sims et al., 1998, Newbould, 1989); degradation of soils (Chalmers et al., 1990, Robinson and Sutherland, 2002, ELD Initiative, 2015); severe wildlife and biodiversity losses (Perfecto et al., 2010: 45-55, Potts et al., 2010); greenhouse gas emissions (Berry et al., 2008, Kindred et al., 2008) and other ecological damage. These environmental impacts combined with the low resilience of modern agro-food systems to

climatic shocks and pest and disease outbreaks (Scarascia-Mugnozza and Perrino, 2002, Holt-Giménez, 2002) indicate not only that agricultural systems are causing significant damage to ecologies but also that they are eroding their ability to continue to produce food into the future. This study is also based on a recognition of the persistent inequalities in the food system, particularly the presence of approximately 800 million chronically hungry people despite sufficient food being produced (FAO, 2012), and the rapid rise and significant burden of diet-related diseases across both the Global North and Global South (Popkin, 1998, Lang and Heasman, 2004, WHO, 2003, Lim et al., 2012, Afshin et al., 2019). In other words, this dissertation recognises the need to urgently address the problems of agro-food systems as advocated by the agroecology and food sovereignty movements. It also recognises that these social movements encapsulate a variety of interpretations of the nature of the political causes of the preceding contradictions. In this way, many strategies can be advocated under their banners, including those which sit within capitalism and would thus be unlikely, as this thesis argues, to effectively transform food systems to become agroecological. In this context, this thesis aims to contribute greater clarity about the political dynamics underpinning the unsustainability and inequalities of existing food systems and thus aims to facilitate more effective strategies to counteract these dynamics.

Specifically, this dissertation engages in a political ecology analysis of the potentials of the application of food sovereignty and agroecology principles to a context in the Global North, the Scottish Uplands, together with an analysis of the agrarian history of this area, especially since the advent of capitalism in the 18th century. Political ecology, as explained below and in Chapter 2, provides an overarching and integrated approach to understanding the co-evolution of the 'ecological' and the 'political' domains of agrarian systems. As this thesis will demonstrate, the Scottish Uplands provide a rich case study both of agrarian history and of current agroecology and food sovereignty needs and potentials for a number of political and ecological reasons, representing some of the contradictions identified above. First, the Scottish uplands have experienced severe concentration of landownership, reduction in the number of people deriving their livelihoods from agrarian activities and loss of diverse food production and consumption systems since the rise of capitalism in the 18th century. Second, Scotland is home to a strikingly counter-capitalist land movement, which, as the next section discusses, is challenging the supremacy of private property rights over the public interest.

Third, despite the fact that the Scottish uplands are valued for their landscapes, semi-natural habitats and 'wildness,' the Scottish uplands have also suffered progressive ecological degradation and a decline of ecological (including agroecological) diversity since the rise of capitalism. Fourth, the vast majority of Scotland's agricultural land (86 percent) is considered to be uplands (Scottish Government, 2010b) and is designated as a 'Less Favoured Area' (LFA) in Europe's Common Agricultural Policy (CAP). With this designation, governmental support for agriculture in the uplands is oriented towards the production of environmental, economic and social outcomes, but does little to foster the joint production of food for local consumption, ecological outcomes and agrarian-based equitable development (Tilzey and Potter, 2007).

Given that most (57 percent) of agricultural land in Europe is classified as 'less favoured' (European Commission, 2013), a study of the Scottish uplands has relevance beyond Scotland. The concept and definition of the uplands is discussed in the next section, following a brief introduction of the theoretical frameworks used in this study.

In order to analyse the 'political' aspect of the agrarian political ecology analysis of the Scottish uplands, this dissertation applies two complementary bodies of theory drawn from the tradition of so-called 'radical' political economy: Political Marxism and neo-Gramscian-informed Regulation Theory. The application of these theories provides clarity about capitalist dynamics and their maintenance, or 'reproduction,' respectively. Political Marxist theory understands capitalism as a set of social property relations which results in a dependence on markets (Wood, 2002a, Wood, 2002b, Wood, 2009, Wood, 2016). In applying a Political Marxist framework to the issues of agroecology and food sovereignty, this dissertation analyses the specific dynamics of capitalism which have affected the food and agricultural systems of the Scottish uplands from pre-capitalist clanship society to today's 'embedded' (see Chapter 5) neoliberalism. In this way, it addresses the lack of clarity about capitalism and its counter movements which can sometimes occur in food sovereignty and agroecology literature as highlighted by Bernstein (2014) and Brass (2015). The application of Political Marxist theory illustrates how capitalism pressures the majority of producers, big or small, to change what and how they produce within capitalist social property relations. This is relevant to debates about the pressure for agricultural intensification on existing farmland (see Lampkin et al. (2015) for the endorsement of this within Scotland) and/or

concerns about the expansion of agricultural land into forestry and other non-agricultural habitats in order to feed growing human populations (see e.g. Foley (2018), Foresight (2011)). While advocates of production intensification also point to the need for dietary changes, the majority of their advocacy relates to increasing production. As this thesis will argue, the re-orientation of agricultural land toward societal use value rather than exchange value is likely to contribute to a reduction in agricultural land required to feed the human population, as indicated by studies which have modelled land use requirements which align with healthy diets (e.g. (Poux and Aubert, 2018, Berners-Lee et al., 2018, Wirsenius et al., 2010) and have estimated land use requirements for some of today's 'discretionary' food products (e.g. Gerbens-Leenes and Nonhebel (2002).

Through the application of neo-Gramscian informed Regulation Theory (Bieler and Morton, 2004, Jessop and Sum, 2006, Tilzey 2018), this thesis analyses some of the ways in which the social system of capitalism, despite its 'political' and 'ecological' contradictions, is maintained in Scotland. This particular application of Regulation Theory facilitates an understanding of how the modern state does not merely *facilitate* capitalist growth (accumulation) but also *legitimates*, by material and ideological means, capitalist growth. As such, the application of Regulation Theory in this thesis allows for a critical analysis of the role of the state in inhibiting or facilitating the realisation of agroecological and food sovereignty principles, overcoming a limitation of Friedmann and McMichael's (1989) influential food regime theory, wherein the state was not considered as an agent in the perpetuation of capitalism (Tilzey, 2018, Tilzey, 2019b). It illustrates the roles that the uplands, as a 'marginal' area, play in legitimating capitalism, including in its neoliberal form, by, for example, creating the image of a nature-rich and 'cultural' landscape. This creates a binary view of the uplands as a 'consumption countryside' (Marsden, 1999) and the lowlands as a zone of productivist agriculture and limits the alternative imaginaries of the uplands as having the capacity to support sustainable food systems, such as through the application of agroecological principles. This application of Regulation Theory, in conjunction with identifying Scotland's current position as a 'core' country in the global food system (Tilzey, 2018:62, Amin, 1976), also facilitates an understanding of why counter-capitalist land reform movements in Scotland have not resulted in the realisation of agroecological food systems. This analysis provides potentially

important insights for the land and agro-food related movements in Scotland, and also the counter-capitalist aspects of the food sovereignty and agroecology movements more widely.

Section 1: Inequality and counter-capitalism in the Global North.

Most food-related social movements in the Global North to date have tended to advocate primarily progressive or 'alter-hegemonic' strategies (Holt Giménez and Shattuck, 2011: 124), though some family farms in the global North are also seen to engage in counter-capitalist social movements related to food (Holt Gimenez and Shattuck, 2011: 115).

However, a radically counter-hegemonic land reform movement is occurring in Scotland, in light of highly unequal land ownership. It is estimated that 50 percent of Scotland's private rural land is owned by 432 individuals (Wightman, 2013). This represents an increasing concentration of land ownership in the past 70 years (LRRG, 2014:161) and is recognised as one of the most unequal concentrations of land ownership internationally (Peacock, 2018: 1). Agricultural land is primarily comprised of vast estates: as of 2016, nine percent of agricultural holdings accounted for 76 percent of agricultural land, or 4.31 million hectares (Scottish Government, 2016f). In addition to these striking inequalities, much of the land reform movement of the 21st century has arguably been influenced in part by the collective memory of the violent removals or clearances of the rural population in the Highlands during the agrarian transition, and the subsequent establishment of crofting (Sellar, 2006, Warren and McKee, 2011), a system of land tenure established from 1886 which is largely individualised but also entails some land held in common, as discussed further in Chapter 4.

The land reform movement of the 21st century has begun to reorient land use towards the 'public interest' (McCrone, 1997, Wightman, 1999, LRRG, 2014), has introduced compulsory right of purchase for communities to fulfil the public interest under certain conditions (Scottish Government, 2015a, Scottish Government, 2016c), and has committed the Scottish Government to ongoing processes related to declaring and inquiring into land rights and responsibilities (Scottish Government, 2017e). In addition, a nascent 'Good Food Nation' movement has also entailed counter-hegemonic advocacy related to food in Scotland, such as opposing the treatment of food as a commodity and opposing the persistence of food insecurity in Scotland despite the 'plenty' of land and water available in the country (SFC, 2016). Scotland thus presents a unique case of counter-hegemonic movements related to

food and agriculture within the Global North. Yet to date, the movements have had little effect on farming practices themselves, as will be discussed. To explain why, this thesis engages in a political ecology analysis of the dynamics of capitalism in relation to ecological food systems in this context. While there have been several analyses of food movements in the global north (see e.g. Desmarais and Wittman (2014) on food sovereignty in Canada; Hassanein (2003) on food democracy; and Allen (2010) on food justice), the analysis presented in this thesis is distinctive in its application of a Political Marxist frame to the issue of agroecological food systems.

Section 2: The concept of the uplands and its relevance to agroecological food systems

A. What and where are the uplands

The term 'uplands' refers variously to socio-political designations as well as ecological and agricultural characteristics (Mansfield, 2011, Glass et al., 2013:9). Ratcliffe and Thompson (1998) define the uplands as those areas above the upper limits of cultivated farmland, indicating that by definition the only agricultural activity suitable on the uplands is livestock farming. Holland et al. (2011) also define the uplands based on what is produced on the land and differentiate them from hill areas on this basis. They indicate that hill farms are primarily used for producing 'store lambs' (which are sold on for fattening on farms with better pasture) and ewes for cross breeding on other farms (Holland et al., 2011:45), whereas upland farms tend to have better quality pasture (often seeded and fertilised, as will be discussed in Chapters 4 and 5) to fatten store animals and/or can produce silage and hay for winter livestock feeding. By this definition, many farms in Scotland would have both hill and upland areas within them, including the land held by crofters.[1] Glass et al. (2013:8) refer to uplands as areas above 180m and/or land which is steeply sloped, and which is categorised as LFA in Scotland's application of the CAP. This technically includes agricultural lands which Holland et al. (2011) refer to as hill areas. Indeed, the CAP designation of LFAs is typically used interchangeably with the uplands in Scotland. The LFA scheme aims to support a continuation of farming in areas in which agricultural activities are limited or less profitable due to a variety of environmental considerations (e.g. high altitudes, steep slopes, harsh climate, short

[1] As will be discussed in Chapter 4, 'crofting' refers to a unique set of land tenure rights in certain counties of the north west of Scotland

growing season, etc.) and/or social considerations (i.e. where areas are in danger of abandonment of farming) (European Commission, 2013). LFA subsidies for agriculture in the Scottish uplands are based primarily on the premise that a continuation of livestock farming is important for protecting 'cultural heritage' (NSA, 2016) and 'semi-natural' habitats (Scottish Government, 2011).

The problem with defining the uplands based on what is produced agriculturally on the land is that, based on a political ecology framework, land use is not solely determined by ecological variables but the outcome of a dialectic between environmental and political factors (Blaikie and Brookfield, 1987:17, Robbins, 2004:7). Today, the existence of a relatively small number of outlier farms contradicts the assumption that the uplands can be defined by their orientation towards livestock. Within Scottish Government agricultural statistics, hundreds of farm holdings in the uplands (approximately 15 percent of upland holdings) engage in the cultivation of barley, oats, potatoes, crops for stock feeding, vegetables, orchard fruits and soft fruits (Scottish Government, 2017c). The Permaculture Association of Scotland also points to farms which do not conform to the notion that the uplands are synonymous with livestock farming. It highlights a number of 'Land Learner' or demonstration farms which cultivate a wide array of vegetables (e.g. potatoes, carrots, leeks, kale), fruits (e.g. apples, strawberries, currants) and animal products (e.g. ducks, cows, sheep) without the use of artificial pesticides or fertilisers and using methods which enhance biodiversity and soils (Permaculture Scotland, 2019). However, less than a dozen of such farms are listed in the uplands, and in official government statistics the amount of land oriented towards non-livestock production in the uplands is approximately two to four percent (Scottish Government, 2017c). While it is likely that both these sources miss a significant number of small sized farms and/or those which are not captured in statistics related to the subsidy system (Laughton, 2017), the definitions of uplands as synonymous with livestock production attest to the minority status of upland agriculture which does not entail the rearing of livestock. Yet in terms of demonstrating ecological potentials of the uplands, the minority of farms diverging from livestock production provides significant evidence of a wider agrarian potential of this vast tract of land, particularly when combined with historical evidence of agricultural and food production prior to capitalism as will be presented in Chapter 4. This agrarian potential is relevant to questions about food systems.

While livestock farming of course produces some food, the majority of production is oriented towards consumption in England or abroad or for niche high-value markets in Scotland (QMS, 2017), though the profits of this are largely captured further along the economic chain: without support payments, many upland livestock farmers would have negative net margins (Grieve et al., 2016, Vipond and Hill, 2008). Further, nutritional and public health literature indicates that what is most needed in people's diets in Western countries is a reduction of meat intake and an increase in the consumption of vegetables, fruits and whole grains (Westhoek et al., 2014, Poux and Aubert, 2018, Friel et al., 2009, WHO, 2011, WHO, 2008, WHO, 2003). In these terms, only a very small proportion of Scotland's agricultural land is oriented towards human dietary needs: 0.38% of all agricultural land in Scotland is dedicated to vegetable and fruit production[2] (Scottish Government, 2017c). A total of 8.3 percent of Scotland's agricultural land is oriented towards the production of grains,[3] (*Ibid*.) though nearly all wheat is utilised for biscuits, distilling and animal feed, rye is predominantly produced as a biofuel or for distilling and 35 percent of barley is utilised for malting (NFUS, 2019b, Scottish Government, 2016b). In other words, aside from the majority of upland land being dedicated to sheep and cattle production, the remainder of Scotland's agricultural land is strongly oriented towards producing what are considered to be 'discretionary' (i.e. non-essential) drinks (primarily whisky) and foods (biscuits) along with biofuels and animal feed for the meat industry. One British food policy expert summarised the overall import of vegetables, fruits, grains and legumes compared with its export of whisky, biscuits and meat at the level of the UK by saying, "Britain imports good things for public health and exports death" (Lang, 2016). Yet Scotland also imports a fair quantity of unhealthy foods. A prominent activist in Scotland recently drew attention to the way in which Scotland 'exports its potatoes and imports Walkers crisps' (Ritchie, 2018b).

In sum, there is a significant disorientation of agricultural production from the dietary needs of society in Scotland. This has two main effects. First, it requires that the food needs of people in Scotland be provided through agricultural production elsewhere, including the rest of Britain and internationally, in what could be considered to be a 'land sparing' orientation

[2] Based on 2017 statistics, 21,711 hectares of agricultural land across Scotland are used for the production of vegetables or fruits for human consumption. The Utilised Agricultural Area for the same year in Scotland was 5,629,142 hectares.

[3] Wheat, barley, oat and rape crops totalled 468,265 hectares based on 2017 statistics.

(Green et al., 2005) at a national and international level. Second, when farming support is disbursed and justified primarily for ecological or social reasons, without considering the issue of food production, upland farming then becomes evaluated against other land uses which could potentially deliver greater environmental (e.g. rewilding) or social (e.g. employment, tourism) benefits. These two issues are discussed in turn below.

B. Agroecology beyond the borders

The majority of food consumed in Scotland tends to be produced 'conventionally,' utilising production practices which diverge significantly from what might be considered to be agroecological. Food production in the UK outside of LFAs (i.e. in the lowlands) tends to be intensive in nature, relying on high usage of pesticides and nitrogenous fertilisers and heavy ploughing which, combined, result in negative effects on water quality, biodiversity, climate change and human health while also threatening the long-term viability of agricultural production (Skinner et al., 1997, Trilling et al., 2017, D'Arcy et al., 1998, Thomas, 2001, Hillocks, 2012, Goulson et al., 2018, Davies and Sylvester-Bradley, 1995, Kindred et al., 2008, Maskell et al., 2010, Holman et al., 2003, Graves et al., 2015). More than half of food consumed in Scotland is produced outside of the UK (Defra, 2010). Export-oriented production, given international requirements for uniformity and standardisation, tends to be based on conventional production, and also tends to favour large corporations which can fulfil the numerous requirements for certification and quality assurance (Raynolds, 2004). While localism is not a silver bullet for addressing these issues, given that it can still perpetuate capitalist dynamics (Marsden et al., 2000a, Winter, 2003), the consumption of foods from unsustainable production systems outside of the uplands contradicts the aims of supporting 'semi-natural' and extensive farming practices in the uplands. It also fails to consider whether imports of commodity foods might threaten the 'cultural heritage' of the areas now feeding places like Scotland, which has oriented its agricultural land towards these social and environmental purposes but not towards meeting the food needs of its population. Scotland's ability to rely heavily on food produced outside its borders is facilitated by its position (as part of the UK) as a 'core' country, for which the 'periphery' produces essential (and non-essential) goods (Tilzey, 2018: 62, drawing on Amin, 1982). The orientation of significant amounts of land (and corresponding 'biocapacities' (Tilzey, 2018: 238)) outside of

Scotland towards feeding Scotland's residents can be understood to represent a form of exploitative relations between core and periphery.[4]

Through considering food and agrarian systems at multiple levels (i.e. the Scottish uplands in a national and international context), the political ecology analysis in this thesis aims to contribute to a greater understanding of the relevance of food sovereignty and agroecological concepts to regions in Europe and elsewhere in the Global North. These areas of the world may be able to protect, conserve or even rewild significant areas of landscape, but their populations' diets significantly rely on foods which are unsustainably produced outside these areas. This consideration of food systems at different levels enables this dissertation to overcome a potential limitation of food sovereignty analyses which emphasise production processes but are arguably weak on the types of products which are produced and/or on the distribution and access of products (Tilzey, 2018: 170).

C. Environmental contestations of upland land use

As noted above, upland farmland is predominantly oriented towards sheep and cattle farming, though the former predominates (Riddell and Walker, 2011). A significant portion of farmland is also dedicated to sporting estates and commercial forestry. However, environmental groups have increasingly advocated for agricultural land to be used for conservation or rewilding purposes.

Upland livestock farming is relatively low on external inputs, with the exception of anti-parasite medications and and/or feed concentrates, both of which cause environmental damage. Anti-parasitic sheep dips and injections have been found to cause environmental contamination particularly to waterways (Foy et al., 1995, Virtue and Clayton, 1997, Taylor, 1999, Milne et al., 2008). Feed concentrates are typically comprised of soya, grains and oilseeds which are produced using high-input agriculture (Sieradzki et al., 2006, EURL, 2919, Marsden, 2008). In terms of diversity, sheep farming has been identified as supporting unique farm-related biodiversity, such as certain types of heathers, grass species and birds (DeGabriel et al., 2011, Holland et al., 2011, Glass et al., 2013) in what Gimingham (1995) considers a 'cultural landscape.' Producer organisations and environmental organisations alike have

[4] As Chapters 4 and 5 demonstrate, the Highlands of Scotland serve as a 'periphery' of the UK immediately following the transition to capitalism in Scotland, but eventually come to benefit from the UK's 'core' position at a global level when they began to be included in national policies

advocated for the need to provide governmental support to ensure that livestock farming, and its associated 'semi-natural' habitats, does not decline (NSA, 2016, NFU, 2013, NSA and NFU, 2014, SCF, 2008, RSPB, 2018). Support for the continuation of livestock farming in the uplands has been additionally advocated for its ability to support rural livelihoods and rural population retention (House of Commons, 2019: 9, Moxey and Thomson, 2018) aligning with the concept of 'multifunctional' agriculture at the level of the EU (Losch, 2004, Marsden and Sonnino, 2008). More recently, 'rough grazing' areas in the uplands—those areas which have not been cultivated—have been designated as 'High Nature Value' (HNV) farming (Scottish Government, 2011:10, McCracken, 2011), in alignment with a the European Union's guidance on Rural Development Programmes which seeks to protect semi-natural habitats and farm-adapted species (Keenleyside et al., 2014:8).

Yet there have also been a number of negative environmental impacts associated with livestock farming in the uplands, and in particular with the overall predominance of sheep farming. A study tracking biodiversity changes over a 400 year period in the Scottish uplands found that biodiversity losses were great with the advent of intensive and widespread sheep farming and that plant diversity has not recovered with the decline in livestock stocking levels which has occurred more recently, though does indicate that complete land abandonment is also associated with lower biodiversity (Hanley et al., 2012). High stocking levels of sheep have also been associated with damage to soils and significant levels of erosion (Darling, 1955:162-176, Fenton, 1937:424, Sansom, 1999).

As will be discussed in Chapter 4, much of the semi-natural or 'high nature value' habitats of today had previously been woodland or scrub, and continued grazing prevents the re-emergence of these habitats (Dodgshon and Olsson, 2006). This raises questions about ecological succession and the notion of 'conservation' as opposed to 'rewilding.' For some advocates of rewilding, the uplands are seen as an ideal place to improve biodiversity through the introduction of predatory animal species which could limit the effects of grazing animals (MacDonald et al., 2000, Sandom et al., 2012), though there is limited evidence about the ecological benefits of doing so (Ermgassen et al., 2018) and there are debates within the rewilding movement about whether woodland or a 'park-like' landscape of grassland, scrub and trees is preferable (Vera, 2000, Fischer et al., 2008). Whether framed as rewilding or conservation, however, large scale biodiversity initiatives have been growing in Scotland and

represent a significant use of privately-owned land (Adams, 2012, Adams et al., 2014). They also represent a potential shift away from agriculture towards other, more 'ecological' land uses.

The debates about the ecological impacts of sporting estates are similar to those for upland livestock farming. While some advocate that sporting estates generate environmental benefits (Glenn et al., 2019:37), particularly through the preservation of semi-natural habitats (GWCT, 2015), sporting estates have been recognised as damaging peat structure and contributing to long-term declines of biodiversity through predator control (Thirgood and Redpath, 2008, Van der Wal et al., 2011). Muir burning is also frequently practiced on sporting estates to maintain heather, which is habitat for grouse and also grazed by deer and, on some estates sheep (Wigan, 1991, Macmillan, 2000). While this is often pointed to in relation to its environmental impact (see e.g. Wightman (2018), it is not clear that burning is carried out with greater intensity on sporting estates compared to livestock farms.

A further major and growing use of upland land is forestry, which has expanded rapidly in the uplands since the First World War (Oosthoek, 2013). The term 'forestry' here is distinct from 'woodland:' the former is used to refer to plantations of trees for timber production (and, more recently, for carbon trading), which in Scotland are primarily non-native conifers, cultivated in monocultures of the same species[5] and the same age of tree, using ploughing and inorganic fertilisers (Burton et al., 2019, Oosthoek, 2013). Woodlands on the other hand are ecologically diverse and comprise native species. The Forestry Strategy indicates the importance of restoring native woodlands, and the Scottish Government's Woodland Expansion Advisory Group (WEAG) indicates a possibility for integrating trees into pastoral production systems, for example using shelterbelts or agroforestry. However, the 2019-2029 Forestry Strategy, which aims to increase forest and woodland cover to 21 percent of Scotland's land area by 2032, only aims for up to one third of this tree cover to be woodland (EFD, 2019). Further, strong financial incentives[6] for 'productive' forestry and low levels of regulation have resulted in large areas of forest plantations. Carbon funds are also

[5] Current regulations allow for 80 percent of land to be planted with the same type of tree. The requirement for more than one species of tree is a recent development (Oosthoek, 2013).
[6] Not only is the timber of value but carbon trading credits are also lucrative and the EEA also provides tax benefits for forest planting. Further, there are inheritance tax exceptions on woodland (Interview C, 2018, Interview U, 2019).

transferred based on planting and do not relate to what the wood is used for later (Representative, 2019). Landowners receive carbon funds even if carbon is quickly re-released through burning, for example. Thus, while tree planting is largely lauded as a positive environmental activity, and there is likely scope for woodland expansion, the rapid spread of forestry in the uplands in recent decades does not necessarily constitute an ecologically oriented use of land.

In sum, all the major land use activities of the uplands – livestock farming, sporting estates, forestry and rewilding – have at least some environmental advantages and limitations. However, as noted above, none of these activities are oriented towards meeting the dietary needs of people in Scotland. Yet the existence of outlier farms, as noted above, indicates that there is a possibility for more of Scotland's land to be better oriented towards meeting the food needs of the country. It also indicates the possibility for much greater access to land for larger numbers of people, given that agroecological production tends to be more labour intensive and access to land is a potential route out of market dependency. The rising environmental costs of intensive agriculture outside the uplands and the stark inequalities of land access in Scotland indicate an urgency for this to happen.

Research questions and structure of the thesis

This dissertation seeks to answer two main research questions:

1. What have been the political and ecological factors which have led to the establishment of the current land use pattern of the Scottish uplands? What does this tell us about the ecological potentials for the uplands to better contribute to agroecological food systems?
2. What have been the potentials and limitations of the land reform and food movements in leading to the integration of social and ecological aims in the Scottish uplands in line with concepts of agroecological food systems and food sovereignty?

In answering these questions, I aim to contribute to the land reform and agroecological and food sovereignty movements in Scotland. I also endeavour to provide insights for the wider debates about the aims and strategies of the agroecology and food sovereignty movements.

This thesis is broadly presented in three main parts. Part 1 (chapters 2 and 3) provides the underpinnings for the research. Chapter 2 discusses the approach to political ecology applied

in this research, which is based on the philosophical pillars of critical realism and dialectics. It also provides in-depth discussion of the relevance and application of Political Marxism and Neo-Gramscian informed Regulation Theory. Chapter 3 then provides a detailed overview of the agroecology and food sovereignty literature and the counter-hegemonic food systems interpretation of these concepts which is applied in this research.

Part 2 (chapters 4 and 5) then analyses the agrarian systems in the uplands of Scotland from pre-capitalist clanship through to today's (embedded) neoliberalism, in order to answer the first research question. It demonstrates how changes to social property relations in the uplands within the wider British and global contexts have radically transformed the agrarian system of the uplands from what might have been considered an agroecological food system. The thesis follows land use and food system changes through the agrarian transition, the productivism of the wars and the post-productivism of neoliberalism to provide insight about the dynamics which have led to today's land use in which agricultural land is almost completely disconnected from the food needs of people in Scotland.

Part 3 (chapters 6 and 7) presents an analysis of the most recent (21st century) land reform movement in Scotland and analyses current discourse related to food and agriculture in order to answer the second research question. Chapter 6 analyses the land reform legislation and related discourse in terms of its counter-hegemonic potential while also identifying aspects which have inhibited the realisation of agroecological food production. Chapter 7 presents today's main discourses related to food and agriculture in Scotland and demonstrates how the majority of discourse and policy strategies could be considered as hegemonic or sub-hegemonic, and thus reinforcing neoliberal capitalism. It also highlights the counter-hegemonic aspects of the nascent Scottish Food Coalition and some of its members, whose potential for radical transformation or cooptation remains to be seen. This is followed by Chapter 8, which draws the findings of the historical and present-day analysis together and suggests some possible implications for future food and land reform movements in Scotland and for the food sovereignty and agroecology movements more broadly.

Chapter 2: Political Ecology, Theoretical Frameworks and Methodology

Introduction

The preceding chapter demonstrated the disconnect in Scotland between agricultural land use and the food needs of society, even though agriculture is at times acknowledged and advocated for its role in food security. It also discussed the limitations of and incongruencies between the predominant conceptualisations of what are considered 'natural' (and favoured) upland ecologies. Thirdly, it demonstrated the tendency for environmentally and socially oriented efforts (both practical and academic) in the uplands to exclusively focus on ecological and social conservation *in situ*, without due consideration of the environmental and social effects of food production which becomes displaced to other areas of the world as a result of this 'land sparing' approach to conservation at home. In this chapter, Section 1 explains how the application of a political ecology analysis in this study, grounded in the twin philosophical pillars of critical realism and dialectics (e.g. Ollman, 2003) seeks to avoid these limitations. Subsequently, Section 2 provides more specificity about the theoretical frameworks used within the political ecology approach of this study. Section 3 then explains the methodology used to apply these frameworks to the agrarian systems of the Scottish uplands.

Section 1: Political Ecology, Critical Realism and Dialectics

This study follows a political ecology approach in that it acknowledges that ecological conditions and changes are both influenced by and interpreted through political processes (Robbins, 2004: 7), and that human society (including its politics) is, in turn,influenced by ecological changes (Blaikie and Brookfield, 1987: 17). Given the wide ranging interpretations of political ecology (Peet and Watts, 1994), it is important to acknowledge the specific philosophical and theoretical underpinnings of any political ecology approach. The political ecology of this study is underpinned by critical realism and dialectics, which facilitate an analysis of the causalities and processes which have shaped and continue to shape the agrarian systems in the Scottish uplands

Critical realism as applied in this study entails a realist ontology and a constructivist epistemology (Maxwell, 2012). The realist ontology proposes that there is a 'reality' which

exists independently of human beliefs and constructions while the constructivist epistemology suggests that knowledge of this reality is 'inevitably our own construction, from our own vantage point and it is not possible to have a purely 'objective' account.' (*Ibid*., vii). In other words, critical realism posits that an objective reality exists (in contrast to post-modern conceptions of multiple realities) (*Ibid*.) and that our understandings of such 'reality' are inevitably 'theory laden' (Sayer, 1992).

In terms of what is 'real', critical realists understand social constructions such as ideas and discourses to be objective phenomena. Classes, processes (such as working for a wage) and relationships (e.g. between teachers and students) are all considered to be 'real' in that they have a causal effect. As Alvesson and Skoldberg (2009) explain, 'ideas about, for example, race, men and age can explain patterns in the labour market and they are real in the sense that they exist and work as mechanisms with causal effects' (42). Yet these causalities are considered to be emergent and context specific, rather than universal or predictable.

In drawing on a critical realist approach, this study has a strong focus on causality and process (Maxwell, 2012, Alvesson and Skoldberg, 2009). A critical realist orientation in this study facilitates an inquiry into the political structures, mechanisms and framings which have caused and continue to shape (or maintain) both biophysical realities (e.g. ecological and agricultural changes) and the conceptualisations of these realities (e.g. as sustainable, as self-evident, etc.). Specifically, this study enquires into the political discourses and contexts which have favoured (or not) certain types of agrarian systems. Again, critical realism indicates that our understanding of these structures and mechanisms relies on the use of theories, and the theories used in this study – Political Marxism, neo-Gramscian and regulation theories – will be discussed in Section 2 below.

As indicated in the preceding chapter, conceptualisations of what is 'natural' shapes many of the debates about the upland environments. Yet as Marsden et al. (2000) explain, 'the power to socially define the natural lies with humans, and particularly their organizational and social practices, rather than nature itself' (Marsden et al., 2000b:23). In other words, what is considered to be 'natural' or 'semi-natural', is shaped by societal and political organisation (Nygren and Rikoon, 2008:767). In discussing the politics of environmental science, Forsyth (2003), writes that 'much environmental knowledge may refer to short-term indications of long-term transitions; and environmental explanations and models are likely to be transitive

structures that reflect partial experience and framings of such complex biophysical events' (16). In my application of critical realism to the environmental debates in the uplands, the political underpinnings of arguments related to the identification of ecological (and social) conservation in the uplands become more apparent and thus more subject to critical engagement. Rather than perceiving an ecosystem as objectively 'optimal' or 'degraded', this study acknowledges that interpretations of environmental changes are value laden, limited and likely to change over time. Moreover, this analysis explicitly recognises the *political* framings and positions which influence different ideas of what is natural.

Applying the concept of *dialectics* between 'nature' and human societies complements critical realism and is important in understanding the co-determination of entities, recognising that in many (but not all) instances, causality of one entity cannot be understood separately from the interaction with another entity. The relationships between entities, which can also change over time, become a focus of inquiry. The concept of the dialectic can help to explain the relationship between humans and nature. As Levins and Lewontin (1985:3, quoted in Tilzey 2018: 19) explains, 'parts and the wholes evolve in consequence of their relationship and the relationship itself evolves.' A dialectical understanding of socio-natural systems understands human life as not wholly separate from nature, but rather as part of nature, dependent and intertwined in extra-human nature (Braun and Castree, 1998). In addition to human societies impacting on ecologies, nature can be seen to have an 'active material presence…in social life and social reproduction' (FitzSimmons and Goodman, 1998:201, drawing on Benton (1989), Benton (1993), and Harvey (1996)). In other words, 'extra-human nature' or ecological domains, shape human societies and simultaneously, human societies shape ecological domains. This represents a departure from a perception of nature as a 'physical nature of stocks and flows of potential use values', or as 'external or inorganic.' (*Ibid*.).

Tilzey (2018:28) points out that there are certain social domains which cannot be explained by the biophysical realm (e.g. human stories and meaning making) and biophysical domains which are not influenced by human societies (e.g. the structure of water as H_20). He stratifies the degrees of autonomy and hybridity of social and biophysical realms into five levels in his analysis of food sovereignty. While I do not explicitly stratify causality in this research, I

acknowledge that there are domains which are solely or primarily social and domains which are solely or primarily biophysical and thus also depart from a notion of hybridity throughout.

Agriculture is a prime example of a dialectical relationship between human societies and ecology in which both ecology and human society have their own properties and also influence one another. Societies shape ecologies in order to meet human needs but are also reliant on ecological processes. Even in highly controlled agriculture, humans are dependent on non-human processes. They may be able to alter flowering times, determine which plants are cultivated and even influence plant genetics, but the phenomenon of plant life itself is ultimately non-human, and the same could be said of animal life. Similarly, ecological dynamics may enable, condition or shape agrarian systems, but there are multiple possibilities for how societies organise in response to these. This is because societies respond not only to biophysical dynamics but also to social dynamics. They are additionally responding to their *interpretations* of dynamics, which again occur through various (theory laden) frameworks.

Further, agriculture represents an area in which societies seek to enhance the capacity of ecosystems to support human populations. The understanding that human societies can organise in ways that change the 'limits' of the biophysical moves beyond fixed ideas of what is 'natural' and 'sustainable.' Benton (1989) proposes that limits vary with different nature-society configurations. Benton writes,

> 'natural limits are…a function of the articulated combination of specific social practices and specific complexes of natural conditions, resources and mechanisms, [thus] what constitutes a genuine natural limit for one such form of nature/society articulation may not constitute a limit for another.' (Benton, 1989: 79 in FitzSimmons and Goodman, 1998: 202).

In other words, Benton does not negate the of existence ecological limits but indicates that they vary with different forms of social organisation. The concept of socially-influenced ecological limits informs this study's political ecology analysis of what is possible in terms of agroecological food systems in the Scottish uplands. It facilitates an explicit consideration of the articulation between different forms of social organisation and different forms of agrarian systems.

Specifically, this study focuses on the importance of different 'modes of production,' i.e. the *political* organisation of societies, or the 'organisation of material life and social reproduction (Wood, 2016) in determining what is ecologically sustainable. While certain 'modes of production' are explicitly oriented towards *sufficiently* meeting the needs of humans in the long term, class based hierarchical societies such as capitalism and feudalism are oriented towards the production of *surplus* and its appropriation by a minority of power holders, and thus tend to lead towards a strain on the biophysical domain (Tilzey, 2018: 20). Overall, different modes of production, or political organisations of humans, have varying effects on ecosystems (Robbins, 2004). This articulation of 'natural limits' with 'modes of production' is highly relevant to the analysis of the potential of agroecological food systems to produce for the human population, as will be discussed in Chapter 3.

Building on the discussion above about nature-society relationships, the concept of 'modes of production' is explicitly expanded in this study to critically engage with the *dialectic* of the biophysical and social. Benton (1994) terms this, 'modes of social appropriation of nature', in his call for Marxist analyses to better incorporate the dialectic between society and nature.[7] The concept of 'modes of social appropriation of nature' is particularly relevant to the relationship between Scotland and other countries in terms of the imports (and exports) of agrarian products, which inherently embody socio-natural resources, as discussed below.

In agrarian studies, a dialectic of the biophysical and the social facilitates an integration of analyses of production and consumption, which has been largely dis-integrated in discourse about Scottish agricultural land, and particularly in the uplands. This was noted in Chapter 1 and will be expanded upon further in later chapters. Goodman (2001) argues that in fact most agrarian studies overemphasise labour processes (i.e. a narrow and arguably orthodox interpretation of 'modes of production') at the expense of considering the relationship between society and nature for the fulfilment of biophysical human needs (i.e. food for consumption) (*Ibid*.: 185). He attributes this narrow focus on production to an underlying conceptual separation of humans and nature in agrarian studies. In considering the dialectic between human societies and their ecosystems, this study avoids this limitation. It inherently

[7] Fitzsimmons (1989) purports that Marx's writing did indicate the social production of nature, but that because Marx was 'not free of the ontology of his time, he often slips into language which implies that nature is external' (109)

orients not just towards production but also consumption, which is nested within and inherently part of ecologies.

Finally, the dialectical dimension to this political ecological study indicates that 'it is impossible to break the world up into discrete elements and analyse them separately' (Cudworth and Hobden, 2014: 634). Upland environmental analyses such as Glass et al., (2013), Mansfield (2011) and Sandom et al. (2012) focus only on ecological changes to the uplands themselves (and occasionally ecosystems which are directly related, such as in water catchment areas). Of course, nature-society configurations inherently extend beyond socially-defined geographic boundaries, a concept that is recognised in political ecology (Peet and Watts, 2004) and other political analyses (Anievas and Nisancioglu, 2015). This is particularly clear in the case of food, which embodies both biophysical and social (i.e. labour) resources. The flow of food products from one locality to another represents a transfer of these resources and inevitably affects the social and biophysical domains where they are produced. The flow of food products also influences the interrelationships between such localities as well as the international or 'world order' domain (Cox, 1981, Cox, 1983). This study therefore analyses Scotland's positioning and relationships within the UK, EU and global levels which influence land use priorities in the uplands and particularly the role (or lack thereof) of the Scottish uplands in food systems.

In sum, the development of a distinctive political ecology approach, grounded in critical realism and dialectics, serves to integrate the social-property relations governing the production and consumption of food with the 'modes of social appropriation of nature' in the Scottish uplands, together with consideration of flows of resources and influence beyond these areas. It considers social modes of production or social-property relations (see below) as key factors determining 'agrarian systems,' which in this study are taken to mean 'agro-food-environmental' systems, or systems of production, consumption and ecology. It also situates the 'local' of the Scottish uplands in a regional and global context. Given that the theoretical approaches used within political ecology analyses can vary (Peet and Watts 1994:6), the following section articulates the theoretical groundings for this study.

Section 2: Theoretical underpinnings: Political Marxism and Regulation Theory

As noted above, certain 'modes of production' are oriented towards sustainably meeting human needs, whereas others are oriented towards the creation of surplus, for appropriation by a minority of power holders, and are disconnected from human society's overall physical needs. The capitalist mode of production is oriented towards the creation of surplus, particularly in the form of economic 'value', the appropriation of which is organised in class ways, with some people forced to transfer surpluses to others (Wood, 2016). Capitalism and its origins are contested, and this has been a significant factor in the different conceptualisations of food sovereignty and its potentialities (Vergara-Camus, 2014, Jansen, 2014). This study draws on a 'Political Marxist' understanding of capitalism as rooted in social-property relations (Wood, 2002a, Wood, 2002b). In analysing the ways in which this mode of production has been sustained, the study draws on Gramscian understandings of hegemony (Gramsci, 1971), and neo-Gramscian and Regulation Theories which provide a more nuanced understanding of the establishment and maintenance of hegemony, including through the role of the state (Bieler and Morton, 2004, Morton, 2005, Poulantzas, 1978). The following sub-sections further develop these theoretical underpinnings.

A. Capitalism stemming from social property relations

From a Political Marxist perspective, capitalism is a unique set of social property relations, which originated from the establishment of absolute private property rights over the means of production in England[8] (Marx, 1887, Wood, 2002a). This diverges from other conceptions of capitalism as a 'gradual, quantitative expansion of the market' (Tilzey, 2018: 49, critiquing Moore, 2015) or as the result of technological changes such as the development of elaborate machines, as proposed by Polanyi in his 1944 analysis (Wood, 2002a).

Wood (2002a, 2002b, 2009, 2016) argues that the establishment of absolute private property rights was essential in creating capitalism's distinct form of organising social life in order to supply 'basic necessities.' To summarise briefly here, Wood argues that the establishment of absolute private property rights of land in England, where capitalism was first realised, had the effect of creating a market in land tenancies. Landlords were incentivised to lease land

[8] Wood argues that 'the competitive pressures emanating from England' particularly once it industrialised, compelled other countries into capitalist development, even though they did not undergo the same processes of establishing absolute private property rights in land (Wood 1998; Wood 2002).

to those who could pay the most rent, while tenants were incentivised to produce as profitably as possible to maintain and/or win leases. Both landlords and tenants thus became dependent on the market for their 'social reproduction' (i.e. to maintain their social status and/or livelihood). Less productive and less competitive farmers were unable to keep their land and became proletarianized, i.e. propertyless labourers, dependent on wages (Wood 2002a: 130). Previously, these groups had engaged with the market as an opportunity, but not as a requirement. As is discussed in Chapter 4, a similar process occurred in the Scottish uplands.

Beyond England, the agrarian transition is believed to have occurred through a variety of means. Lenin identified two broad pathways for the capitalist transition or the transition to market dependency: the Prussian 'junker' path (i.e. 'capitalism from above') and the American or 'farmer' path (i.e. 'capitalism from below') (Byres, 1996). In the American path, peasant differentiation led to wealthier peasants employing poorer peasants, particularly those who had lost their land due to debts. In the Junker path, tenants who had provided labour services to their landlord's farm were gradually transitioned to new tenurial arrangements which required them to work as wage labourers. The agrarian transition in the Scottish uplands most resembles the 'junker' path, as detailed in Chapter 4.

Dependence on markets for social reproduction, according to Wood, is considered 'market compulsion'[9] and is a defining characteristic of capitalism. This conceptualisation of capitalism is relevant to this study about the land use potentials and agrarian production in the uplands of Scotland in a number of ways as follows.

An understanding of capitalism as related to 'market compulsion' can facilitate an improved understanding of the barriers to sustainable food production in the uplands and the general understanding of the uplands as marginal. The capitalist mode of production, in its orientation towards surplus, prioritises the 'exchange value' of goods over their 'use value.' In other words, it orients production towards what will generate economic profit (or surplus for appropriation by the relatively few), rather than towards addressing the needs and wants of all of society's members (i.e. ensuring everyone has access to adequate and appropriate

[9] E.M. Wood uses the term 'compulsion' to refer to a need to rely on the capitalist market to ensure material and social reproduction. This is not to be confused with sociological concepts of compulsion.

food). Because producers are forced to sell their products in competitive markets for their social reproduction, production becomes oriented towards the incomes it generates, rather than what is needed by society. As noted in the previous chapter, in Scotland this has led to farmland being used primarily for the production of meat products for 'export'[10] and 'discretionary' products such as whisky and biscuits, rather than nutritious staples which are needed by the population in Scotland. The previous chapter also indicated how only a tiny minority of producers orient towards foods which align with healthy diets, for local consumption. This leaves staple foods for people in Scotland to be produced in other parts of the world, by other people, who in turn also need to prioritise exchange value over use value. This cascade of production and exchange inevitably leads to pressures on humanity's ability to supply its food needs sustainably from a finite amount of land, yet is rarely recognised in the narratives calling for increases in agricultural productivity, as will be discussed in more detail in Chapter 3.

Secondly, the capitalist mode of production forces producers to compete against one another, even in times of 'readily available and even growing demand' for goods (Wood, 2002b: 65). In agriculture, this results in strategies to lower production costs and/or to maximise production. To achieve either of these, producers often use methods to boost the productivity of a given area of land, through e.g. increasing the nutrient content and changing the structure of soil and/or using highly productive varieties of plants or animals. They also use methods to minimise labour costs, through a variety of labour-saving activities (e.g. mechanisation) and depressing agricultural wages (e.g. through the use of migrant labour) (Araghi, 2009). Attempts to minimise labour costs are also seen in morally-driven ecological farms, who rely on unpaid or low-paid interns, volunteers and self-exploitation (Ekers, 2019, Ekers et al., 2015, Akram-Lodhi and Kay, 2009). Efforts to minimise labour also largely shape what is produced and what is not. As will be detailed in Chapter 4, the low labour requirement of sheep is one of the reasons why sheep farming became widespread in the transition to capitalism in the uplands and is a significant factor in its continued practice today. In 'industrial' cultivation[11] systems, the use of fossil fuel-derived fertilisers and mechanised

[10] Much of the meat produced in Scotland is consumed in England (QMS 2017), which does not technically count as an export, but is outside of Scotland.

[11] The term 'cultivation' tends to refer to arable or horticultural production. It can also refer to 'improved' grasslands for grazing animals in the uplands in which land is fertilised and may be seeded. 'Industrial' farming

ploughing both boosts area-based productivity and reduces labour costs. However, such approaches have negative effects on soils, water and biodiversity and are widely critiqued in agroecological literature (e.g. Gliessman, 2014, Altieri, 1983). They represent the treatment of ecological systems as a 'source' of resources to be extracted (i.e. fruits of the soil) and a 'sink' for the disposal of the by-products of production (e.g. through contamination of water ways) (Tilzey, 2017, Moore, 2015).

Thirdly, an understanding of capitalism as market dependency enables a greater understanding of the extent to which land reform efforts would lead to social property relations which are incompatible with capitalism. Recently, land redistribution, in which land is taken from those who have large holdings and given to those with small or no holdings, has been advocated for curbing social inequalities and reducing poverty through increasing economic efficiencies (Griffin et al., 2002). Byres (2004) and Bernstein (2004) point out that this recent wave of advocacy is strikingly similar to the post-war redistributive land reform movements which were advocated by Lipton (1977) and Griffin (1974) to generate an articulated form of developmentalist capitalism. While Byres (2004) follows a more orthodox Marxist perspective of the need to pass through capitalism as a prelude to socialism, he critiques Griffin et al., (2002), pointing out that redistributive reform does not alter capitalist social property relations, and as such is incapable of eliminating the structural inequalities inherent to capitalism. While I argue (*contra* Byres) that there is an urgent need to transition away from capitalism rather than allow it to fully develop, Byres' insights are illuminating for analysing the extent to which land reform efforts such as those in Scotland might lead to post-capitalist social property relations.

Finally, the definition of capitalism as a specific mode of production, with 'historical specificity' can facilitate a different set of ideas about capitalist behaviour and effects, including what is possible within capitalism and the possibilities of non-capitalist futures (Wood, 2009). Recognising capitalism's historic specificity acknowledges that it has had 'a beginning and, presumably an end, which leaves open the possibility of organising human subsistence in more socially equitable and ecologically less destructive ways' (Wood, 2009: 55). In contrast, an understanding of capitalism as *intrinsic* to human society can result in

tends to refer to practices which favour uniformity at the expense of agro- and bio-diversity. These practices tend to use mechanisation and/or repetitive human labour tasks.

efforts to mitigate capitalism's effects, rather than attempting to transform capitalist dynamics. Similarly, more orthodox Marxist understanding of capitalism as necessary and/or inevitable leads to the perspective that society needs to 'pass through' capitalism, again while possibly mitigating its effects but not necessarily rushing the transition. As will be explored in more detail in Chapter 3 (theoretically) and in Chapter 7 (empirically) much of the discourse about the uplands which fails to consider food-oriented agricultural production may be based on an implicit acceptance of capitalist dynamics as natural, rather than the result of a unique mode of production.

B. Hegemony and its regulation

This study draws on critical theories of hegemony to examine the ideologies which have become dominant in relation to agrarian systems in the uplands of Scotland and the potential for these to change. Marx recognised that 'capitalist production develops a working class, which *by education, tradition, habit* looks upon that mode of production as *self-evident laws of nature*' (Marx, 2008:372) (emphasis added).[12] Building on Marx's work, Gramsci's theory of hegemony explained how power can be acquired and maintained by small numbers of people at the expense of larger numbers of people through the 'active consent' of dominated groups in capitalism (Gramsci, 1976). A critical theory of hegemony 'asks how existing social or world orders have come into being, how norms, institutions or practices emerge, and what forces may have the emancipatory potential to change or transform the prevailing order' (Bieler and Morton, 2004: 86, drawing on Cox, 1981). It particularly focuses on the dialectical interrelationships between social relations of production, forms of state and world orders (Ibid) which are not static but always in flux.

In critical hegemony theory, the state is not considered to be a 'pre-constituted institutional category' but a form of *social relations* through which capitalism and hegemony are expressed. In other words, the state is the 'condensation of a hegemonic relationship between dominant classes and class fractions' (Bieler and Morton, 2004: 92). Gramsci indicated that the state's relationship with—and incorporation of—civil society can be integral to the establishment and maintenance or 'regulation' of hegemony. Regulation

[12] I would argue that *all* classes also look at the capitalist mode of production as self-evident laws of nature

Theory, which draws on Gramscian theories,[13] takes as its unit of analysis 'the accumulation regime and its mode of regulation' (Jessop and Sum, 2006: 7), and thus considers both the capital accumulation and the legitimation roles of the state. Jessop (2016) argues that hegemony can *only* be perpetuated by incorporating counter-hegemonic ideology, through partial concessions to non-hegemonic groups. Tilzey (2018) explains that, per Regulation Theory, the state may 'seek to mitigate the negative social and environmental impacts of accumulation but [will do so] crucially without subverting capitalist relations of domination which continue to secure the 'ecological dominance of capital' (Tilzey, 2018: 148). In other words, the state may offer concessions to marginalised classes and/or for environmental protection, but will do so in a way which gives legitimacy to the dominant classes, the capitalist state and capitalist social relations (Poulantzas, 1978:44). As such, the state does not merely enable capitalism to exist but 'the state's part is integral to the reproduction of the capital relation' (Jessop, 2014).

This study will explore the ways in which the Scottish, British and European governments have mitigated the effects of, and thus 'regulated', capitalist social relations over time and the effects of this on Scottish upland agrarian systems. Drawing on neo-Gramscian influences particularly, it will also examine the strategies—as expressed through discourse—which are sub-hegemonic (not challenging the hegemony but sitting within it, such as neomercantilism, social welfarism or the redistributive land reform movements discussed above); alter-hegemonic (not directly following hegemony but neither directly challenging it, including 'alternative' and progressive movements); and counter-hegemonic movements (those approaches which directly challenge hegemonic social property relations) (Tilzey, 2018:8, Tilzey, 2016, Potter and Tilzey, 2005).

Section 3: Methodology: Analysis of historical trajectories and current strategies

Drawing on Political Marxist and Neo-Gramscian Regulation Theory, this thesis explores the political factors which have dis-oriented the uplands from the sustainable production of food for society, and the factors which either continue to prevent or are creating openings for agroecological food systems from being realised in Scotland in the near future. This study is

[13] See Jessop and Sum (2006) for a discussion of the variations of regulation approaches, including schools which focus on economic rather than 'societalization' aspects of regulation and thus do not draw on Gramscian theory.

first grounded in a novel political ecology analysis of the agrarian transition (i.e. the transition[14] to capitalist social relations) in the uplands of Scotland, demonstrating the dynamics between changing social-property relations, particularly in relation to land, and the ways in which food was produced, gathered and consumed in the upland areas. It then explores (in Chapter 5) the agrarian changes throughout subsequent iterations of capitalism (i.e. Fordism and post-Fordism / neoliberalism) up to the present, and the framings and policies—Scottish, British, European and global—which have underpinned them. The political aspects of land use are further elucidated through a presentation of 'outlier' or 'alternative' farming practices (Chapter 5). Following this is an analysis of the 21st century land reform efforts in Scotland (Chapter 6), and their counter hegemonic potential in relation to agrarian change. Finally, the existing strategies and discourse related to agrarian systems – again, including issues of agricultural production, food consumption and ecology – are analysed in terms of their orientation in relation to the hegemony of neoliberal capitalism in order to provide a fuller picture of the 'potentials' for food sovereignty and agroecological food systems to be realised in the near future (Chapter 7).

Both historical and current political ecology analysis in this study use Critical Discourse Analysis (CDA), in which language is understood as a form of social practice and a social process, which is conditioned by society (Fairclough, 2001). This approach understands language to express meaning and actively produce knowledge, and thus, in Gramscian theory, to reproduce—or change—society (*Ibid*.: 19). Discourse also reveals relationship dynamics, which in this study refers to relationships between humans within society and also between humans and their ecologies (Fairclough, 2013). An analysis of discourse offers an ability to extend analysis beyond existing structures to analyse emerging and competing strategies for overcoming a set of challenges (Jessop, 2012). This study analyses emergent strategies (past and present) developed and/or taken up by various actors, and the framings and justifications used to support them. In this way, discourse analysis further elucidates the underpinning values and assumptions behind strategies and actions, which may sometimes be implicit (Fairclough, 2013: 18).

[14] Scholars have noted that the term 'transition' can imply a smooth, gradual development whereas, the period 'was among the bloodiest and discontinuous in world history' (Frederici, 2017)

The following sections provide details on the methodology used for each of these aspects of the research analysis.

A. Historical political ecology

The historical analysis of the agrarian transition and subsequent iterations of capitalism applies a novel political ecology framing to historical source material to provide an alternate interpretation (or reinterpretation) of secondary historical texts. Specifically, it identifies the political (and social) and ecological dialectics—both within Scotland and more widely—which have led to the existing agrarian systems of today which continue to be founded on capitalist social property relations. This analysis considers not only the political ecological dynamics but also the discourses and positions of class (and class fractional) interests. This demonstrates the political underpinnings and drivers of both agricultural practices and ecological endeavours which are argued to be 'traditional' and/or important for cultural and environmental conservation. This allows for a consideration of 'alternative' practices as well as an examination of the discourses which continue to shape and/or maintain current agrarian systems and future systems which might be possible. The historical political ecology analysis is presented in Chapters 4 and 5.

B. Current Policies and Discourse

Building on this historical analysis, this study analyses existing framings and strategies of various state and non-state actors which are seeking to shape upland agrarian systems, either directly (i.e. organisations oriented towards agriculture) or indirectly (e.g. initiatives aimed at changing property rights). Specifically, it analyses food and land discourse in comparison with a 'radical' interpretation of agroecology and food sovereignty, which, as Chapter 3 explains, offers potential to address—at least partially—the ecological and social challenges of the uplands, while also contributing to agroecological and food sovereignty goals beyond the uplands through challenging the hegemony of capitalism. As discussed above, and building on Tilzey (2017), four main strategy and discourse types are identified: counter, alter, sub and hegemonic. This thesis aims to provide a nuanced analysis of existing framings and strategies and the extent to which these might enable or prevent the realisation of agroecology and food sovereignty in their 'radical' interpretations in the Scottish uplands.

In analysing current trajectories, two main areas of focus are presented: the land reform movement (Chapter 6) and the discourse related to food and agriculture (Chapter 7). For these topics, 'politically important' actors (Patton, 2002:240) were identified through their participation in government consultations (i.e. through publicly available consultation responses), participation in conferences and events (i.e. through speaker lists, conference proceedings and through in-person exchanges in conferences) and advocacy activity identified through media (i.e. through news and social media activity). Actors considered in this analysis spanned civil society organisations, business associations, interest group bodies and governmental departments. See Annex 1 for a list of organisations included in the discourse analysis.

Information about the strategies and framings (discourse) of these actors was sourced via publicly available documents (e.g. policies, grey literature and strategy statements) and media (social media, event presentations, TV, radio), and was complemented with semi-structured interviews. Discourse from events and interviews was collected between February 2016 and November 2019 both in-person (during eight visits to Scotland) and remotely (via Skype and phone interviews, event recordings and online media).

While interviews provided valuable data for discourse analysis and also helped furnish details about the current political context, the primary source of information for the discourse analysis presented in Chapters 5 and 6 is organisational policies, strategies, press releases and other publicly available documents. I have chosen to prioritise these more 'official' documents over interviews. Given the possibility that the perspectives of interviewees might differ from the official stance of their organisation, interviews here are intended to supplement the content of publicly available sources of discourse from each organisation or actor. Questions specifically sought to understand individual and organisational framings related to (a) perceptions of various types of agricultural practices, including forms of production, what is produced (and producible), linkages with consumption; (b) perceived ecological potential (and what is 'natural' or desirable) in the uplands; (c) engagement with and/or perceptions of land reform movements; and (d) perceived ability to influence agricultural and land-based policy. Questions were open-ended to allow for additional information to surface which might not have otherwise arisen via closed questioning, with prompts oriented towards respondents expressing concepts in their own words rather than

leading (McCracken, 1988). An example interview template is provided in Annex 2. A total of 27 policy interviews were conducted to feed into the political discourse analysis. All interview data are presented here in an anonymised form, with codes and dates of interviews presented in Annex 4.

C. Current Agroecological Practice

In order to provide information about alternative agricultural potential of the uplands, information was sourced about 'outlier' or 'alternative' farms, crofts and gardens. These outlier producers (both commercial and semi-subsistence) were identified through 'alternative' farming organisations, namely Permaculture Scotland, Common Good Food, Nourish and the Land Workers' Alliance. Twelve of these producers were interviewed about their existing production practices and challenges. Information about producers was also collected during two events which brought such producers together: a gathering of ecological upland producers[15] called a 'farm hack' organised by Common Good Food in October 2016, and a Land Workers' Alliance gathering of ecological producers from across Scotland in November 2018. Each of these events was attended by about 30 producers, with very small overlap (i.e. fewer than 5 attended both). Data from these producers were analysed to draw out key themes in terms of challenges and limitations faced by producers and to identify the ecological potential for producing different foods in the uplands. This analysis is presented in Section 3B of Chapter 5. A template of interview questions for producers is provided in Annex 3. All interviews were anonymised for presentation in this thesis. Codes and dates of producer interviews are provided in Annex 5.

Section 4: Researcher positionality

My positionality is that of a critical participant of agroecology, as a food producer and researcher based in England, endeavouring to practice agroecology at the farm level and promote and support the development of agroecological food systems through influencing national-level policy and supporting local initiatives. I am a member of the Land Workers' Alliance, which is an affiliate of La Via Campesina.

[15] For both events, producers self-identified as 'ecological'

In this case study of the Scottish Uplands, critical political ecology analysis is applied to major events and actors throughout the transition towards capitalism to the present day. This is not an exercise in assessing the efficacy of specific actors in realising food sovereignty or agroecology, particularly as these are terms which few of the actors in Scotland explicitly use to describe their aims. Rather, this research endeavour aims to illuminate the possibilities and challenges for the principles of agroecology and food sovereignty to be realised, given the current situation, as shaped by historical political and ecological factors as well as existing discourse and strategies of key actors in Scotland.

The insights from this research could be built upon by those advocates and critical friends of food sovereignty and agroecology movements in any location, but perhaps particularly in the Global North. While I hope that this thesis can illuminate insights for actors working on issues related to food and agriculture in Scotland, I do not provide detailed recommendations for actors in Scotland. It is my belief that those people who are embedded in the Scottish land and agricultural contexts are much better qualified than I am to identify what this analysis implies for their ongoing work on these issues.

Conclusion

This section has explained the unique political ecology approach used in this study and how it is underpinned by critical realism and dialectics. Critical realism orients the study towards causality and acknowledges the role of theory in shaping our understanding of reality, including what is 'natural.' Dialectics allows for a consideration of emergent properties of socio-natural interactions, which is key to understanding agrarian systems. A further premise that societies and biophysical realms have independent qualities facilitates clarity about causality.

The theoretical underpinnings of Political Marxism, neo-Gramscian and Regulation theories inform my understanding of agroecology and food sovereignty and my analysis of their possibilities in the uplands of Scotland. These possibilities are analysed through a twin approach of a historical political ecology analysis of the agrarian transitions in the uplands, nested in wider national and international contexts, and an analysis of current policy and discourse related to land reform and food systems, which reflect and shape the possibilities

for the realisation of agroecology and food sovereignty. Critical Discourse Analysis is used throughout the study to identify the main framings which drive and shape various policies impacting on agrarian systems in the uplands. Through this analysis the study provides an indication of the agroecological potentials of the uplands and the political factors which have been oriented towards and those which have been disoriented from food sovereignty and agroecology. The next section presents the key literature related to agroecology and food sovereignty and explains the interpretation and relevance of these concepts in this study.

Chapter 3: Literature Review of Agroecology and Food Sovereignty

Introduction

As discussed in Chapter 1, agroecology and food sovereignty are two influential social movements which seek to generate more ecologically and socially sustainable food systems. Both movements entail some counter-capitalist orientations, though the conceptualisations of capitalism within both the agroecology and food sovereignty movements vary. This chapter provides an overview of the origins, interpretations and critiques of both agroecology and food sovereignty and presents the interpretation of these concepts which are used in this study.

Section 1: Agroecology

The term 'agroecology' was first used in the 1920s to refer to application of ecology in plant science (i.e. at the plant, plot or field level) (Wezel, 2009). From the 1960s onwards, the term was used in relation to the integration of ecology and agriculture at farm or landholding scales. This largely entailed approaches for understanding and replicating existing ecological processes on a given site in order to produce more sustainably (Altieri, 1989). Later, from the 1990s onwards, a movement within agroecology began orienting towards food systems, considering issues such as distribution of resources and consumption issues (Wezel et al., 2009, Francis et al., 2003, Gliessman, 2014). At present, agroecology tends to be interpreted at either the farm level alone, based primarily on natural sciences, or at the food system level, which includes farm-level practices and thus integrates natural and social sciences and incorporates some type of political orientation (Rivera-Ferre, 2018, Rivera-Ferre et al., 2013, Levidow et al., 2014, Holt-Giménez and Altieri, 2013, López-i-Gelats et al., 2017).

While not using the term, 'agroecology,' there were many intellectuals who recognised the need for nutrient cycling on farms, a key component of agroecology. As detailed by Foster and Magdoff (2000) and Foster (1999), from as early as the 18th century and continuing through the 19th century, a number of intellectuals—including Scottish agronomist James Anderson, German chemist Justus von Liebig, Scottish agricultural chemist James F. W. Johnston, and US economist Henry Carey—had identified the increasing degradation of soils as a result of a lack of nutrient cycling, in contrast to the Malthusian idea that soils were

degrading due to population pressures. Relatedly, they indicated that the fertility of soil is not inherent but rather is built and maintained. At the time, efforts for improving and maintaining agricultural productivity were oriented towards the appropriation of fertiliser additions. However, these intellectuals identified that fertilisers which were high in only one or two nutrients could not make up for the lack of organic matter cycling such as through the applications of manure (from both animals and increasingly urban humans). Marx, and later Kautsky and Lenin, built on these analyses and argued that capitalist agriculture 'disturbs the metabolic interaction between man and the earth…hence it hinders the operation of the eternal natural condition for the fertility of the soil' (Marx, Capital Volume 1, 1976: 637-638). Indeed, many non-capitalist societies have cultivated and foraged food according to the principles of agroecology without labelling it as such (Carruthers, 1997, Turner et al., 2011, Altieri, 1995).

A. Agroecology at an ecological level

At the farm or holding level, agroecological production principles include approaches which seek to produce in ways which foster high levels of biodiversity and ecosystem health and which require minimal external inputs. Altieri and Toledo (2010) summarise the key components of Gliessman's (1998) farm-level agroecology as follows:

- 'recycling nutrients and energy on the farm, rather than introducing external inputs;
- enhancing soil organic matter and soil biological activity;
- diversifying plant species and genetic resources in agroecosystems over time and space; and,
- integrating crops and livestock and optimizing interactions and productivity of the total farming system, rather than the yields of individual species' (Altieri and Toledo, 2010: 588)

It is notable that many agroecological approaches seek not only to achieve 'sustainability' but to actually enhance or regenerate ecosystems through processes such as biological nitrogen fixation, building carbon into soils and fostering increased biodiversity at genetic, species, ecosystem and landscape levels (Altieri, 1995, Wezel et al., 2014, Pimbert and Lemke, 2018).

Much of agroecological practice is framed in opposition to the industrial farming practices which became widespread with the Green Revolution (i.e. high uses of inorganic fertilisers and pesticides (i.e. insecticides, herbicides, fungicides), over-use of irrigation, and reliance on formally bred seeds) and globalisation (see e.g. (Rosset and Altieri, 1997, Altieri and Toledo, 2011b, Lampkin et al., 2015, Rosset and Altieri, 2017, Giraldo and Rosset, 2018). Lampkin et al. (2015) frame agroecology as a 'development pathway from input-intensive industrial systems through to highly sustainable ecological systems' (10). Wezel (2009) indicates that the growth of the agroecology movement and its shift from plot level to farm level was part of the wider environmental movement which was initiated in response to the impacts of the industrial agriculture of the Green Revolution. Mendez et al. (2013) similarly note that agroecology emerged in response to the 'social and ecological costs generated by agricultural industrialisation and the implementation of Green Revolution technologies' (2013: 12).

Principles of agroecological production are in many ways opposite to those of industrialisation. The latter favours uniformity, high reliance on external inputs and the use of highly developed technologies which are often centrally controlled (Giraldo and Rosset, 2018, Altieri and Toledo, 2011, Tittonell, 2013). However, a framing of agroecology as counter to industrial farming can limit the scope of the agroecological concept. This is because the overriding of ecological constraints is not limited to industrialisation. As will be explored in Chapter 4, the agricultural improvements which were promoted in the transition to capitalism in Scotland (and which had occurred earlier in England, see Tilzey (2018) and Wood (2002a)), maximised productivity at the expense of diversity and long-term sustainability but might not necessarily have be considered 'industrial.'

While a large focus of farm-level agroecology is on the biodiversity and soil health which exists on farms themselves, there is also an important consideration of the wider impacts of farm-level practices on the surrounding ecosystems. Typical considerations include the effects of fertiliser or soil runoff from farms (which can result from improper soil cover) and can cause problems beyond the farm such as eutrophication and flooding (Daniel et al., 1998, Withers and Lord, 2002, D'Arcy et al., 1998). The work of Perfecto (2009) and Vandermeer and Perfecto (2007) goes further to make more of a direct link between agro-ecosystems and the biodiversity of the wider area. In their analyses, the landscape 'matrix' or the mosaic of the landscape strongly impacts on biodiversity through either enabling or preventing organisms

from travelling across the landscape from one area to another. Their work builds on the island biogeography research of MacArthur and Wilson (1967), Diamond (1975) and others, which indicated the necessity for populations of organisms to be able to migrate to different 'islands' (i.e. areas of a landscape) in order to thrive as a species. Specifically, the use of pesticides and reduction in wildlife habitats on 'conventional' or non-agroecological farms affects off-farm biodiversity through reducing the ability of populations of species to travel to other parts of the landscape. For example, insects cannot cross a field treated with insecticides (Vandermeer and Perfecto, 2007), and amphibian movement is hindered both by pesticides and by the loss of aquatic habitats within agricultural fields (Piha, 2006).

The wider ecosystem impacts of on-farm practices is highly relevant to debates about land sparing and land sharing. The former indicates that agricultural productivity should be maximised on favourable agricultural land, which can then enable other parts of the landscape to be 'conserved' for biodiversity and other environmental benefits (Lamb et al., 2016). As was introduced in the first chapter, a version of this framing is prevalent in Scotland: according to this view, lowland agriculture should be oriented towards high productivity, whereas upland agriculture should be oriented towards conservation, with limited concern for producing.

By contrast, the land sharing approach indicates that all agricultural areas should integrate both ecological sustainability and agricultural productivity, with some advocates differentiating agricultural production for commodities from that for society's needs (Fischer et al., 2014). The consideration of 'islands' of habitats or landscape mosaics indicates how the ecosystems on agricultural land are essential for fostering overall biodiversity across a landscape. Agricultural land can thus impact on the biodiversity residing within conservation land that is not directly adjacent to agricultural fields. In other words, dichotomies between the ecological protection afforded on productive and less productive land (as in land sparing) can cause long-term problems for biodiversity and ecosystems across large areas. The agroecological approach is a land sharing approach in that it seeks to regenerate ecosystems while also producing (a diversity of) agricultural products.

B. Agroecology at a food system level

Beyond the farm or holding-scale interpretation of agroecology, an expanded definition of agroecology in the 1990s and early 2000s began to consider linkages between production and consumption. A paper by Francis et al., (2003) (which includes Gliessman and Altieri as co-authors) advocates a 'food system' interpretation of agroecology. In 2007, Gliessman's third edition of the authoritative agroecology textbook oriented towards food systems, representing a significant departure from his previous focus on 'sustainable agriculture' (Gliessman, 2007). This food systems approach to agroecology has broadened the consideration of agroecology to consider not just how agricultural products are produced but to also consider how all people can have access to appropriate, adequate and nourishing food while protecting and conserving natural resources.

A number of publications have indicated that shifting agricultural practices towards agroecological approaches has the potential to address food security and nutrition problems (see e.g. De Schutter, 2010, Chappell and LaValle, 2009, Pimbert and Lemke, 2018). These claims tend to be based on studies which argue that area-based yields for agroecology are comparable to non-agroecological production approaches (see e.g. Badgley et al. (2007), Pretty et al. (2006), Khan et al. (2011)) and that the nutritional quality of agroecological production is higher than that of conventional production (see e.g. Barański et al. (2014) and Średnicka-Tober et al. (2016)). A further argument for the ability for agroecological approaches to contribute to better food security and nutrition is that the agricultural diversity inherent in agroecological systems can help to improve dietary diversity (Pimbert and Lemke, 2018, Chappell and LaValle, 2009) and can continue to produce even in the face of climatic shocks (Holt-Giménez, 2002).

However, the ability of agroecological approaches to generate enough food to meet society's needs is disputed. Some studies have indicated that agroecological processes have lower productivity (i.e. yield per hectare) than conventional processes (see e.g. de Ponti et al. (2012), Seufert et al. (2012)). These conflicting findings may stem in part from the tendency of productivity studies to equate organic and sustainable intensification approaches with agroecology (see e.g. Poux and Aubert (2018), Pretty (2008)), despite the potential for significant differences between these approaches (Pimbert, 2015, Guthman, 2000, Guthman, 2004). There can also be significant challenges in comparing yields between conventional and

agroecological farms due to the high levels of diversity and the nature of agroecological rotation processes which occur in agroecology but not in conventional production (van der Ploeg, 2014a:1003, Ponisio et al., 2015). These differences are not always captured by short term analyses or by focusing on one crop. Longer term analyses of the entire diverse yield of agroecological farms in comparison with conventional farms are lacking at the time of writing (Altieri and Toledo, 2011, Seufert and Ramanukutty, 2017). It is also unclear whether studies of productivity per area of land have accounted for differences in labour requirements between agroecological and conventional production, given that the former tends to rely on much higher labour per land area than the latter (Laughton, 2017).

Productivity debates have occurred in the context of discourse and research indicating the need to significantly increase agricultural yields in order to feed the world (see e.g. (Godfray et al., 2010), in what (Marsden, 2010) has termed a 'new productivism.' The dominant approach linked to this discourse is that more food needs to be produced on the same amount of land in order to prevent food security problems and that trade needs to be liberalised to enable people to access this food (Godfray et al., 2010, Foresight, 2011). This framing has been widely incorporated by UK policy makers and the agricultural industry (Tomlinson, 2013).

However, as Tomlinson demonstrates, this framing of needing to increase productivity ignores issues of distribution and access (2013). Further, it is partly based on modelling of price dynamics in order to determine accessibility of foods (*Ibid*.: 83). In other words, it is based on modelling of food access within the same capitalist social relations as exist today. The modelling also assumes that diets of more affluent populations in the Global South will inevitably transition towards Western diets and that Western diets will continue as they are (Kearney, 2010, FAO, 2006), assumptions that run counter to the idea that food production should be oriented towards healthy diets, rather than market demands.

There have been some acknowledgements of the need to influence dietary choices to facilitate better health outcomes amongst those oriented towards the 'feeding the 9 billion' approach, but the main focus remains on productivity (see e.g. Foley, 2018, Foresight, 2011). However, other studies have indicated that a change to diets alone would address food needs. In a modelling exercise, Poux and Aubert (2018) found that a reorientation of agricultural land towards a healthy diet for society, rather than towards agricultural commodities, would

reduce the land required for the European food system to the point where Europe could become self-sufficient in food using less agricultural land than at present even while using potentially less productive agroecological approaches. A study of the Dutch diet found that land required for the country's 'discretionary'[16] beverages alone (wine, beer, tea and coffee) comprised 12% of the total land required to feed the country (Gerbens-Leenes and Nonhebel, 2002), which ignores the land required to produce other 'discretionary' foods, such as sugar, refined flours and highly processed foods which do not fit into healthy dietary guidelines.[17] At a global level, modelling has indicated that orienting food production towards dietary guidelines would enable global agriculture to significantly exceed the needs of the projected population at 2050 (Berners-Lee et al., 2018). Further, a significant amount of agricultural land is now allocated to the production of biofuels (Molony and Smith, 2010, Harvey and Pilgrim, 2011) and reducing this could also reduce the pressure to maximise yields in agriculture and allow for less productive approaches.

In sum, research indicates that a reorientation of farmland away from commodities (i.e. exchange values) and towards human needs (i.e. use values) would potentially allow for sufficient food to be produced, in alignment with healthy diets, and through potentially lower yielding agroecological approaches. However, many advocates for a 'food systems' interpretation of agroecology have not explicitly made the link between commodity orientation and pressure for agricultural intensification on limited land. In his book on Agroecological Food Systems, Gliessman champions a community network which provides more direct linkages between coffee producers and consumers, as an example of an alternative food system which provides a decent wage to producers and which 'empowers' producers to use sustainable practices (2006: 323-328). The book does not discuss any potential trade-offs in food production resulting from the widespread production of coffee or other commodities. It is possible that this is due to the belief that agroecology is more productive per hectare than conventional farming and that there is thus scope for such commodities to be produced in addition to foods needed for a healthy diet.

[16] 'Discretionary' food and drinks refers to those products with little to nutritional value, such as alcohol, confectionary, sugary drinks, crisps, coffee, etc.

[17] A recent study indicated that households in Europe are consuming large amounts of ultra-processed foods, which comprise up to 50.4% of dietary energy in the UK (Monteiro et al 2017), leading to high and rising dietary diseases and premature deaths (IHME 2016)

An agroecological food system, in which food production is oriented towards and fulfilling of human needs would represent a shift away from the hegemonic capitalist system in which production and consumption is 'determined' by the market and only partially mitigated by the state in instances of so-called 'market failures'. It is this counter-capitalist interpretation of agroecological food systems which I use in this dissertation. Specifically, I consider agroecological food systems to entail ecologically sustainable (or regenerative) agricultural production which is oriented towards providing healthy diets on an equitable basis for the human population (i.e. oriented towards societal use value). However, as discussed in the next section, clarity about capitalism (and in turn, what is counter-capitalist) is lacking in much of the agroecology discourse.

C. Politics of agroecology

Agroecology as a political movement has been framed as oppositional to those who seek to only promote the technical or field-level approaches of agroecology (Giraldo and Rosset, 2018, Rosset and Altieri, 2017, Lopez-i-Gelats et al., 2016, Rivera-Ferre, 2012). The latter is associated with 'official' institutes (e.g. FAO, IFAD, etc.) which propose that agroecology can be one of many options for agrarian systems, and situate it alongside approaches such as 'climate smart agriculture' and genetic modification in what could be considered a cooptation of its environmental benefits and social mobilisation (Giraldo and Rosset, 2018: 548, Pimbert, 2015, Mendez et al., 2013, Levidow, 2015, LVC, 2015). The former is associated with grassroots and civil society movements which are seeking to 'transform' the food system, including the food sovereignty movement (Giraldo and Rosset, 2018: 547-548, Rivera-Ferre, 2018, Rosset and Altieri, 2017). While there are significant differences between these two broad framings of agroecology, there are also significant differences among those who claim to be advocating a political agroecology.

Again, many advocates of agroecology primarily frame it in opposition to industrial agriculture, as discussed above. However, agroecology is also commonly framed as counter-capitalist. Yet the implicit definitions of what is counter-capitalist and the identification of the forces and/or actors which drive capitalism are somewhat inconsistent, and at times counter to a Political Marxist understanding of capitalism.

Rosset and Altieri (2017) identify the need for social movements and grassroots organisations to 'struggle for land and defend their territories' and also advocate widening the commons. They further advocate ensuring that the technical tools of agroecological movements are 'of service to the collectivity.' They oppose a 'technical' or 'mainstreamed' interpretation of agroecology which often advocates a substitution of agri-chemical inputs for more 'ecological' inputs as this does not reduce producer dependence on external inputs and their markets (128, 132). Giraldo and Rosset's (2018) discussion of capitalism identifies the problem of 'convert[ing] people's communal goods into private property rights…making it impossible for people to live outside market-based networks' (551). Thus, both acknowledge the need for control over the means of production, identify the need for independence from markets and also acknowledge the importance of orienting towards collective needs rather than individual needs, in alignment with Political Marxism. However, the Rosset and Altieri (2017) article strongly focuses on the risk of agroecology being commercialised by agri-business (e.g. through incorporation into contract farming) without recognising that agroecological 'peasant' producers can also compete amongst themselves for local markets within capitalist dynamics as discussed in Chapter 2. Giraldo and Rosset (2018) similarly slip into identifying the drivers for these processes as corporations and 'big capital' and tend to focus on neoliberal 'accumulation by dispossession', articulated by David Harvey (2003). In strongly focusing on the cooptation of agroecology via international markets, they overlook the possibility for domestic or localised capitalist dynamics to occur. In sum, while these articles rightly point to control over the means of production and autonomy from markets as key aspects of counter-capitalism, they tend to frame capitalism as driven by and strongly associated with corporates, agri-business and internationalisation and imply that localism and *all* peasants are counter-capitalist, which runs counter to a Political Marxist understanding of capitalism as described in Chapter 2.

Friedmann (2016) argues, as does van der Ploeg (2008), that 'closed loop agriculture' which agroecology can represent (again, through minimising external inputs) is 'reversing the process of commodification' (10). The argument is that reducing or eliminating reliance on markets for agricultural inputs is a significant move away from 'the imperatives of capitalism' (*Ibid*.). Van der Ploeg similarly classifies those producers who do not rely on markets for inputs as peasants who are 'distantiated' from the capitalist system (2008). As above, this is

also a strong underpinning for the arguments of Rosset and Altieri (2017) and Giraldo and Rosset (2018). From a Political Marxist perspective, there is significance in reducing dependency on markets for the means of production, which includes land, labour, knowledge and inputs such as seeds and fertilisers. Reduced dependency on these 'input' markets reduces the imperative to produce for 'output' markets. However, a reduction in input dependence alone may not necessarily be enough to eliminate the dependence on selling into markets. For example, farmers without secure tenancy, or those on land parcels too small to provide for themselves or their households, will be subject to the imperatives of market competition even if they have created 'closed loop' or agroecological systems. van der Ploeg (2013) acknowledges that autonomy from input markets may not be enough for producers to continue a high distantiation from markets in certain market situations.

Another area of confusion relates to conflation between small scale producers, those who practice agroecology, and the implications of operating within capitalist society. Within the agroecology literature, small scale farmers are often associated with the practice of agroecology (Altieri and Toledo, 2011: 588, Holt-Gimenez and Altieri, 2013: 92, Holt-Gimenez, 2006). Altieri and Toledo (2011) define the transition towards agroecology as moving towards an 'alternative agricultural paradigm that encourages local/national food production *by small and family farmers* based on local innovation, resources and solar energy' (588, emphasis added). Rosset and Altieri (2017) similarly frame 'agro-capitalism' as something separate from small producers. Referencing research by the ETC Group (ETC Group, 2009), they state that '70% of world food production is in the hands of small producers, many of whom are agroecological' (Rosset and Altieri, 2017: 127). This conflation of small-scale producers and agroecology could stem in part from the orientation of agroecology as counter to industrial farming which tends to entail high reliance on external (agrichemical) inputs and occur at large scales (Wezel, 2009). However, as this thesis will argue, it is possible to engage in environmentally degrading agriculture at small scales and without the use of agrichemicals. Second, while there are important differences between small and large scale farming, including the affordance by the former of more of a 'mosaic' in the landscape which is less likely to occur with large scale farming[18] (Perfecto et al., 2010), the equation of small scale

[18] Some large farm holdings may be managed in a way that facilitates a mosaic, whereas other large farms may be singularly or near-singularly cropped at a given time. These latter farms would be unconducive to the travel of species over the landscape and thus less conducive to biodiversity.

producers with the practice of agroecology does not adequately recognize that many of these small producers are already embedded within capitalism and dependent on markets for their survival. Many small-scale farmers are thus engaging in various trade-offs in terms of what they produce and how they produce (as was discussed in Chapter 2, Section A), which limits their ability to contribute to agroecological food systems.

In a departure from the dichotomies of agroecological peasants and industrial agribusiness, Holt-Gimenez and Altieri (2013) indicate that smallholders and the practice of agroecology can be both a 'means and a barrier' to the expansion of capitalist agriculture. Drawing on De Janvry (1981), they note that smallholders subsidise capitalist production through their cheap labour and also through supplying a 'low end factor market', which enables industrialisation to expand, in turn leading to the 'subsumption' of peasants to capitalist agriculture (Holt Gimenez and Altieri 2013: 92). Van der Ploeg (2014) also acknowledges that peasantries are shaped and reproduced by capital and also contribute to the unfolding of new forms of capital such as the organic food sector (2014: 1023). While Giraldo and Rosset (2018) also acknowledge, drawing on Bartra (2008), that capitalism needs peasants, they suggest that that capitalism 'needs peasants who are *fully integrated* into the markets' (552, emphasis added). It is unclear whether producers who are fully integrated into (capitalist) markets could be considered as peasants. For van der Ploeg, peasants are always striving for autonomy from markets, and there is some fluidity between categories of farming, with de-peasantisation and re-peasantisation occurring with relative distantiation from markets. Tilzey (2018) indicates that while peasants may strive for autonomy, they may not have the means to address the social property relations which allow for this autonomy. The complexities of peasantry and capitalism are discussed further in Section 2 of this chapter.

The orientation of agricultural production towards local food systems is another prominent feature in agroecology discourse which is at times framed as counter-capitalist (see e.g. Rosset and Altieri, 2017, Rosset and Martinez-Torres, 2012, Francis et al., 2003, Altieri and Toledo, 2010). Localism is framed as counter to globalised agri-business and is at times seen as a reorientation of production with 'ecosystems and societies' (Rosset and Martínez-Torres, 2012: 17). However, I argue that while a localisation agenda can be in service to a greater integration of production, consumption and ecology, localisation does not necessarily lead to this integration. Where local food markets exist in parallel with retailers of global commodity

foods, local food can represent an 'alternative' or progressive approach which may fail to include large sections of the population, particularly those on lower incomes, and which does not necessarily undermine capitalism (Holt-Gimenez and Shattuck, 2011). As Giraldo (2019), drawing on Bartra 2008: 80 suggests, 'the problem is not markets or meeting places where goods and services are exchanged but rather that worldly activities are *oriented by the whims of capital*' (112, emphasis added). In other words, operating (or not) within capitalist imperatives is a more significant determinant of agroecological food systems than localism per se. Similarly, Lamine and Dawson (2018) argue that relocalisation is part of the solution but 'does not fully address the diversity of interdependencies of food systems' (1). I would go further to say that while localisation is important, efforts to relocalise in and of themselves are not sufficient to transform the capitalist dynamics which prevent the realisation of agroecological food systems.

As the above discussion indicates, political agroecology is commonly framed as counter-capitalist but without full clarity about what this entails. The food sovereignty movement has explicitly incorporated agroecology into its aims and principles (LVC, 2015). At a European Level, La Via Campesina has adopted agroecology as a 'path to food sovereignty' (ECVC, 2018: 20). The more political advocates of agroecology, in turn, have also endorsed and supported food sovereignty as a way to realise agroecological food systems (see e.g. Vandermeer and Perfecto, 2009, Holt-Gimenez and Shattuck, 2011, Pimbert, 2015, Levidow, 2015). As such, food sovereignty is an important framework for a food system interpretation of agroecology. However, as with agroecology, the food sovereignty movement is also heterogenous, though is arguably stronger in its counter capitalist orientation. The following section provides an overview of the counter-capitalist aspects of food sovereignty as well as the controversies about small scale producers, peasants and agrarian transitions which have surrounded the concept.

Section 2: Food sovereignty

Food sovereignty aims to 'return the land to its social function as the producer of food and sustainer of life' (LVC declaration Rio +20 (LVC, 2012))

Food sovereignty as a concept is largely associated with La Via Campesina (LVC), a peasant social movement which brought together representatives of peasants and small scale

producers from North, Central and South America in 1993 and has since evolved into a global movement of producers (Borras, 2004). While some controversy exists about whether LVC itself first coined the term (Edelman, 2014: 911), LVC's introduction of the food sovereignty concept at the World Food Summit in 1996, as a departure from food security, brought it into widespread public awareness (Patel, 2009: 665). The concept of food sovereignty called for a consideration of the processes by which food security is ensured, including the ecological aspects of production and the livelihoods and wellbeing of producers. It also introduced an element of democratisation of food systems (McMichael, 2014: 937).

Food sovereignty as a concept has been evolving rapidly since its introduction. It initially focused on nation states and their right to determine their own priorities for food production. However, the LVC conceptualization of food sovereignty later evolved to focus on the rights of peasant producers, and in 2007 the right of 'peoples' to shape and define their food and agricultural systems in democratic ways (Patel, 2009, Wittman et al., 2010). While food sovereignty has been widely interpreted and implemented (Borras et al., 2015), overall the movement has at its core a number of counter hegemonic principles.

A. Food sovereignty as counter-hegemonic

The 2007 Nyeleni Declaration of La Via Campesina indicates that food sovereignty 'implies new social relations free of oppression and inequality' (LVC, 2007b). Included in LVC's Six Pillars of food sovereignty and the thematic outputs of the Nyeleni forum are three main counter-hegemonic concepts: democratic control over natural resources; an orientation of agriculture towards food and away from commodities; and a democratisation of trade.

- **Democratising, not privatising resources:** The LVC indicates the centrality of 'access, control and stewardship of the natural resources…[including] land, forests, water, seeds, livestock breeds and fish species' for food sovereignty (LVC, 2007b). It laments that such resources 'are increasingly becoming commercialised and privatised commodities.' (Ibid). The European Coordination of Via Campesina argues for 'human beings having direct, democratic control over the most important elements of their society – how we use and maintain the land, water and other resources around us for the benefit of current and future generations and how we interact with other groups, peoples and cultures' (ECVC, 2018: 3). This represents a clear departure from the

privatisation of the 'means of production', while also recognising the interconnectedness of food systems.

- **Reorienting towards food, not commodities**: The first pillar of food sovereignty (LVC, 2007b: 75) 'rejects the proposition that food is just another commodity'. The non-capitalist aspect of food systems is reinforced by the second pillar, which refers to 'valuing' food providers, a departure from assuming that the market will remunerate people as needed. Finally, the third pillar relates to localising food systems. While local markets can potentially exist within a neoliberal food regime (in which they are only accessible to a small minority of the population as discussed above), local food systems can offer a departure from neoliberal capitalism when they are accessible to everyone, when they reconnect people to place and when markets are 'under societal control' (LVC, 2007b) in a departure from anonymised competitive markets. Taken together, this aspect of food sovereignty entails a departure from treating food primarily as a commodity and, in Marx's terms, reclaiming the importance of its 'use value' over its 'exchange value.'

- **Democratisation of trade**: The initial definition of food sovereignty in 1996 offered by LVC focused on a right of nations to be self-reliant in food, whereas later definitions (2002 and 2007) instead focused on the right for people to determine the extent to which they want to be self-reliant (McMichael, 2014). While Agarwal (2014) critiques this based on arguments against the viability of self-reliance, LVC is clear that food sovereignty is not about self-sufficiency, and does not negate trade (Burnett and Murphy, 2014), but rather emphasizes that decisions about trade need to be determined through democratic deliberation, rather than determined by 'market forces' (*Ibid*., LVC, 2007b). Bringing trade decisions under democratic control is another departure from allowing markets to determine the movement and consumption of agricultural products. While this principle is particularly contra to the free trade principles of neoliberalism, it is also counter to capitalism in general in that it allows for the possibility of orienting food production towards consumption as a society.

Taken together, these principles of food sovereignty directly challenge the capitalist underpinnings of the existing food system, and thus the ecological and social exploitations that are generated by the capitalist system. They challenge the privatisation of resources (the means of production), and they counter the idea that markets should determine what is produced (again, driven by exchange value) and where products go (driven by exchange value and underpinned by international trade agreements, trade rules and government orientations toward exports and GDP).

However, Patel (2009), a 'critical friend' of the movement, has referred to food sovereignty as 'big tent' politics, where multiple interpretations of food sovereignty and different (and conflicting) class interests are advocated under the same banner. While its inclusivity has galvanised what many have considered to be the most significant transnational movement globally (Martinez-Torres and Rosset, 2010, Borras, 2004, McMichael, 2006, Patel, 2005, Patel, 2006, Borras and Franco, 2009), its diversity and fluidity also present risks of co-optation into neoliberal projects (Patel, 2009, McMichael, 2008). Its multiple interpretations have also subjected the movement to criticism (see e.g. Bernstein, 2014).

An area of strong controversy about the meaning and relevance of food sovereignty (and the agroecology it promotes) stems from disagreements about the role of peasants and small-scale producers in the food system.

B. Food sovereignty and the question of peasants

The food sovereignty movement is strongly centred on small-scale producers and peasants, who are often considered to be one and the same (Araghi, 1995, Claeys, 2013, UN, 2018). While the 2007 declaration explicitly went beyond producers to include consumers and distributors (LVC, 2007b) and the movement now includes urban and peri-urban non-agricultural populations (Borras et al., 2015: 607), the LVC is still centred on peasants and small-scale producers, who are claimed to comprise the majority of the LVC movement (LVC, 2015).

The centrality of peasants and small-scale producers in the movement and the advocacy for their right to livelihood has enlivened debates about the roles of peasants in agrarian systems. Van der Ploeg has promoted a neo-Chayanovian approach of removing the constraints to the 'peasant way' (2013, 2014a, 2014b, 2008, 2018). Van der Ploeg (2014a) argues that a focus

on production and growth will contribute to redistribution and the resolution of other problems in food systems, such as waste. (2014a: 1001). While Van der Ploeg distinguishes three categories of producers: peasants, entrepreneurs and capitalists, he acknowledges that there are overlaps between categories and that producers can travel along a continuum between types of production.[19] He makes important distinctions between peasants and entrepreneurial farms, both of which might be small in scale. Van der Ploeg thus avoids the common mistake of completely eliding class differences among small scale producers. Van der Ploeg defines peasant agriculture as 'built upon the sustained use of ecological capital and oriented towards defending and improving peasant livelihoods' (van der Ploeg, 2018: 2). He describes peasants as autonomous, pluriactive and striving to reduce dependency on input markets. He states that '[peasant] production is partly market-oriented but also partly oriented to the reproduction of the farm unit and the family' (Ibid). In comparison, he describes entrepreneurs as discordant from ecological 'co-creation' and highly dependent on markets for inputs as well as outputs. In a 2014 article he states that he considers peasant agriculture to be Petty Commodity Production, 'producing for the downstream markets but grounded on low levels of commoditisation of the main resources' and considers entrepreneurs to be engaged in Simple Commodity Production, 'grounded on a far reaching commoditisation of the main resources, but not of the labour force' (1004). Overall, he argues that producers who are embedded within capitalism (and/or 'subordinated to the overall logic' of capitalism) can be considered non-capitalist peasants (Ibid).

In contrast, Bernstein (2014) points out that Petty Commodity Producers—what van der Ploeg refers to as peasants—have internalised commodity relations, due to the overall 'commodification of subsistence' in capitalism. Contra van der Ploeg, he indicates that this results in a 'relentless micro-capitalism' of petty commodity production in the countryside (2014: 1044, drawing on Davis, 2006). He advocates a stronger differentiation of class position within food sovereignty analysis.

[19] Van der Ploeg distinguishes capitalist farming as being characterised by a commodification of *all* resources, including the labour force in the process of production (2014b: 1004). Similarly, Amin (2011) argues that family farms in the US (both large and small) are not capitalist because they have no fixed division of labour (i.e. they do not generally employ off-farm labour). But they are nonetheless subject to the capitalist imperatives of market dependency and competition.

Wood (2002) argued that if producers depend wholly or partially on the sale of their products into markets, they will necessarily operate in ways that are different from producers who do not need to produce for a market (Wood, 2002, Tilzey, 2017, Tilzey, 2018). As discussed in Chapter 2, market dependence leads to limitations in the ecological aspects of production, the types of products generated and/or the people to whom products are made available. Further, as discussed in Section A in relation to agroecological food systems, the production of commodities which are not necessarily oriented towards society's food needs can put pressure onto remaining farmland (particularly that in the 'periphery') to produce more intensively. It also can exclude some classes from benefitting from the products of the land (e.g. if they are financially out of reach). While van der Ploeg (2014) discusses ecological sustainability as one of the qualities of peasant production, his engagement on issues related to what is produced—and the effects of what is produced—is somewhat lacking. Again, his concept of peasants as distantiated from markets is more focused on input markets than on output markets (van der Ploeg, 2018: 55-56).

Tilzey (2018: 170) proposes that van der Ploeg has conflated petty commodity producers with peasant producers in his definition of peasantry. He argues that producers who have turned towards 'local', 'ecological' and 'quality' food—foods, which van der Ploeg (2008: 279-280) considers to embody the 'cultural capital' which is 'intrinsic to the peasant principle'—could be considered to be entrepreneurial producers in that they are dependent on the capitalist market, even if they do not employ or commodify wage labour. Tilzey argues that while Marsden (2003), Marsden and Sonnino (2005) and Morgan et al. (2006) have defined producers of this sort as 'post-productivist' and counter to corporate and industrial food interests, their dependency on 'economies of scope' and niche markets only provides a temporary relief from the pressures of competition (Tilzey, 2018: 169). As more producers enter a market, be it organic, geographically protected, etc., competition leads to cost-cutting pressures which impact, in turn, on labour conditions and on labour-capital ratios, encouraging downward pressure on workers' wages and/or a shift to practices which require less labour (e.g. mechanisation, the use of chemical rather than labour inputs or, in the case of the uplands as we shall see, extensive livestock farming). This then leads to practices which diverge from agroecological food systems. In accord with Tilzey (2018), I do not consider that producers who are independent of upstream markets but produce for downstream markets,

are *necessarily* contributing to or moving society towards non-capitalist food systems, even if they are producing foods with 'cultural capital' (van der Ploeg, 2008: 280) or foods with 'distinction' such as Texel Lamb from New Zealand, Parmesan from Italy and even organic food (van der Ploeg, 2018: 209-211). In addition to the reasons which Tilzey advances, I would add that such products, even when sold in short supply chains, tend to be exclusive to affluent or educated consumers. Some of these products could also be considered 'discretionary' and their production can come at the expense of producing the foods necessary for healthy diets, in what I would consider to be the prioritisation of exchange value over societal use value. The production of niche products which may or may not allow certain producers to be relatively distantiated from markets, does not adequately take into account the societal use value of production from my perspective. In the context of limited land resources for agriculture, niche production also appears incompatible with agroecological food systems, as discussed earlier in this chapter. Van der Ploeg appears to negate the latter through his argument that peasant agriculture is more productive than non-peasant agriculture (van der Ploeg, 2014). Again, as discussed above, studies of productivity are somewhat inconclusive, and I argue that the ability to produce a certain number of calories or tonnes of product per hectare or per unit of labour must absolutely consider whether that product is of societal use value.

Thus, a producer who qualifies as a peasant according to van der Ploeg's typology, does not *necessarily* contribute to the realisation of agroecological food systems as I define them here, though many surely would. Similarly, peasant production, as defined by van der Ploeg, does not *necessarily* align with the Food Sovereignty movement's aims of non-commoditised food which is accessible to everyone and which is democratically controlled by society. As such, I do not use van der Ploeg's typology of peasantry to indicate whether producers contribute to agroecological food systems, but instead use Wood's concept of market dependence, with a strong consideration of what is being produced and the extent to which food access is available to the many and not the few.

In a broader critique of the food sovereignty movement, Bernstein (2014) points out that many of the peasants and activists who initiated the food sovereignty movement in Latin America did so in response to free trade agreements and other globalising events which significantly undermined their livelihoods from the 1970s onwards (*Ibid*.: 1033). Brass (2015)

indicates that this perspective on the causations of agrarian problems results in strategies which can be considered 'nationalistic', and/or simply oppose 'corporate industrialised agriculture' (1032). Brass rightly criticises the arguably populist idea that supporting peasantry as a single entity is somehow anti-capitalist (Brass, 2015: 192). He notes that rather than opposing capitalism, undifferentiated peasant movements (i.e. those led by the upper peasantry) instead oppose 'the market advantage currently enjoyed by large agribusiness enterprises' (Brass, 2015: 196). His point is that the concept of supporting the peasantry as a generality (comprised in reality of differing class fractions of semi-proletariat, middle peasantry and economically efficient family farms), and the aims of the (commercially-oriented) peasantry fighting to survive and reproduce itself through the market do not represent a 'revolutionary' effort to change or undermine the capitalist system, but rather an effort to make capitalism easier on certain producer groups through state mediation of the way capitalism operates. Kappeler (2013:2) similarly critiques the focus of the food sovereignty movement on 'levelling the playing field,' which does little to transform capitalist social relations.

These criticisms of where the food sovereignty movement, like the agroecology movement, has lacked specificity about capitalism could help to strengthen and refine the movement. However, neither Bernstein nor Brass propose ways for addressing the problems inherent in capitalist agriculture. Both authors point to the *benefits* of capitalism but neither fully engages with the starkness and urgency of its limitations. In his 2014 article, Bernstein evokes Malthus in praising the labour productivity of capitalist agriculture for allowing population growth and urbanisation to occur (2014: 1040). Bernstein (2002) embraces economies of scale, mechanisation, specialisation, divisions of labour, and other aspects of capitalist industrial agriculture. (Bernstein 2002: 440). Tellingly, Bernstein (2002) indicates that the agrarian question is no longer relevant and that we should instead be investigating issues within the capitalist system (even after the passing of neoliberalism). Neither engages fully with the ecological damages caused by the capitalist (or industrial) mode of agricultural production (discussed in Section A above), as has been critiqued by Friedmann (2016). Nor does either author acknowledge the need to address a trend of declining nutrition of foods, which several studies link to capitalist industrial production systems (see e.g. Pimbert and Lemke, 2018, Davis et al., 2004, Thomas, 2003, Barański et al., 2014, Średnicka-Tober et al.,

2016, Chappell and LaValle, 2009). Bernstein (2014) questions the ways in which the products of peasant agriculture could be accessed by non-producers, asserting that markets have distributed food from producers to consumers better than any other system. While he notes that distribution has been unequal, I argue that he understates the inequality and resultant widespread malnutrition which persists today despite productivity covering the food needs of the global population (FAO, 2012).

While Bernstein[20] (2014) and Brass (2015) have largely overlooked the potential—and necessity—for food sovereignty to be a positive force for agrarian change, Tilzey (2018) and Vegara-Camus (2014) from a Political Marxist perspective, argue that mobilising around food sovereignty offers important potential for agrarian and livelihood transformation, when the potential contradictions within the movement are recognised. As already stated, this dissertation aims to identify instances in which food movements advocate for or result in significant challenges to the hegemony of capitalism, and instances in which hegemony is not challenged. In relation to hegemony, the following section offers a brief consideration of the role of the state in food sovereignty.

C. Food sovereignty and the State

While the concept of food sovereignty has evolved away from the state level and is now more oriented towards producers and 'peoples,' there remain a diversity of perspectives about the role of the state in food sovereignty. According to Borras et al., (2015), while the food sovereignty movement has preferred decentralised, non-state actors (e.g. communities, households, etc.) to be the main protagonists of food sovereignty, the incorporation of food sovereignty aims by a number of states in South America has re-problematised the role of state sovereignty in food sovereignty. Further, drives toward changing the governance and rights over land 'inevitably' bring food sovereignty advocates into relation with the state as a 'regulator, arbiter or claimant' of land (*Ibid*.: 607). Further, Bernstein (2014) points out that much of the food sovereignty movement has advocated that states should support small-scale farmers and peasants (e.g. Altieri, 2010). Bernstein argues that this state-oriented advocacy fails to recognise that most states are 'deeply implicated in the ongoing march of capitalism 'against the peasant'' (2014: 1054).

[20] Bernstein states that he does not outright reject the concept of food sovereignty but is sceptical.

The 'Food Regimes' theory of Friedmann and McMichael (1989) has been highly influential among scholars and activists supporting food sovereignty, including Holt-Gimenez (2019) and Moore (2015). McMichael himself has also become a strong advocate of food sovereignty (McMichael, 2014). However, Friedman and McMichael's food regime theory has arguably failed to adequately consider the role of the state in maintaining capitalist food regimes. As an example, in their 1989 paper, they state:

> 'We conclude that the growing power of capital to organise and reorganise agriculture *undercuts state polices* directing agriculture to national ends such as food security, articulated development and the preservation of rural / peasant communities' (95, emphasis added)

This statement implies that it is capital which prevents the state from orienting its farmland towards food security and the survival of peasant communities. Tilzey argues that this conceives of capital and the state as 'discreet, polar entities' (Tilzey 2018: 113-114). In doing so, food regime theory does not recognise that the state itself can play an active role in furthering the dominance of capital, per Regulation Theory. Tilzey (2018, 2019) argues that the Food Regime Theory would benefit from better consideration of the role of the state in *maintaining* capitalism. As discussed in Chapter 2, in Regulation Theory, the state is understood to entail the 'condensation' of class relationships (Bieler and Morton, 2004: 90, Jessop 2014, Poulantzas, 1978). Drawing on Regulation Theory, Tilzey argues that the state plays a 'crucial role' in legitimating or suppressing the contradictions of capitalism and thus in enabling and strengthening food regimes (2018: 113). In Scotland, as we shall see, the state offers a number of environmental and social supports in the agricultural sector. While these could be viewed as 'counter' to or in resistance to the hegemony of neoliberal capitalism, they could alternately be viewed as potentially enabling the hegemony to continue and enabling the state to reproduce itself. This is because such policies do not challenge the overall dominance of neoliberal capitalism, but rather partially mitigate its effects, and legitimise state policy as both 'green' and supportive to marginalised producers.

While not explicitly evoking Regulation Theory, Holt-Gimenez and van Lammeren (2019) question the ability of existing states to support a truly counter-hegemonic food sovereignty. They ask, 'can liberal democracy--an institution founded on private property and individual rights--promote a socialized property regime like the food commons?' (2019: 320). They, like

Tilzey (2018, 2019a, 2019b) support the need to go further, to consider not just the fact that states (and international bodies) protect property rights but that there are strong class interests in maintaining a neoliberal capitalist agricultural system, and thus in preventing the realisation of food sovereignty within or outside of Scotland.

In analysing the potentials for food sovereignty, this dissertation does not treat the state as a neutral entity. Further, it recognises that any incorporation of 'counter-hegemonic' discourse or policies could represent the strengthening or maintenance of hegemony, and not necessarily the weakening of it. The analysis of land policy and food-related discourses in this study aims to facilitate a fuller picture of the dominant paradigms which shape Scottish agriculture in the uplands and the extent to which they are substantively challenged.

Conclusion

The concept of agroecological food systems, in orienting production towards ecological regeneration, and towards the food needs of society, offers potential for addressing the ecological and social challenges stemming from today's capitalist food systems. I argue that the realisation of agroecological food systems is unlikely to occur within capitalism, in that it requires an orientation of agricultural production towards societal use value, instead of exchange value. This premise of reorienting food systems towards social needs is strong within the food sovereignty movement, which includes a number of counter-capitalist aspects.

While many agroecology and food sovereignty advocates and scholars claim to be counter-capitalist, discourse often slips into a dichotomy between neoliberal corporate and/or industrial agriculture and small-scale peasant agroecology. Other analyses discuss capitalism but not in ways which are completely congruent with a Political Marxist understanding of market dependency. Instead, a premise which underpins this study is that dependence of producers on markets for their social reproduction undermines their ability to contribute to agroecological food systems. While issues of scale, reducing input dependence and localism can all be part of a counter-capitalist food system, in themselves they do not represent counter-capitalism practices or actors. Further, while advocacy is often directed at the state for the promotion of agroecology, and state involvement may be necessary in transitions

away from capitalism (e.g. in changing private property rights), this study understands the state not as a neutral actor but as a condensation of class forces and thus considers that any 'concessions' for 'alternative' and 'counter' movements may represent a strengthening and legitimising of capitalist social relations. With these foundations of agroecological food systems and food sovereignty established, the next chapter analyses the transition towards capitalist social relations in the Scottish uplands.

Chapter 4: The Agrarian Transition from Clanship to Capitalism

Introduction

This section details the agrarian society which existed prior to the agrarian transition towards capitalism in the Scottish uplands, the changes which occurred immediately after the agrarian transition, and the attempts to address the symptoms of capitalism which followed. In doing so, it exemplifies how the land use patterns which are predominant today, sheep grazing and sporting estates, do not have their roots in the ecological characteristics of the uplands in themselves as is often assumed (see Chapter 1). Rather, they became seen as the most efficient or self-evident uses of land in the context of a strong push towards a capitalist system, namely in the privatisation of land and compounded by trade policies and the contrasting economy of the industrialising lowlands.

While nearly all of Scotland was Gaelic speaking in the 11th century, in the 14th century, Scotland was largely[21] divided between '*Gàidhealtachd*', the Gaelic 'Highlands,' and the English speaking 'Lowlands' (Withers, 1988: 3-4). MacInnes notes that the distinction between the highlands and lowlands was abstract and did not reflect hard boundaries (MacInnes, 1981: 157). However, the Highlands Boundary Fault line is often used to delineate the two areas, and this largely coincides with the current classification of upland and lowland areas in Scotland (see Figure 1). The vast majority of upland land is located in the Highlands, north and west of this line.[22] The two exceptions are the 'Southern Uplands', which exist in what is now the Borders and Dumfries and Galloway, and the Shetland and Orkney Islands. The islands were not part of *Gàidhealtachd* but have at times been included in the Highland classification. The agrarian transition in the Highlands occurred later than that in the rest of Scotland, and for that reason has been more extensively documented (Withers, 1988, Hunter, 1976, Dodgshon, 2015, Dickson, 1980). For these reasons and in the context of the purpose and scope of this study, this chapter's historical analysis of the agrarian transition in the uplands will primarily focus on the Highlands.

[21] Nordic descendent society also existed in Orkney, Shetland and the northernmost areas of mainland Scotland

[22] More recently, the 'Highlands and Islands' became an electoral region and the 'Highland' is also a council area (which does not include the Western Isles, Shetland or Orkney). For this chapter 'Highlands' is used to roughly refer to that which had been considered to be '*Gàidhealtachd*'.

Figure 1: Map Depicting the Highland Line and the Highland Boundary Fault Line (Source: Withers, 1988: 2)

Section 1. Social property relations and agrarian practices in clanship

Prior to the transition to capitalism in the Highland areas of Scotland, land and community were governed based on a Gaelic clan-based system. While social property relations in the remainder of Scotland had transitioned away from clanship and towards feudalism around the time of the Norman Conquest, the Anglo-Norman settlers struggled to dominate above the 'Highland line', and so the social structures and norms in the Highlands were still largely based on clanship, which has been described as 'the fusion, not the fission of feudalism, kinship and local association' (Macinnes 1996: ix). While the central Scottish government led by James VI was primarily focusing its efforts on converting Gaelic areas of the east and southern fringes of the Highlands away from clanship in the 16th century (though also made attempts to dismantle clanship in the western Highlands and Islands (MacGregor 2006)), the western and northern highlands remained under clanship throughout the 17th century while the tenure system had changed in the lowlands and Southern uplands by this time (Smout and Fenton, 1965).

Within the clanship system, chiefs and leading gentry or elites (referred to as the *fine*) were seen to be responsible for ensuring the overall well-being of the clan (Devine, 1994: 10). This included ensuring that their clansmen had access to sufficient land and resources in order to provide for themselves and to produce some surplus to support communal resources such as providing for the chief, bard, and for communal feasts, where everyone ate together (Johnston, 1974). It was understood that 'ruling families had responsibility to act as their protectors and guarantee secure possession of land in return for allegiance, military service, tribute and rental' (Devine, 1994: 11). This responsibility is often referred to as *duthchas.* While there is no direct translation for this Gaelic word, it can most closely be defined as the exercise of trusteeship of the clan chiefs and *fine*. Clansmen were considered to be part of an extended family, and an essential virtue of chiefship was compassion and ability to support those in need (Macinnes, 1996: 3).

Devine also notes that the clan was structured to ensure its existence as a 'socially unified and militarily effective organisation' (1992: 11). Because of the focus on cohesion and military needs, and perhaps also because of other cultural values, agricultural production and rent paid on land were not maximised but were sufficient. Historians have noted how the 'clan system in general cultivated people, not crops' (Dodghson, 1982: 108), and one of the primary

values of clanship was protection (Macinnes, 1996: 3). Macinnes (1996: 18) also discusses the way in which efficiency was 'defined not in terms of market production or basic subsistence but in terms of *beathachadh boidheach* - comfortable sufficiency for the clan as a whole, not just the fine in particular.' Further, clans required military force for defending against raids (or utilised this force for raiding other clans' supplies). In the context of this system, there was little incentive to increase food production much beyond sufficiency, particularly in the context of low food prices (Smout and Fenton, 1965). Thus, social property relations, and agricultural production stemming from them, were oriented towards the welfare and interests of the collective, at least at the level of individual clans. One scholar writes, 'land in the Highlands…was laid out not so much to ensure an effective agricultural economy as to stabilise a class structure and to verify mutual obligations' (Gray, 1957: 23).

Apart from their military service, most people were primarily engaged in activities that contributed to their subsistence and the subsistence of the collective. Food rents were redistributed to meet productivity, entertainment and trade needs, as well as to provide support for newlyweds or recently arrived families (Macinnes, 1996: 20).

For the majority of clans—but not in all localities—'tacksmen' served as an intermediary between the fine and the rest of the clansmen. They are seen to have played a political role of stabilising the sub-branches of clans and maintaining clan solidarity, in addition to collecting rents. Macinnes describes them as 'harmonisers of landed resources, of social expectations and of manpower' (1996: 18). Tacksmen tended to be kinsmen to the chief who sublet land to small groups of families and ensured that there was an adequate supply of skilled soldiers (Macinnes, 1996, Devine, 1994). They were responsible for managing resources within a *baile* or collective settlement. This included management of natural resources as well as distributing (and re-distributing) land and coordinating work (e.g. transport of produce to markets).

Monetary exchange was highly limited and was one of the factors which limited wage-labour and employment through trade. Again, most activities were coordinated by the tacksmen. However, there were also specialised tradesmen, though the analysis of these people varies amongst authors. Dodgshon states, 'What is missing from the Highlands is any substantial reference to independent tradesmen. There were many cottars or crofters who practiced a trade, such as weaving or shoemaking, but few who derived their living in this way.

Subsistence in the Highlands meant land, and few were entirely removed from it, either directly or indirectly' (1981: 287). Macinnes (1996) on the other hand acknowledges the existence and importance of tradesman such as coopers, smiths, millers, weavers and shoemakers. He states that these people had their own individual smallholdings attached to the settlement, rather than engaging in the multiple tenant farming system of most clansmen. In both assertions, however, it appears everyone in the clan depended on the land for their needs, and even the minority of clan members engaged in other professions worked the land in some way through their smallholdings.

The concept of *duthchas* or trusteeship of the fine was complemented or 'harmonised' with that of *oighreachd,*[23] the bestowal of title and heritable jurisdiction over land that the fine owned. However, this was not formalised in law, but was based on customary agreements and personal trust (Macinnes, 1996: 6). Similarly, in terms of tenancy, clansmen did not have heritable title but had customary rights to tenancy once they had inhabited the land for more than three generations, for kin within four degrees. After growth of the family beyond what the land would support, kin tended to split into new groups, provided that land was available. This security of tenure—referred to as 'the right and kindness,'[24] was not legally formalised, which would prove to be significant in the legal changes to come.

Settlements, or *bailes,* were organised as multiple-tenant farms, and varied in size, from 4 to 16 families. Arable land, or in-bye, was typically located closest to a settlement and was cultivated with high levels of attention and care through a run-rig system. In-bye land was typically cultivated year after year and therefore people ensured its continued fertility through the use of animal manure, seaweed, turf, old thatch, bedding material, etc. (Dodgshon, 1981: 159, Macinnes, 1996: 19, Dodgshon, 2015: 107). The main livestock which were kept were cattle, horses, goats and sheep (Dodgshon, 1998: 163-197). Clansmen were allocated strips of land in the in-bye which were redistributed every few years, ensuring wet and dry portions of land were equitably shared among the tenantry, and proximity to holdings was also considered (Macinnes, 1996: 17). Larger areas of 'outfield'[25] land, comprising up to

[23] Macinnes notes that this was unique in Scotland and that in Ireland, the equivalent concept of *duthchas* was not complemented with *oighreachd*

[24] It is unclear whether this refers to 'kindness or tolerance' of a feudal superior or whether it refers to kinship (Dodgshon 1981)

[25] Dodgshon (2015) notes that at the time, people did not use the term 'outfield' to describe this system and it only came into use in later analyses in juxtaposition with infield systems

hundreds of acres, were used for arable and grazing in rotation, with attention to ensuring different parts of the land were left fallow to regenerate. Outfield areas often entailed shieling systems of transhumance or seasonal settlements, with people moving up to the shielings after the sowing of crops. In shielings, people (primarily women) produced dairy products while animals (cattle and sheep) grazed. The transhumance also had the effect of taking animals away from the in-bye crops when they were most vulnerable after sowing (Whyte, 1979, Miller, 1967).

Much written evidence focuses on the use of outfield and shieling areas for livestock, and in terms of land area the outfield was primarily pastured. It is also important to note, however, that outfields were also cultivated, particularly once animal manure had increased the fertility of the soil (Dodgshon, 2015: 111, Bil, 1990). In order to concentrate the increased fertility from manure, livestock would be 'folded' in the summer on a patch of land chosen for cultivation the following spring in what is called 'tathing.' Once it was time to cultivate the area, livestock would be moved onto a new fold (Dodgshon, 2015: 107). Cultivations occurred in rotation with pasture, or, at times, shielings became converted to new permanent settlements or *bailes* (*Ibid*.). Grazing in the outfields was communally shared within each *baile* (i.e. it was not subdivided as the in-bye land was).[26] Whyte (1979) indicates that shielings were also documented throughout the southern uplands (i.e. uplands outside of the Highland area) during the medieval period but were already in decline from the early 18th century (Whyte, 1979: 84).

The area of arable land was relatively equivalent to that of pastureland within the infield (or inbye) and outfield systems of many *bailes* (Dodgshon, 2015: 121). However, surveys from the 18th century indicate that additional hill pasture, moor, moss and woodland beyond the outfield was significant. Thus, there was a vast expanse of land for livestock grazing. Grazing patterns were regulated through local courts, presumably to ensure the sustainability of pastures. From autumn harvest (early August to late September) until early summer (June), livestock were taken in from the shieling areas and other extended grazings and were kept within the outfields and infields (or within the head dyke (Dodgshon and Olsson, 2006: 24-25). Thus, they were only out in the 'hills' for at most four months (*Ibid.*). In the infields,

[26] Presumably the arable cultivations in outfields were organised in runrigs and divided communally as in the infields. There were no historical records found in this study which indicate otherwise.

livestock grazed the stubble of crops and the grass between the rigs. In the outfield, they grazed in folds and also in woodland, consuming both the 'under grass' and young branches (Dodgshon, 2015: 121-123). It is quite possible that livestock also consumed saplings and stripped bark in a way that may have prevented woodlands from regenerating,[27] though evidence of this is from the late 18th century and may have been primarily associated with goats (Dodgshon and Olsson, 2006: 25). If damage had occurred, it was likely to have been primarily near to dwellings rather than in the hillier pastures where livestock had more abundant choice (*Ibid*.: 26). While Dodgshon and Olsson suggest that the availability of winter fodder limited the number of livestock which could be kept (2006: 22), the orientation towards sufficiency rather than maximisation would have also limited the stocking of livestock.

The practice of 'muir burn' or burning parts of moorland or pastureland in order to regenerate vegetation for livestock consumption, is documented as early as 1400 in Scotland (2006: 27). Heath cover of land develops when woodland is cleared, and when this is grazed, heather (*Calluna*) tends to dominate over other shrubs (Gimingham, 1995:5). Without burning, mature heather eventually dies back, allowing other species, including trees, to colonise openings (*Ibid.*: 15). While there is limited documentation of muir burning *per se* in the northwest Highlands, the spread of heather from the 16th century as documented through palaeobotanical research indicates that it is likely to have occurred (Tipping, 2000). However, that burning which did occur in the Highlands is likely to have been regulated and controlled locally given that land was held communally (Dodgshon and Olsson, 2006: 25). Further, the extensive areas of pasture, relatively low levels of stocking and the lack of grazing over winter months would have limited the incentive for people to burn (*Ibid*., Tipping, 2000).

While records often stress the importance of cattle in the highlands prior to the spread of sheep farming from the 18th century, Dodgshon (1993) argues that arable production was prioritised over that of cattle prior to the agrarian transition (and also stresses that a mixture

[27] Woodland cover is estimated to have been in decline due to climatic factors but also due to the demand for watling, in which saplings were used for the construction of houses and fences and was 'by far the greatest single demand on timber' (Dodsghon and Olsson, 2015: 26). Dodgshon and Olsson (2006) estimate that heavy use of alder and hazel saplings for this purpose would have had more of an impact on the regeneration of woodlands than livestock grazing, though it is unclear from their article why saplings rather than coppices (harvesting the new shoots from existing trees) would have been used.

of livestock was grazed). He writes, 'livestock served the needs of arable and took second place to it in any competing claim on resources such as labour or sheltered land' (680). While some townships on the western seaboard had limited arable areas, data ranging from the 11th century to 18th century indicates that many townships of the Hebrides cultivated significant areas of arable land. Records indicate that townships in South Uist and Benbecula for example cultivated approximate averages of 800 acres of arable land, which Dodgshon indicates was comparable in size to the more fertile parts of the lowlands (*Ibid.*: 681). The ample pasture for animals would have presumably prevented competition between arable and livestock use of land.

The main arable crops sown and harvested were grains such as oats and barley (Macinnes, 1996: 19, Martin, 1703, Whyte, 2001, Dodgshon, 2015). Peas and rye were also cultivated (Dodgshon, 1993: 686-687) but as they were minor crops and did not comprise rent payments they are often overlooked in historical analyses as discussed further below. While ploughs were used in some areas of arable cultivation in the highlands, in more rocky and steep areas, cultivation was undertaken with spade and with the 'foot plough' (known as the *cas-chrom* or *cascrome*) (Whyte, 2001, Macinnes, 1996: 19). These tools facilitated cultivation in smaller areas between rocks and boulders, which would be unsuitable for ploughs but still possible for cultivation. People also managed the cultivation of rocky land through the building of 'lazy beds' – mounds of soil and manure which created raised rigs or cultivation beds which helped to deepen the soil for cultivation and enhance its nutrient content (*Ibid*., Dodghson, 2015). Additional nutrients in coastal areas were added through seaweed, shell sand and peat. This cultivation of rocky 'marginal' lands is noteworthy given the existing discourse and practices, which suggest that food production on rocky land in the uplands is limited to grazing.

While many accounts indicate that agriculture before the 'improvements' occurred was 'backwards,' particularly in comparison with agricultural yields in England (Smout, 2012: 125), other research has directly contradicted this perception of the Highlands. An anonymous report as early as 1630 considered all but the most upland and least accessible districts of the highlands to be 'very fertile and profitable' and suggested that any deficiencies in production in a locality were made up primarily by the transfer of surplus grain from townships and districts *within* the Highlands, and not necessarily by imported grain from lowland markets (Macinnes, 1996: 70). Records on the returns to these grains vary, with Martin (1703)

reporting 20- to 30-fold returns to barley, but Martin may have been incentivised to embellish these yields (Stewart, 2014). Macinnes indicates that average returns to oats and barley were three and four-fold, respectively (Macinnes, 1996: 19). Yields in the eastern areas and lowlands during the 17th century were also reported to have averaged three to four-fold (Whyte, 1979: 74-79). While records are limited, it appears that yields of the Highlands were comparable with those elsewhere in Scotland at the time.

While famine or dearth is recorded as occurring in the Highlands at various points during medieval history, this has been recognised as an inevitable part of an agrarian based society, occurring throughout Scotland and not confined to the Highlands (Whyte, 1979, Smout and Fenton, 1965). There are conflicting accounts of the impacts in the Highlands during the Maunder Minimum (Little Ice Age) which had affected most of northern and western Europe in the 1690s, knowns as the 'ill years' (Cullen, 2010, Dodgshon 2015). Cullen (2010) asserts that the 1690 famine affected the Highlands of Scotland more severely than in the lowlands due to the 'susceptibility of grain crops to failure' in the uplands (Cullen, 2010: 49). Yet the evidence on which Cullen makes this assertion primarily refers to dearth in the Southern Uplands, the eastern uplands (Montquhitter), and in Orkney and Shetland Islands (Cullen, 2010: 49-52). Only one mention is made of an area of the Highlands which would have been under clanship social property relations at the time (Glenorchy). Given that there are no population records available for the Highlands during this period (Flinn et al., 1977), it is possible that Cullen's extrapolation of the information about the poor harvests in upland areas outside of the clanship areas led to the conclusion that the highlands in the northwest would have suffered the same or more. However, it is also possible that the poor harvests were less detrimental in areas under clanship social property relations. Smout and Fenton (1965: 75) indicate that the lower harvests resulting from the poor weather do not seem to have affected the Highlands in the same way as market-dependent lowland areas, and report that in the Highlands, glut was the complaint rather than dearth. Macinnes reports that the *baile* system in particular protected the Highlands against the dearth and famine that had affected the rest of Scotland (drawing on Youngson, 1973, Martin, 1703 and Bil, 1990). In his visit to Lewis in the late 1690s, Martin reported that there had been recent years of 'scarcity and bad seasons' but that otherwise the island was 'fruitful' in grains (Martin, 1703).

It is possible that research which was based primarily on rent and trade records (e.g. Gibson and Smout 1995, Cullen 2010) overlooked much of the yields and consumption in the Highlands. Whyte points out that many crops which were cultivated were not used for rent payments (1979: 65). In examining the rental records during the Little Ice Age, Dodgshon also argues that it is important to differentiate between rent and subsistence. He contends that townships in the Highlands which did not record rent during the Little Ice Age would have still covered their subsistence needs while having 'rests of rent' (2015: 82-83). He also indicates that some settlements were likely to have simply been 'downgraded' from permanent to seasonal (i.e. shieling) cultivation during one or two years (*Ibid*.). Dodgshon also points out that while changes to rentals are often interpreted as results of harvests, other factors such as political turmoil and disease outbreaks also affected the collection of rents (*Ibid.*: 83-85).

Further, much of the research which occurred after the improvements would have been influenced by different standards and conceptions of 'productivity,' which tended to be concerned with yields per unit of labour. Efforts to reduce labour within the 'improvement' movement—and within capitalism more generally—entail specialisation, ecological simplification and uniformity and the substitution of machinery for labour. As such, diversity in biological and dietary terms is limited. A survey of an estate in Tiree in 1737 indicates the biases that improvers had concerning which crops were deemed valuable. The survey reports, 'while the fields appeared thick with herbage, hardly one tenth of them is corn,[28] the rest is all wild carrot, mustard, etc.' (cited in Dodgshon, 1981: 299). While Dodgshon quotes this to refer to the lack of effective arable production in 1981, in his later work, Dodghson (2015) presents the same quote and states,

> 'there were reasons why communities were not too attentive over weeding out such growth, for some, like silverweed (*Potentilla anserina)*, wild carrot (*Daucus carota*), sorrel (*Rumex acetosa*), wild spinach (*Chenopodium album*), mugwort (*Artemisia vulgaris*), ground elder (*Aegopodium podagraria*), cow parsley (*Anthriscus Sylvestris*), Scotch parsley[29] (*Levisticum officinale*), common white blite (*Chenopodium album*), burdock (*Arctium minus, Arctium lappa*[30]), nettles (*Urtica dioica*) and even the

[28] 'Corn' as used here refers to grains more generally
[29] Also known as 'lovage' or 'Scots lovage'
[30] Dodgshon does not specify whether greater or lesser burdock but other sources indicate both are prevalent in Highland Scotland

common thistle (*Cirsium vulgare*) helped combat the subsistence deficit that followed from a failed harvest' (2015: 136, *scientific names added*).

He notes that silverweed (*Potentilla anserina*), the root of which was used to make flour, had formed a significant part of the diet in Tiree, particularly when cereal crops had run out between seasons. In his 1777 Flora Scotica, botanist Lightfoot indicated that silverweed was consumed on a regular basis and was not reserved for times of scarcity, and that it was abundant even in impoverished soils (Milliken and Bridgewater, 2004: 49). Folklorist Carmichael noted that silverweed was one of the 'seven breads of the Gael' (*Ibid*.). Such plants in agricultural fields came to be considered to be 'weeds' in the improvement era and thereafter. In addition to supporting and supplementing a diverse diet, which was resilient to crop failures, the presence of weeds and other uncultivated plants would have presumably supported a healthy agrobiodiversity. Many plants considered to be weeds by improvers and those thereafter also have a number of medicinal uses (Watts, 2007, Milliken and Bridgewater, 2004). In more recent times, the presence of weeds has been shown to be beneficial in agroecological systems, including through supporting populations of insects and birds which are beneficial to agriculture (Marshall et al., 2003, Barberi et al., 2010).

A project to investigate and document the plant usages in Scotland indicates that a wide abundance of plant species was eaten in the Highlands, based on documentation from botanist explorations and a review of folklore and poetry (Milliken and Bridgewater, 2004). In 1695 the botanist Martin wrote that plants such as 'scurvy grass' (*Cochlearia*) and Scots lovage (*Levisticum officinale*) were frequently collected and eaten in coastal areas, in addition to a range of seaweeds: most notably dulse (*Palmaria palmata*), carrageen (*Chondrus crispus*) and sloke (*Porphyra laciniata*) (Martin, 1703). From woodlands, historical evidence indicates that hazel nuts were widely consumed and that mushrooms were also collected and consumed (Milliken and Bridgewater, 2004: 32, 40-42). It is possible that other 'weeds' in fields and field margins were also eaten, as more recent documentation has indicated that edible plants such as common hogweed (*Heracleum sphondylium*), chickweed (*Stellaria media*), charlock (seeds) (*Sinapis arvensis*), pignut (*Conopodium majus*) and lesser celandine (tubers) (*Ficaria verna*) are prevalent in the Highlands (*Ibid*.: 26, 38), which expands on the species acknowledged by Dodgshon (2015). It is important to note that the collection of foods from woodlands, outfields, coastal areas, seas and lochs had been permitted under clanship,

allowing clansmen to harvest what was sufficient for their basic needs, while also being regulated to ensure continuity of resources (Smout et al., 2005: 139). Later, however, as will be discussed below, these common areas were closed off to clansmen without permits and hunting and collection from them was punishable as 'poaching.'

Martin's documentation of the Western Islands also indicates that coastal diets comprised a diversity of food from the sea: cod, ling, shellfish, whale and even seals and otters were consumed. It also indicates that food from freshwater lakes on the islands (trout, eels) and rivers (salmon, black mussels) was abundant. While no similar documentation is made on the mainland of the Highlands given that the botanists focused their expeditions on the coasts and islands, the presence of a large number of inland lochs indicates that such freshwater food collection might have also occurred on the mainland. Martin further notes that cattle—deer, black cattle (cows) and sheep—while smaller than in the lowlands, were 'very fruitful' (Martin, 1703). A journey by Johnson to the Hebrides in 1775 also revealed a significant amount of dairy and meat in the diet from goat, cow and sheep, and meat from fowl including geese. Cheese, butter and milk was regularly consumed along with barley and oats. Johnson also confirmed the consumption of eel, trout and fowl on the islands (Johnson, 1775: 23). Again, the collection of these foods was to be later restricted for clansmen.

While the cultivation of food in the Highlands today is perceived to be restricted to sheep and cattle farming (with the former much more common), and is considered to be 'traditional', this section has shown that the food system in the Highlands under clanship entailed a mixture of arable cultivation, foraging, hunting, fishing (presumably also in mainland lochs) and also the production of sheep, goat and cattle products, which included a significant amount of dairying. Scholarship is mixed as to the extent to which the Highlands might have been affected by famine in 1690, though this was, in any case, a famine which affected many countries of northern Europe (Cullen, 2010, 1-6).

The above account of land use in the Highlands under clanship indicates that in ecological terms, the landscape would have likely been characterised as a 'mosaic' of different ecological zones (Dodgshon and Olsson, 2006: 22), rather than a simple and gradual transition between sub-montane and montane zones (Ratcliffe and Thompson, 1988). While there will have inevitably been variance across the area of the Highlands, land use would have resulted in the following ecological areas. Low-lying land consisted of woodland, scrub (i.e. areas with sparse

trees, mature heather and/or bilberry, etc.), and areas of permanent cultivation with strips of pasture between them (i.e. runrigs). Beyond these existed areas of semi-permanent grasslands and heathlands (i.e. outfields) which were cultivated in pockets through the practice of tathing. Beyond this still existed heath, scrub and montane woodland (i.e. near the shieling sites and beyond). This variety of ecosystems of the Highlands, to be detailed in this chapter and in Chapter 5, decreases during the agrarian transition and throughout further iterations of capitalism.

Overall, this section has indicated that agriculture in the Highlands was able to adequately sustain its population with a diverse diet. Land was held and managed for the common good of the clan, surpluses were directed back into the clan and relatively diverse ecosystems were maintained.[31] As the next section will demonstrate, however, with the privatisation of land in the Highlands, surpluses were extracted and the majority of agricultural land became oriented towards financial returns, rather than towards the sustenance of the Highland population. This of course, changed production, consumption and ecologies significantly.

Section 2: The beginnings of capitalism

A. Privatisation of land and beginning of the 'improvements'

For a variety of reasons, which are still debated, the clanship system was in decline from the 17th century through the 18th century. The Jacobite rebellions and particularly the battle of Culloden (1746) have been noted as particular turning points for clanship. Hunter (1976) emphasizes how following these battles (of 1689, 1715 and 1746) the 'British government was determined to destroy the traditional society of the Highlands' (11). The banning of the traditional dress of the kilt and the traditional instruments of the bagpipes with the Disarming Act of 1746 has been recognised as a significant factor in accelerating the decline of clanship traditions and unified identities (Devine, 1994: 88). However, Macinnes (1996) argues that the process of clanship decline, at least in terms of the change in communal values and practices, can be seen as early as the beginning of the 17th century and argues that clanship would have declined regardless of the defeat at Culloden.

[31] The exception to this is the reported decline of woodland, though as discussed, the primary source of this decline was not directly related to agriculture.

In the early- to mid-17th century, the Crown began to demand formalised leases and charters from the *fine*, which institutionalised the *fine* as lairds, or landed classes. It also emphasized the 'finite and revocable' terms of leases for tacksmen. While tacksmen continued to enjoy customary security of possession during this time, they were faced with increasing fees for renewal, rent increases and shortened leases (Macinnes, 1996: 69). The central government of Scotland additionally aimed to achieve social reform, control and 'pacification' through educating the fine about 'their responsibilities as members of the Scottish landed classes' which included controlling the use of arms, lowering expectations of hospitality, reducing 'vagrancy' and annual accountability of the fine to the Privy Council. The Statutes of Iona in 1609 required all chiefs to send their heirs to lowland Scotland for an education (in English) and banned bards and beggars (MacGregor, 2006, Withers, 1988: 6, Macinnes, 1996: 74). These efforts were particularly targeted towards the clans on the western seaboard, which were demarcated from the mainland Gaels, the latter being seen as more easily redeemable (Macinnes, 1996: 59).

Through a series of ordinances in the 1620s the clan *fine* revoked the right for clansmen to hunt, shoot or fish without a license. This formally marked a differentiation between the clan interests and the personal interests of the fine, and possibly signalled a shift away from clanship and more towards a feudal type of social property relations. According to Macinnes (1996), it signalled that the chiefs and fine endeavoured to individually exploit resources and 'defend' their personal interests against those of their clansmen. Importantly, it also reduced the amount of common resources available from which the population could sustain itself.

In addition to the weakening of clanship traditions and culture, the beginning of land tax (formally imposed in 1667 in Scotland in the Restoration Regime) has been cited as one of the factors that contributed to a shift in the way that land was viewed by chiefs (Devine, 1994, Macinnes, 1996). In addition, the increasing debt levels of the fine have been identified as leading to significant increases of rents for tenants (Devine, 1994, Hunter, 1976, Macinnes, 1996). These authors note the way in which chiefs 'spanned two worlds' – that of the clans and that of the aristocrats in the lowlands of Scotland and in Europe. It is believed that because of exposure to the elites in Edinburgh and Paris, and to the values espoused in southern schools and universities, including 'uncritical beliefs in individualism,' eventually the chiefs came to perceive the need for more money, which conflicted with their roles as 'tribal

patriarchs' (Hunter, 1976: 7). This became even more pronounced during the 18th century, in which 'conspicuous consumption', or obvious demonstrations of wealth, were the mode. While Hunter focuses strongly on the character of the landlords as a cause for the change in land tenancies, Walker (2003) points out that public accountants—who were 'conditioned by prevailing ideologies about the progress of the capitalist economy' (846) played a significant role in enforcing land tenure changes, as discussed later in this chapter.

Further, the drive for agricultural 'improvements,' which are seen to have been part of a series of efforts for asserting political control over the Highlands, influenced changes to land tenure. The improvements began as early as mid-17th century but were reinforced after the 1707 Union of Parliaments (Withers, 1988: 58-59). It was hoped that by stimulating economic growth the improvements would make the clanship way of life (and associated Jacobite rebellions) less appealing to people in the area (Ibid). Across Scotland, the improvements entailed sub-dividing open fields, levelling and straightening of ridges (i.e. ploughing over runrigs), drainage of peatland areas and increasing specialisation (Smout and Fenton, 1965). It also entailed building a network of transport which could facilitate access to markets. While the improvements are often written about in terms of agricultural techniques for increasing agricultural productivity, Smout and Fenton (1965) argue that the improvements could only occur where land became privatised. In other words, much more than a set of techniques, the improvements required and entailed a change in social property relations (Davidson, 2004: 414). Dividing and enclosing areas which had been held in common was essential to the reorientation of land towards 'maximising productivity,' that is, raising yields of specific marketable commodities through reducing the ratio of labour input to output, hence maximising profit for landowning and capitalist classes.

The agricultural improvements in the Highlands were advocated by Adam Smith as an essential pathway for reducing Britain's debt burden (MacKinnon, 2018: 285). Smith's 'Wealth of Nations' served as a 'bible' to the improvers (Richards, 1985: 18). Richards (2007) states:

> 'Adam Smith had little direct knowledge of the Highlands yet exerted a profound influence on thinking which penetrated into the furthest reaches of the region. For Smith the Highlands was a perfect example of the poverty of nations tied by antiquated restrictions and organisation. It was a victim of the poor division of labour,

> a backwater of feudalism that had been deprived of the benefits of trade too long' (Richards, 2007: 10, 126-127 citing Smith, 1776).

While there is much debate about the motivations of the improvers, and the causes of the decline of clanship, it is the *consequences* of the transition away from clanship which are highly relevant to this study. The departure from clanship resulted in an 'agrarian transition.' This may be considered to conform broadly to the 'Junker' path to capitalism, or 'capitalism from above,' with the state and lairds engineering social property relations in favour of capitalism.[32] Social property relations changed from a situation in which clan chiefs and *fine* had a duty to ensure that everyone had access to sufficient land and resources to a system in which land was leased or sold to individuals who could provide the greatest return and surpluses were commodified. Macinnes considered this the marketing of chiefs' *dùthchas* (Macinnes, 1996: 123) and it represented the beginning of 'so-called primitive accumulation,' in Marx's terms. As Hunter states, the way that land was perceived changed from one of obligation to one of 'income yielding investment' (Hunter, 1976: 9). Cregeen writes about the assumptions underpinning this change in land tenure:

> 'that land should produce a revenue…like any other capital asset and that it should therefore be allocated, not as a token of kinship, as a reward for allegiance or as a means of maintaining a following, but in response to the operation of competitive bidding.' (Cregeen, 1969: 118).

The majority of the changes to social-property relations in the Highlands occurred in the 1760s and 1770s, with the earliest in 1710 (Withers, 1988: 8). By 1790 almost all clan holdings had been replaced by single, individualised holdings (Devine, 1994, Withers, 1988, Hunter, 1976). With this significant change in social-property relations, the Highlands entered into a phase of capitalism, in which engaging with the market became an imperative (Wood, 2009). The class relationships in the Highlands changed from a clanship system based on kinship and mutual obligation to a landlord – tenant relationship.[33] In Wolf's terms, social relations

[32] In most cases, lairds themselves did not become capitalists *per se* (unlike the Prussian Junkers), but as landlords, drew rent from a new class of capitalist tenant farmers.

[33] With the privatisation of land, the tacksmen who had been in the 'middle' between the chiefs and clansmen were squeezed out. According to Hunter, tacksmen found it difficult to engage with the new approach to land property rental, and, given that they had the means to do so, many of them emigrated to the Americas. The new middle class that replaced them comprised sheep farmers and cattle ranchers from the south, who had

shifted from patrimony (in which control is exercised through kinship) to mercantile land management in which 'land is viewed as private property of the landowners, an entity to be bought and sold and used to obtain profit for its owner' (Wolf, 1966: 50-56, cited in Withers, 1988: 13).

While Cregeen indicates that the change happened 'almost at a single stroke of the pen' (Cregeen, 1970: 11-12), Macinnes (1996) highlights that a number of measures were taken to 'wean clansmen away from customary expectations' (Macinnes, 1996: 145). In the late 17th century, some clan *fine* (e.g. at House of Argyll) had begun to reduce the amount of debt permitted within their estates, and the House of Argyll had begun marketing its surpluses as commodities rather than redistributing them within the clan. The Campbells and House of Argyll shortened their leases from multiple generations to just one life or even 19 years. Some *touns* or settlements were consolidated and leased directly from landlords, eliminating the role for tacksmen (Macinnes, 1996: 144-146).

The first reported instance of the competitive renting of land in the Highland areas occurred in 1710 in Kintyre by the House of Argyll, one of the largest land holders in the Highlands at the time. The House of Argyll additionally changed its leasing of land to the highest bidders in 1737 in Mull, Morvern and Tiree (Withers, 1988:8). Another early instance of changes to land tenure occurred in the estates 'forfeited' by Jacobite supporters. Land held by clan chiefs found to be 'traitors' involved in the rebellions (along with that held by 'Popish Recusants' and people employing land for 'superstitious' uses) were appropriated and managed by the Forfeited Annexed Estates Commission, from 1715. This commission also attempted to impose improvements, through individualising land tenure, establishing 'colonies' of former soldiers and sailors (said to have inspired a later policy of 'wasteland colonisation'), and changing rotation systems (Withers, 1988, MacKinnon, 2017). Macinnes (1996) argues that it was land governed by the Forfeited Estates commission which first saw a crofting organisation – small scale tenants on individualised land parcels.

little hereditary or cultural connections with the local population. The lack of kinship and trust-based relationships between those who worked the land (tenants and cottars), and those who managed it (sheep farmers and large estate owners) may have been one of the factors that enabled the clearances to take place as they did (Devine 1992, Hunter 1976).

The advent of competitive land tenure resulted in market compulsion and reoriented agricultural production from use value to exchange value. This made yield and productivity differences between the Highlands and the remainder of Britain key factors in what was produced in the Highlands. Unable to compete with the rapidly industrialising and urbanising south, attempts to promote 'endogenous development' were 'doomed to unprofitability' (Hunter, 1976:12 drawing on Cregeen, 1964). Hunter indicates that the contrast between the rural Highlands of Scotland and the industrialising lowlands of Britain resulted in the former being 'transformed into neocolonial subordination to the requirements of the developing industries of England and lowland Scotland' (*Ibid*). From the 1760s, the Highlands became an 'economic satellite,' supplying goods to the industrially developing lowlands of Scotland and to England. Much of this was intended by the improvers. Sir John Sinclair, one of the most influential individuals in promoting agricultural change in the 'improvement' period, indicated that through the improvements, 'a foundation has thus been laid for a new system, not of foreign, but of domestic colonization, which will be found infinitely preferable to the cultivation of distant settlements' (Sinclair, 1815, cited in MacKinnon 2017: 32). Hechter considered that the relationship of England and lowland Scotland to the Highlands was one of 'core' and 'periphery' and considered the Highlands of Scotland to be one of Britain's 'internal colonies' (Hechter, 1999). A periphery is typically characterised by a high economic reliance on a single primary export and the movement and migration of workers in response to price fluctuations of this good, the growth of an urban economy in the core and the deterioration of social structures within the periphery (Withers, 1988: 10).

As the next section will illustrate, this dynamic paved the way for land to be predominantly used for sheep in the Highlands and for the associated clearances.[34] While sheep have been strongly associated with the clearances, it is important to note that the privatisation of land occurred before the introduction of English breeds of sheep, and that the latter was unlikely to have had the same effect had land still been held in the clanship system. A documentation of the Western Islands by Johnson and Boswell in 1773 indicated that at the time—before lowland sheep had taken off—rents were sharply rising, landlords had become 'unpaternal', and many people were emigrating to North America (Richards, 2007: 10). Despite efforts to

[34] While this thesis focuses primarily on the supply of sheep products (and kelp and fish) to the rest of the UK, MacKillop (2000) argued that the primary 'export' from the Highlands as an internal colony was its supply of manpower for the British military.

curb it, Highland emigration significantly increased in the 1770s, which coincided with the privatisation of land in the area but preceded commercial sheep farming (*Ibid*.: 41-44).

B. Sheep, clearances and the departure from self-sufficiency

As part of the improvements, larger, English breeds of sheep were introduced to and promoted in the Highlands from the 1760s onwards. With the privatisation of land and in the context of rising wool prices, most land, and the best quality land, was turned over to sheep grazing. While in 1803 sheep farming was still unknown in many parts of the Highlands (Richards, 2007: 10), by 1840 the majority of land in the Highlands was used for large-scale sheep farms, comprising 85 percent of the land in Sutherland and 60 percent in Ross and Cromarty and in Inverness (Richards, 2007: 50, drawing on Devine (1988) and New Statistical Account (1845)). In Southern Argyll, the improver Sir John Sinclair writes in 1791:

> 'The great decrease in the population of the country is owing to the introduction of sheep. Since the farms have been chiefly stocked with sheep, one man often rents as much land as 10, 12, or 14 tenants formerly possessed' (Sir John Sinclair, 1794, cited in Richards, 2007: 132).

Sinclair goes on to extol the virtue of this change, indicating that the productivity of the land had been greatly increased with the transition to sheep farming:

> '…that the inhabitants of this part of the country were formerly sunk in indolence and contributed very little to the wealth or to the support of the state cannot be denied. The produce of this parish, since sheep have become the principal commodity, is at least double the intrinsic value of what it was formally; so that half the number of hands produce more than double the quantity of provisions, for the support of our large towns, and the supply of our tradesman and manufacturers; and the system by which land returns the most valuable produce, and in great abundance, seems to be the most beneficial for the country at large' (*Ibid*.: 133).

Here Sinclair reveals the driving principles behind the introduction and promotion of commercial sheep farming in the Highlands. For him, the 'intrinsic value' of what is produced from the land is related to 'exchange value' for the wealth of the state, urban areas and industrial production. It does not relate to the 'use value' of the inhabitants. He also reveals

how he perceived the resulting reduction in the labour force—a key characteristic of capitalism—as desirable, again, resulting in increased productivity, or yields per unit of labour. Sinclair's account clearly indicates the productivist drive occurring at the time of commodity sheep farming, and the extent to which this reduced the ability of Highland inhabitants to sustain themselves from the land.

In order to pursue lucrative sheep grazing, the people who were previously inhabiting and cultivating these estates through the *baile* system needed to be 'cleared'[35] from the land in what Devine (1994) has termed 'economic rationality with devastating consequences' (51). Landlords relocated them to the least profitable, and least productive parts of the estate, and onto smaller, individualised units of land or cleared them from the estate altogether. In short, with the privatisation of land, the *baile* and settlement structures were destroyed in order to make way for the sheep and create single tenant farms. As the majority of the Highland population in the 18th century—the former clansmen who had previously had customary rights to sufficient land—did not have legal rights to their land, they were typically limited in their ability to challenge these removals (Devine, 1994). The Act of the Court Session 1756 provided clarity on the legal procedures for the removal of tenants, illustrating that removals were in fact lawful, and possibly even encouraged (*Ibid*.: 45). Walker indicates that many of the people involved in evicting or relocating tenants were encouraged by knowing that they 'acted within the law and that it was their function to preserve the assets of the estate and maximise surplus to be extracted from it' (Walker, 2003: 844).

While some people emigrated to North America, the majority of the population was relocated within the Highlands, and the overall population was rising, not falling (Richards 2007: 10). When they were relocated, again, largely on lower quality land, often in coastal areas and moorlands (Devine, 1994:34), effort was explicitly made to ensure that they were unable to eek a living out of their 'new' plots alone and that they would be compelled to sell their labour. Specifically, Sir John Sinclair wrote that the parcels of land or 'crofts' should be made of a size that would force people to work as labourers for at least 200 days of the year (Devine, 1994: 47-48). The guiding principle was that 'too much land would act as a distraction from

[35] Richards (2007) indicates that the term 'clearance' was not widely used until the mid-19th century when it was used to criticise the actions of landlords. Prior to this, the term 'eviction' and 'removal' were in use. Richards notes that the term 'clearance' does not differentiate between small and large, or voluntary and forced removals, resettlements or evictions (Richards 2007: 20)

other profitable tasks' (*Ibid*.). These small-scale individualised parcels later became known as 'crofts' and were convenient for holding population on the land as a 'labour pool' (Macinnes, 1996: 223).

Sinclair harshly criticised the communal land management system, stating that 'work…where everyone claims an equal share in the direction can never be carried on with success' (Sinclair, 1831, quoted in Devine, 2006). However, as MacKinnon details, while improvers would have ideally enclosed the grazing areas of the crofts, it was concluded that doing so would lessen their value (Blackadder 1811: 2, quoted in MacKinnon 2018: 287). The crofting system which resulted is what MacKinnon considers to be a 'quasi-privatisation:' individually occupied small plots with communal grazing areas, the structure of which is still reflected in the crofting tenure system at the time of writing.

The smaller individualised parcels were indeed successful in requiring people to work as labourers, in a process of semi-proletarianization. Deterrents to and restrictions on emigration from the turn of the 19th century such as the 1803 Passenger Vessels Act (Hunter, 1976: 21) led to seasonal and permanent migration within the Highlands. At the time, the labour-intensive kelping and fishing sectors were booming and needed to employ a large proportion of the population. While profitability was high in these sectors, wages were determined by the same landlords who controlled land rents. Wages were typically set as low as possible and with little relation to the profitability of what was produced. The strong concentration of power in this arrangement is noteworthy: a small number of people served as both landlord and (wage setting) employer (Bird, 1982). It is also significant to note the dramatic contrast with the previous communal management of resources to sufficiently provide for the resident population.

The nature and timing of the kelping and fishing industries further limited the population's ability to be self-sufficient in their agricultural production. Cultivating crops which required attention during the summer was 'out of the question' as the main activity time for kelping was during the summer (Hunter, 1976: 32, MacDonald, 1811). While seaweed had traditionally been used as a fertiliser, during the times in which prices for alkali (the product of kelping) were high, people were prohibited from using kelp on their fields. While not explicitly discussed in the literature, less time was also presumably available for foraging and

processing other subsistence foods. The employment in fisheries was again justified as part of the 'improvements,' to both benefit the people who had previously been relocated to make way for sheep, and for preventing further rebellion.

As another strategy for landlords to increase financial returns on their land, woodlands were exploited for commercial use. Timber was one obvious use, particularly on the coasts which could utilise the sea for its transport. Iron smelting utilised oak from woodlands, particularly on the western coast.[36] Bark was also harvested and sold for tanning. In order to protect this resource, woodlands were physically enclosed to prevent damage from livestock. This prevented local residents from using the woodlands for winter feed (through 'under grass') and shelter for their livestock. It also made a sharp distinction between woodland and pasture, which had previously been less defined.

With the exception of areas of enclosed woodland, grazing of the Highlands—and associated practices such as muir burn—increased in intensity as stocking levels increased significantly from the mid-18th century onwards (Dodgshon, 2015: 197-198, Smout et al., 2005: 105). Further, new breeds from England—the Blackface and the Cheviot—had been introduced by the improvers and replaced previous breeds (Devine, 1994: 35). Combined, this resulted in an estimated eight-fold increase in grazing intensity (Dodgshon and Olsson, 2006: 29). Further, what had previously been inbye land was rededicated towards the wintering of sheep, through sowing (monocultures) of grasses (*Ibid*.). Sheep were also put out on the hills (previously the extended pastures beyond the outfields) from mid-April, two months earlier than they had been allowed out under clanship, which was facilitated by the new breeds' characteristics (*Ibid.*). This increase in grazing intensity and extension of the grazing season led to a decline in woody scrub and heather on the hills. Significant areas of heather were converted to grass,[37] in what was considered at the time to be the 'greening' or 'improvement' of hill pastures (Dodgshon and Olsson, 2006: 30).

[36] It is worth noting, however, that iron smelting in the western Highlands first occurred in the early 17th century though Lindsay (1977) argues that it did not have detrimental impacts on woodland in the area (Lindsay 1977).

[37] Overgrazing of heather results in its replacement with grasses such as sheep's fescue (*Festuca ovina*), bent (*Agrostis spp.*), mat grass (*Nardus stricta*) and heath rush (*Juncus squarrosus*). The grazing of scrub may have first led to the establishment of heather, much of which would have been succeeded by grass.

Diets began to significantly change in the Highlands from the mid-18th century, which coincides with land privatisation. The consumption of meat and dairy (cheese, milk, butter) reduced, and consumption of starches increased, particularly from oats and potatoes. Potatoes were introduced to the Highlands in 1743 in South Uist, and quickly spread (Symons 1959). A journey by Johnson to the Hebrides in 1775 reported potato consumption on nearly all the islands visited. He states, 'Potatoes…are never wanting, which, though they have not known them long, are now one of the principal parts of their food' (Johnson, 1775). Potatoes were favoured in the context of small land parcels given that they produced more calories per area of land than grains. Sir John Sinclair played a significant role in the promotion of the potato: he claimed that four times as many people could be supported by one acre of potatoes compared to one acre of oats (Devine, 1994: 49).

While widespread potato cultivation was the result of changes to land tenure, it also further facilitated greater subdivision of land and population increases. This would facilitate greater concentrations of population, which was seen as key to economic efficiency given the existence of the kelping and fishing sectors which required labour. Landlords also tried to increase population densities through deterring migration, encouraging early marriage and subdividing plots. While the population of the Highlands as a whole increased less than the rest of Britain at the time, the population in the north and west part of the Highlands[38] increased by 53 percent from 1801 to 1841 (Richards, 2007: 35). This increase would have been due in large part to the relocation of tenants to these areas in combination with the efforts to increase the population overall (Devine, 1994: 34).

Many of the improvements can be seen as being in contradiction with agroecological principles. The specialisation entailed often reduced biodiversity, as seen in the case of sheep farming, which, in addition to displacing the biodiversity inherent in what had previously been arable, mixed farming or woodland, had the effect of reducing biodiversity on pasture land itself, through the sheep's use of selective grazing (Darling, 1955, Toth et al., 2018). Specialisation also affected the ability of a population to sustain itself in the Highlands, as will be discussed further below. Intensification compounded the effects of specialisation: the

[38] Richards 2007 reports that the population in the south and east of the Highlands was relatively stable until 1800 and only increased by 7% from 1800 to 1841. He attributes the contrast to the ease with which people could migrate to nearby towns outside of the Highlands (Richards 2007: 35).

continual use of land for the same activity replaced previous practices of rotation between grazing and arable, and the use of fallow, leading to a deterioration of soil quality. Drainage was also environmentally detrimental and resulted not only in the destruction of peat bogs, but also changes to the biochemistry, hydrology and sediment load of freshwater ecosystems which receive the drainage (Ramchunder et al., 2009, Holden and Burt, 2003).

Further, inherent in the model of commercial production of just one primary product was the export of nutrients through sheep sales. This 'metabolic rift' broke the nutrient cycles which had been occurring locally and led also to a nutrient leakage. It is likely that the initial success of high intensity sheep grazing was due in part to the fertility which had been built up over the years in the in-byes and outfields through the strategic placement of manure, seaweeds, thatch, turf, and bedding. As discussed in the following section, the ability for the land to continue supporting high numbers of sheep was significantly eroded by the 1880s in the absence of nutrients flowing back into the system, in addition to other effects on soil and biodiversity from the intensity of grazing.

While some of the agricultural practices of the improvements such as liming and drainage might have occurred under the clanship system, Davidson argues that 'without [the restructuring of rural class relations] the mere introduction of, for example, lime or marl[39] as fertilizer, would have made little qualitative difference to either agriculture or the broader economy' (2004: 414). In other words, agricultural innovations were unlikely to have resulted in intensive and specialised production had land still been held under the social-property relations of clanship. When land management ceased to be organised based on the benefit and survival of the entire clan and instead became individually managed for market production, a significant departure from agroecological principles ensued. As the next section details, the privatisation of land and the associated divergence from agroecology had disastrous consequences for the local population in the middle of the 19th century.

C. Economic decline, depopulation and famine

Following the end of the Napoleonic Wars in 1815, the profitability of the Scottish kelping industry plummeted as European sources of alkali became available again and manufacturers lobbied effectively to remove alkali duties. The effects of this blow to the Highland kelping

[39] Marling is the addition of a type of clay (rich in calcium carbonate) to soil

sector were compounded by an overall post-war recession in Britain (Hunter, 1976: 48). This led to sheep farming being perceived as the only profitable activity in the Highlands by the 1820s and led to further removals of tenants for 'sheep walks' (*Ibid*., Devine, 1994: 52)

For tenants, wages and employment declined significantly and yet rents stayed the same. A lack of money was problematic because people had become more reliant than before on consumption of purchased goods, rather than their own production, as discussed previously. Up to 35% of the population did not hold land, while 51% rented one acre or less, and only 14% of the population had access to more than 5 acres (Devine, 1994, 54-55). When they could not afford rent, tenants had rent abatements with rates of 10 to 20%, which led to their being in perpetual debt to the landowners. Debt made it difficult to invest in capital (e.g. in expensive but profitable sheep) and the threat of eviction from the land created an environment of insecurity that deterred investment. Combined with this, the lack of land and cash income resulted in poverty and severely eroded the resilience of the population over the decades preceding the potato blights of 1837[40] and of 1846 (Hunter, 1976: 51-53, MacAskill, 2012).

The perspective amongst elites and landlords during this time, however, was that poverty in the Highlands was due to overpopulation as well as laziness and ignorance, rather than the result of the structural and social changes that had taken place. This contrasts starkly with the measures previously imposed to maintain or even increase the population of labourers by subdividing holdings and preventing people from leaving. Now that the population represented a financial burden to landlords, a number of actions were taken in order to reduce the population. The Passenger Act was repealed in 1827 in order to encourage emigration once more. Landlords such as Lord MacDonald stipulated that people could marry only after acquiring land, thus delaying both marriage and childbirth (Hunter, 1976: 42-43).

Evictions continued, often justified by the 'improvements' and a narrative of 'efficiency'. The majority of the population was not formally on the rent roll and lacked protection against removal by the landlords. While some were complex clearances which entailed relocations over several years such as that in Harris (Richards, 2007: 48), others were undertaken quickly

[40] The effects of the 1837 blight were less severe and were largely mitigated by governmental and charitable assistance (Hunter, 1976: 53)

and by force. The Sutherland estate was among the most extreme examples of violent clearances: villages were destroyed and burnt and fields turned over to pasture with the assistance of British soldiers (Prebble, 1963, Hunter, 2014). Between 1807 and 1821 alone, estimates indicate that 6,000 to 10,000 people[41] were 'cleared' in the Highlands (Devine, 1994: 37).

In 1846 a potato blight spread from Europe into the Highlands of Scotland, with the islands experiencing the most significant blight in Scotland, losing up to 67% of potato crops (Devine 1988). By the end of that year, three quarters of the population of the Highlands was without adequate food. Given that potatoes were already the least expensive foodstuff, there was nothing less expensive to purchase. A hard winter combined with the hunger led to the spread of diseases such as typhus and cholera (Hunter, 1976: 56), making it difficult for people to work, forage or otherwise invest energy in securing more food or income. Further, many of the areas for fishing (and hunting) had previously become privatised by landlords, and inaccessible to tenants. Emigration and moving to the lowlands were options for some tenants, though many did not leave because of illness, poverty, lack of English communication, fear of falling ill without family, and because of the 'tenacity of attachment to their native soil' (*Ibid*.). By the early 1850s, after successive years of failed potato crops, the poverty in the north west of the Highlands was severe (Hunter, 1976: 78-81).

The famine resulted in an even greater push for emigration by landlords, financiers and government bodies. The Poor Law of 1846 made it more expensive to keep tenants on their properties, and landlords became afraid of being in a 'sea of debts' if the tenants were not removed (Hunter, 1976: 73). Emigration was reframed as being in the best interests of the tenants, and a 'solution' for progress. The Emigration Advances Act of 1851 funded voluntary emigration. The Highlands and Islands Emigration Society sought to match the 'wonderful exodus' from Ireland and send people to Australia (Hunter, 1976: 86). Landlords with the financial capacity to do so forced people onto boats across the Atlantic. Detachment or removal from the effects of such decisions seemed to facilitate their occurrence: 'trauma inflicted on local populations was…rendered more palatable by the fact that the unpleasant tasks of eviction and forced emigration could be conducted at a distance by local agents,

[41] According to Marx, 15,000 were driven off between 1800 and 1820

estate factors and ground officers' (Walker, 2003: 844). Discourse of improvements justified the removals: an article in *The Economist* claimed that the famine had shown that 'the departure of the redundant part of the population is indispensable to every kind of improvement' (Hunter, 1976: 74). Removals and forced emigration were also justified by reasoning that by decreasing the population, there would be larger landholdings for those that remained. However, the land that was freed up from the evictions and emigration was not allocated to tenants but instead was used for enlarging sheep farms, in a blatant contradiction (Hunter, 1976: 80). New clearances accompanied the emigration push on most estates. In 1853, for example, tenants in the Boreraig and Suishnish townships (on one of MacDonald's estates) were evicted (120 of which were resettled into other townships, while several families emigrated to Australia) in order to establish a sheep farm consisting of 2,761 acres of hill grazings and 183 acres of what had previously been arable land of 'fair quality' (Hunter, 1976: 83). Overall, between 1849 and 1856, 2,500 tenants from MacDonald estates were sent to Canada and Australia whilst sheep farms were simultaneously enlarged on the estate (*Ibid*.).

These harsh evictions corresponded with increasing prices of wool, mutton and lamb from the 1850s onwards. The Sutherland Estate increased its stocking levels by as much as 50 percent during the 1850s and 1860s (Dodgshon and Olsson, 2006: 32, drawing on figures from MacDonald, 1880). Around this time, the system of sheep production shifted towards a more 'efficient' system of 'ewe and lamb' flocks, in which sheep are sent to the lowlands to be 'finished' or fattened on better pastures, a system which is also associated with an increased intensity of grazing (Dodgshon, 1998: 33).

For those who remained in the Highlands (including those who were relocated to a different area), relief assistance was only given in return for labour, and able-bodied people did not have a universal right to relief. According to the Board responsible for 'Relief of Destitution' in the Highlands and Islands,[42] assistance aimed to instil 'habits of industry, and steady and continuous labour on land, of which the majority were marvellously deficient' (Committee, 1852: 3, cited in Walker 2003: 845). According to the Board, in order to be considered 'destitute' and thus receive relief, people had to have completely exhausted their own stocks.

[42] The Central Board for the Relief of Destitution in the Highlands and Islands, which was an alliance of charity and church organisations which took over the task of relief from the government

If people worked on their own holdings instead of the Board's projects, they were refused assistance (Devine, 1994). As Hunter states, 'Attempts to conserve seeds and stock were thus nullified. They were compelled to eat the former and sell the latter before being granted relief' (Hunter, 1976: 70). Guided by the ideology of the improvements, the famine relief forced people into engaging in non-subsistence activities in order to essentially 'earn' their relief. This policy arguably contributed to deepening the population's alienation from their means of production.

In fact, the Board specifically introduced cash payments into the Highlands in order to integrate the population into 'commercial and trading communities' (Walker, 2003: 845). It considered that the cash remuneration approach was successful in that it 'created new desires' which could be satisfied only through 'increased exertion' (*Ibid*.). This reflects a perception amongst powerful urban actors that the real root of the problem – and thus its solution – lay in a lack of industriousness and a need for more commercial behaviour, while as shown above, the famine was arguably the result of the land tenure changes and the orientation towards commodities (i.e. sheep, fish and kelp) that led to an over-dependence on the potato as a staple crop for consumption.

In addition, many of the poor relief activities directly furthered the improvements such as creation of new drainage. An inspector for the relief Board in Skye reported that on an eight-mile drive, he 'counted something more than 100 new drains opened on the second day of the new (relief) system' (Hunter, 1976: 71). While the inspector was delighted at this 'industriousness,' as indicated earlier, many of these drains were detrimental to the ecology of the Highlands.

This section has shown that discourse related to the famine in Scotland pointed to a Malthusian over-population or the existence of a population now 'surplus' to the requirements of capital, rather than viewing the famine as a result of the orientation of the majority of land and labour towards commercial enterprises in lieu of the food needs of the resident population. It also attributed the poverty to the laziness or lack of industriousness of the Highlanders. However, it is clear that the famine was largely a result of the tenantry having inadequate access to land as a result of commercial sheep farming and also due to the breakdown of the clanship system, in which production had been primarily oriented towards subsistence. The population was too great in relation to the very limited land available to the

tenantry, not, contra Malthus, in relation to the 'carrying capacity' of the land to which it previously had access under clanship. The squeezing of the tenantry onto land 'leftover' from capitalist sheep farming and conveniently located to feed into capitalist kelping and fishing industries resulted in overdependency both on the potato, as well as on cash income. When the blight wiped out the former and the decline of alkali prices and fishing eliminated the latter, the population became destitute. The establishment and enlargement of sheep farms, the fruits of which were extracted to the rest of Britain, was rarely considered a cause of destitution at the time, as evidenced by its continuation throughout the period of famine, along with other 'improvements' to support grazing such as drainage. While sheep are often recognised as the cause of the clearances and Hunter's 1976 work famously linked them with the famine, it is essential to reinforce the point that sheep farming of this type would not have occurred had land not been privately held. Further, the famine arguably reinforced a belief (which had been held by the improvers) that the highlands are incapable of producing sufficient food to sustain a population with a local diet, despite evidence that populations in pre-capitalist society had been able to adequately sustain themselves on the land through a diversity of foodstuffs.

Section 3: Land reform and the establishment of crofting in the Highlands

In the 1860s and 1870s, economic expansion in the south translated to increasing incomes for tenants in the Highlands for the first time since 1815 (Hunter, 1976: 108). This boost to incomes came from increased cattle prices and higher demands for migrant labourers. A herring boom also occurred in the 1870s leading to more employment (Ibid). Meanwhile, agricultural productivity on tenant plots was decreasing given that people were cultivating the same small areas continuously due to lack of space. People also had limited drive to generate high yields due to the availability of cheap grain with the repeal of the Corn Laws in 1846. In addition, there were disincentives for tenants to invest in the land, given the likelihood of removal, or the chance that landlords would increase rent because of improvements (Hunter, 1976: 101-105). Sheep and wool prices were high and rising and the number of sheep rose significantly in the Highlands, by 40 to 50 percent on some estates from the 1850s to 1870s (Hunter, 1972: 201).

With increasing incomes and declining subsistence agriculture production, the shift from self-sufficiency to consumption was even stronger than before. Imports of meal rose from the

1850s to the 1880s, and people began to regularly consume other imported and manufactured goods, with overall expenditures on imported goods rising six fold from the 1850s to 1880s (Hunter, 1976, 128-129). The generation which came after the famine was thus raised in relatively prosperous conditions, with expectations to regularly consume imported goods, and discretionary goods such as tea, tobacco and sugar became staples (*Ibid*.). While in the 1850s, people might have drunk tea once per week, by the 1880s even the poorest houses brewed tea twice per day (*Ibid*). By this time, one could postulate that people in the Highlands had been 'alienated' from a significant proportion of the foods and drinks that they consumed, many of which were produced far away in extractive and slave-like conditions. This followed the trend in the rest of Britain. Based on its ability to enforce trade on its colonies, its mastery of the seas, the use of sterling as international currency, and influenced by the free trade arguments of scholars such as Adam Smith, Britain was strongly orienting towards imports, both from colonies and from neighbouring countries (Marsden, 1993). Britain's commitment to free trade and the removal of tariffs representing the new economic and political prevalence of manufacturing capital, was manifested in the repeal of the Corn Laws in 1846, and accelerated thereafter in a period that Tilzey (2018, 2019b) has termed the 'First International' or 'Liberal Food Regime' (1840s-1870s).

In part due to competition with imports, wool prices began to decline in the 1860s and fell dramatically in the 1870s. By 1884, Cameron of Locheil stated as part of the Napier Commission report that, 'the old 'wool rents' are gone, probably never to return' (Napier Commission 1884, Cited in Hunter 1972: 203). Scottish production was unable to compete with imported wool, mutton and lamb, the latter facilitated by the use of refrigeration from the 1870s (Marsden, 1993, Henzell 2007: 69).

Environmental degradation may have also compounded the low profitability of sheep farming in the Highlands. In 1880, a systematic survey of pasture in Sutherland was carried out, which concluded that 'there has been marked deterioration,' a claim supported by sheep farmers in 'but one voice' (MacDonald, 1880, cited in Dodgshon and Olsson, 2006: 30). Degradation of pasture was also reported in Ross and Cromarty, Skye and Kintail (Hunter, 1973: 202-203), in Invernesshire (MacDonald, 1872) and in the southern Uplands (Wood, 1930, Fenton, 1936). This deterioration of pasture has been characterised by the spread of species including mat grass (*Nardus stricta*), common bent (*Agrostis tenuis*), Yorkshire fog (*Holcus lanatus*), bracken

(*Pteridium aquilinum*), and mosses, with the relative spread of these species varying somewhat between areas of the Highlands. Overall, areas of grass (which had previously been heather, and likely would have been woodland before that), reduced in biodiversity, and became what has been referred to as 'species-poor' pasture (Dodgshon and Olsson, 2006: 31-32). Dodgshon and Olsson (2006) conclude that that rise in intensity of sheep farming in response to the increased prices of mutton, lamb and wool from the mid-19th century led to the removal of cattle from upland farms, resulting in 'mono-grazing' and an increase in the use of muir burn (31-34). Combined with the increased density of sheep on the land—which selectively graze the young plants which are most nutritious to them—this led to this deterioration in pasture (*Ibid*.). While many of the studies of this deterioration largely relate to the ability to stock sheep on the land, given the spread of species which are not consumed by sheep or even cattle (Mather, 1978, Armstrong and Milne, 1995:163, Grant et al., 1985), a number of studies have also indicated that in ecological terms, degradation occurred in relation to biodiversity, wildlife habitats and soil erosion (Fenton, 1937, MacVean and Lockie, 1969, Boyd, 1967, Tivy, 1973, Sansom, 1999, Ramchunder et al., 2009), with erosion leading to the exposure of bare rock and scree on some hill tops, higher levels of runoff which has damaged rivers and their ecosystems and limited evapotranspiration leading to an increased radiation of heat from the uplands (Sansom 1999, Innes 1983: 147).

In the context of declining profitability of sheep farming, and the advent of the romantic movement (Cronon 1996), Highland land increasingly became used for leisure, including for deer hunting (in 'deer forests'), grouse hunting and fishing (Devine, 1994). By the 1880s in the west Highlands and Islands, the majority of land had changed ownership in what Devine called a 'revolution in land ownership' (Devine, 1994: 64). Sheep walks began to be replaced with sporting and leisure estates, which maintained or even amalgamated the large size of land holdings. An early illustration of and contribution to this change can be seen in 1852 when Queen Victoria purchased Balmoral Castle and Estate. This led to further tourism and purchase of estates for leisure purposes (Glass et al., 2013: 64). The 'wild' landscapes of the Highlands, once avoided, seen to require civilising, and perceived as 'gloomy,' 'barbarous' and a 'wide extent of hopeless sterility' (Smout, 1982: 99) began to be perceived as desirable and 'sublime' (Hunter, 2014). According to Hart-Davis (1978), the period from 1880 to the first world war was the 'heyday of Highland stalking' partly due to the increased demand for sport

and partly due to the decreased prices in mutton and wool. Eventually, more land became dedicated to deer and grouse (i.e. sporting estates) than to sheep (Butler, 1985: 385), and in the western Highlands approximately 60 percent of land was converted to sporting estates (Orr, 1982). Whether for sheep or for shooting, estates sizes were astounding. The Sutherland estate—by far the largest landholding—was 1.36 million acres. A single individual, Lord Matheson, owned Lewis' 424,000 acres, and MacDonald's estates on Skye encompassed 85 percent of the island's population (Hunter, 1974: 128). Armstrong and Mather (1983) estimate that half of the area considered to be the Highlands was owned by 15 landowners by 1873. These sporting estates had an incentive to maintain heather moors, as heather supports both grouse and deer (Birks, 1995: 176-179). This could be achieved through the suppression of tree growth and through continuing muir burning and by reducing or eliminating sheep numbers (Bonn et al., 2009: 245).

In the early 1880s, people in the Highlands experienced a combination of blows that were reminiscent of conditions of the famine in the 1840s. The potato crops were completely destroyed by blight, the herring fishing was poor, cereal crops were flattened by a severe gale (which also destroyed boats and fishing gear), and the price of grain had increased. Proposals for parliamentary aid for seed oats and seed potatoes were refused. With this significant shock to livelihoods and food security, combined with other events and conditions[43] people in the Western Highlands began to engage in acts of resistance (e.g. refusing to pay rents, attacks on sheriff officers serving eviction notices, raiding of deer on the Matheson estate, reclaiming of grazing lands, etc.). In the 1882 Battle of Braes, for example, 150 people banded together to resist a sheriff serving eviction orders. In 1883, 2,000 crofters who were in Fraserburgh for the herring season agreed to set up land reform associations in their respective parishes (Hunter, 1976: 144).

These activities, along with unrest in Ireland as well, spurred a government inquiry in 1883 into the conditions of 'crofters' and 'cottars' the Napier Commission (Commission, 1884). In response to the report of the commission and other influential factors, the UK parliament passed the Crofters Holdings Act of 1886 which guaranteed security of tenure to what had

[43] Factors which may have contributed to uprising include the raising of rents in the Kilmuir Estate; the Irish Land League's activism leading to the passing of the Irish Land Act of 1881; and anti-landlord campaigning. However, analysis and debate of the causes for uprising and resistance is still ongoing.

become known as 'crofters' in the Highlands and Islands. It also provided them the ability to pass their croft on to a chosen family member (i.e. a successor), gave them the right to claim compensation from the landlord for improvements made by themselves or their predecessors, assured their right to a share in the common grazing of their township, and allowed them the right to collect seaweed, peat and heather (MacCuish and Flyn, 1990: 40-43, MacKinnon, 2018: 281). It also established the Crofters Commission, which had the power to fix fair rents for crofter holdings. It allowed for the enlargement of crofts where land was available. However, it did nothing to address the challenges faced by people who did not already have a land holding ('cottars') and did not challenge large deer estates. In view of the fact that the act was insufficient to address the challenges of the Highlands, acts of resistance continued, and were met by further governmental initiatives to ameliorate the situation, such as the Highland Congested Districts Act in 1897 (Hunter, 1976: 184-186). The act sought to duplicate the Irish policy of land purchase which offered low interest loans to crofters who wished to own their land. However, uptake of this 'opportunity' was limited to just one case: that of Glendale.[44] Lack of enthusiasm for this act was due to loan repayments being more expensive than rent; crofters would also lose the protections and privileges of the 1886 Act, including the right to appeal to the Crofters Commission for disputes (e.g. in collective grazings) (*Ibid*.).

Following the First World War, there was renewed momentum for further land reform. Highland soldiers who fought in the war felt an increased sense of entitlement to land, stoked by government promises before and during battles that the land from which their forefathers were evicted would be given back to them (Hunter, 1976: 195). When these promises were not fulfilled, riots, land raids and other acts of resistance occurred in the Highlands, by both cottars (those without land) and crofters (those with land who wished to enlarge their holdings). While these groups had distinct and sometimes conflicting interests, Robertson argues that overall, land seizures were 'community-based collective acts' (1997: 117). In response to acts of resistance and violence, and in context of fear of the spread of Marxism (Hunter 1976: 195) the Land Settlement (Scotland) Act of 1919 authorised the government to undertake compulsory purchase of lands for agriculture and settlement. By 1924, a significant

[44] Where it was taken up in Glendale, residents and informants report that there are challenges of garnering momentum as a community given that all of the parcels were individualised and many of them were later sold (Interview FF, 2017 Interview Z, 2018).

amount of land was resettled, and in official crofting areas, landlessness was nearly eliminated in areas such as Skye (Hunter, 1976: 206). A total of 1500 new holdings were formed, and 1200 holdings were enlarged as a result of the act. The Board of Agriculture attempted to apply the act to acquire deer forest land for crofting in response to ongoing illegal occupations and a view at the time that agricultural use of the land would be superior to sporting use. However, this intention was largely unrealised, in part because the Board of Agriculture found the prices of land set by the land courts to be exorbitant (Robertson, 1997: 114). The legacy of this ineffectual challenge to the deer estates can be seen today: sporting estates cover more than 26 percent of the country, compared with the seven percent covered by crofting (Brown, 2008).

While the 1919 Act covered the whole of Scotland, it was primarily applied in the Highlands and particularly in the crofting areas (Cameron, 2011: 84, Cameron, 1997). Cameron (1997) argues that this decision was taken by the Secretary of State for Scotland due to both a limited budget and political concerns about the crofting districts. The Secretary argued that settlements and enlargements could be done 'more cheaply' in the crofting areas and would also serve to stem the 'danger of raiding and agrarian disturbance' in the area (Cameron, 1997: 202). However, even within crofting areas, support was not uniform: Cameron (2016: 122) points out that many Highland localities such as the Isle of Mull, which had experienced depopulation due to clearance, famine and emigration, did not benefit from land resettlement as had other areas such as Isle of Skye.

In the discussions following the report of the Napier Commission, it was proposed that areas to be included in the 1886 Crofters Holdings Act would be those above the Highland Line in which holding sizes were small, common grazings existed and Gaelic or a distinct dialect was spoken. This would have included many of the counties in the East and Central Highlands, such as Aberdeenshire, Nairnshire, Moray and Banffshire and the highlands of Perthshire (LRRG, 2014: 181, Cameron, 1997: 198). In the end, the acts only included the counties of Sutherland, Ross and Cromarty, Inverness, Argyll, Shetland, Orkney and Caithness (see Figure 2 for a map of crofting counties compared with the Highland Line). While there is some controversy about the rationale for the final selection of areas covered by the crofting acts, it is widely acknowledged that the designated crofting counties excluded a large area of the Scottish uplands with very similar characteristics. The Land Reform Review Group recently

highlighted that the drawing of this 'politically expedient line' through the Highlands has meant that much of the Highlands has been without the unique government support provided to the crofting areas, such as that of the Highlands and Islands Development Board (today the Highlands and Islands Enterprise) and the security of tenure and succession of crofts (LRRG, 2014).

Figure 2: Map Depicting Formal Crofting Counties, Compared to the Highland Line (Source: Moisley, 1962: 84)

When debates resurfaced about the definition of the Highlands in 1960, a Scottish Office Note on Defining the Highlands stated:

> ''It is true that the Highlands of Perth, etc. have certain problems in common with the Highlands and Islands, but these are equally shared by other areas in the Southern parts of Scotland…There is little doubt that an extension of the 'Highlands' to include areas as far South as Perthshire and as far east as Aberdeenshire would make matters much more difficult with the Treasury. Some of these areas show little difference from conditions in say, Cumberland and Westmorland — and one is getting into areas which the Treasury know and understand without the aura of Highland mystique' (Scottish Office, 1960 in Cameron 1997: 207-208)

The above quote reinforces that the definition of the Highlands used today does not necessarily reflect its unique challenges in comparison with other upland areas of Britain. Here, the 'aura of Highland mystique' and the inability for the Treasury to 'know' the issues of the area seem to be spurious justifications for maintaining the Highlands as separate and in turn, excluding other areas of Britain—such as mid-Wales—from extra support. The legacy (and shame) of the oppression of Gaeldom and the clearances appear to be used instrumentally in the justification for the establishment of the Highlands and Islands Development Board in 1965:

> 'For two hundred years the Highlander has been the man on Scotland's conscience.... No part of Scotland has been ... given a shabbier deal by history from the '45 onwards. Too often there has been only one way out of his troubles for the person born in the Highlands – emigration' (Willie Ross, Secretary of State for Scotland, cited in Cameron, 1997: 209).

Thus, while the challenges facing the Highlands largely stemmed from the privatisation and individualisation of land which also occurred throughout Scotland, only a part of what was the Gaelic Highlands became protected under what today is considered crofting. The Highlands were also considered special in terms of their 'harsh' physical conditions or problems of isolation, which fails to acknowledge the political factors which eroded the ability for agrarian society to thrive in the Highlands or elsewhere. While cultural colonisation and ethnic discrimination have also been cited as rationale for extra support, the area which became designated as 'Highlands and Islands' is significantly smaller than the area which had previously been under Gaelic clanship. Meanwhile other areas which share similar characteristics—including the remainder of the uplands—have been largely excluded from

land tenure changes and economic support. Extreme levels of depopulation and farm amalgamation which have occurred in the uplands outside of crofting areas attest to the impacts of capitalism on eroding agrarian livelihoods.

Arguably, the large concessions made to the Highlands in the years since the Napier Commission could be considered a form of 'regulation:' the establishment of crofting was successful in calming agrarian uprisings amongst this population, at least temporarily. The 1886 Act made some changes to counter the private property rights which had replaced the clanship system and decimated the Highland society. Namely, it protected crofters' right to access common grazings (which had previously been kept because it was deemed more economic than subdivision), regulated the costs of renting land and ensured that tenants could not simply be evicted because a landlord wanted to change the use of land. However, security of tenure was, and is today, not absolute: ultimately, tenants needed, and still need, to pay rent in order to maintain their holdings. In order to pay rent, they needed, and still need a certain income. This was particularly the case given that crofts were, by definition, extremely small holdings, the sizes of which had been dictated by both 'improving' landlords and the architects of the improvements in order to prevent people from subsisting from the land and to require them to work as labourers for 200 days per year. The crofting acts limited to some extent the degree to which crofters were and are required to engage with markets for their social reproduction through the setting of 'fair' rent but has not fully eliminated it. While many crofters continued to produce potatoes on their 'in-byes' or smallholdings, and some crofters voluntarily held grazing animals in common,[45] they still needed to sell their labour or the products of their labour (typically the sheep grazed in common grazings) for their social reproduction. In essence, the crofting acts protected a semi-proletarian class of tenants who operated largely—though not entirely—as individualised units and were at least partly dependent on markets for their survival.

Further the 1886 Act did not challenge the private ownership of the land that the crofters rented. In other words, while crofters had secure tenancy, the land was still owned by private individuals, many of whom owned extensive estates. While the ownership of large estates

[45] In a minority of common grazings, stock are communally owned by a Sheep Stock Club, managed as one flock with members receiving a dividend of profits at the end of the year. Stock clubs are organised at local levels and are not legislated for in crofting legislation (Brown, et al., 2003: 153).

was later challenged by crofting communities and has become a driver of the land reform movement of the 21st century,[46] crofting legislation and the Land Resettlement Act of 1919 did not address the inequality in land ownership in Scotland. According to Bateman's survey of landed proprietors, in the 1880s a total of 1,758 landowners owned 92 percent of the total land area of Scotland, making Scotland the locality of greatest land concentration in the UK (Cameron, 2016: 56). Not only did these landowners have control over what was done on these estates, they also exerted influence through the organisation of local governance. Landowners sat on parochial boards for poor relief, school boards and on county councils (Hutchison, 1994). They were also influential in the establishment and activities of conservation organisations. For example, Scottish landowners were influential in the establishment of the National Trust for Scotland in 1931 and the Association for the Preservation of Rural Scotland (Cameron, 2016, citing Lorimer, 1997). When the National Trust purchased its first estate of Glencoe in 1937, for example, landowners argued for limited access to protect the 'solitude' of mountaineering and insisted that the land was not suitable for human dwellings or for agriculture (Cameron, 2016: 70). The National Trust has since become the largest non-governmental landowner in Scotland, owning 77,206 hectares of Scottish land, including several crofting estates (McMorran, 2016: 69).

Conclusion

This chapter has charted some of the effects of the emergence of capitalist social property relations on the agrarian capacity of the Highlands to sustainably support a human population. As Section 1 showed, before the advent of capitalism, the Highland population was largely self-sufficient in food. Arable production was significant and the amount of land under arable cultivation often matched that of lowland townships. While records are limited, there is no evidence that Highland food production and consumption was inferior to that of the lowlands. The widespread and intensive production of sheep and intensive potato

[46] In 1976, the Crofting Reform Act gave crofters the right to buy their holdings at preferential rates (fifteen times their annual rent). The Act was controversial but was deemed to align with the overall narrative that support for crofting related to the insecure tenancies leading to the clearances (Hunter, 1991: 143-148). This of course arguably reinforced the individual private property holdings, albeit on a small scale and regulated by crofting legislation. In 1993, the Assynt Crofters Trust purchased the 21,500-acre estate on which its crofters resided, which opened the way for future land acquisitions for crofting, and later non-crofting communities, as detailed in Chapter 6.

cultivation were specific to the privatisation of land—and resultant pressures for maximising economic value of the land—which occurred in the middle of the 18th century.

The yields of grain in the Highlands were perceived as comparatively 'disadvantaged' in the context of capitalism's drive to minimise labour and within the economic context of Britain, both in terms of industrialisation and trade liberalisation (including forced trade from the colonies). This led to the Highlands of Scotland becoming an economic satellite for the rest of Britain, producing a small number of products (and cheap labour) and relying strongly on markets external to the area. The decline in the profitability of sheep, in the context of expansive, privately owned estates and the romantic movement's search for the 'sublime' led to the rise of sporting estates, which now comprise a significant part of upland land use in Scotland. However, the establishment of these sporting estates would not have been possible without prior capital accumulation of their (new) owners or the visitors who paid high prices to enjoy them.

While some areas of the Highlands became protected under crofting legislation, individualised property still prevails within this system (with the exception of common grazings), and in the vast areas of Highlands (or uplands) which did not become included in the crofting designation. Extra support for Highland and upland areas has been justified on the grounds of the unjust clearances and geographical challenges of the areas. However, the social property relations which underpinned the over-specialisation, intensification, and unequal access to, and control over, land largely remained unchallenged, even under crofting legislation. It is only relatively recently that the concept of private property has come under scrutiny in Scotland, as will be detailed in Chapter 6.

The political ecology approach applied in this chapter also demonstrates the significance of social property relations in shaping the biophysical domain. Without the social property relations of capitalism, sheep farming—and later deer estates—would not have spread in the same way. At the same time, the biophysical features of the Highlands played a significant role in the capacities for these land uses within the capitalist mode of production, particularly in comparison with the biophysical features of the Scottish lowlands and of England.

The effects of widespread and intensive grazing by sheep have had a lasting impact on upland ecologies themselves as well as their perceived agricultural capacities. As discussed,

peatlands were drained and moorlands were burned to create habitats which were favourable to sheep. This resulted in a resettlement of people onto land that previously had not been used for agriculture (i.e. on the less fertile outskirts of estates) and also resulted in what had previously been arable land being taken over by heather, and eventually, in some parts, bracken and species-poor grassland. There are debates about the extent to which the extraction of sheep from the Highlands resulted in an overall depletion of nutrients in upland ecosystems (see Innes 1983). Despite this, there is clear evidence that commercial sheep farming resulted in environmental degradation, including soil erosion (which, as noted above, in some places has led to exposed rock in scree), a decline in soil fertility and a reduction in vegetal biodiversity. The drainage projects which sought to create more productive pastures have also been linked to ongoing degradation peatlands and the ecosystems downstream from them (Ramchunder et al., 2009, Holden and Burt, 2003). The economic disincentives for engaging in arable cultivation in the Highlands would have presumably become compounded by this soil erosion and the spread of bracken, grasses and mosses. These biophysical limitations to cultivating crops in the Highlands have come to be seen as intrinsic to the biogeographical features of the area, which are often identified as the causes of the Highlands being 'constrained' or 'less favoured' in their ability to produce food.

Further, the transition in upland ecology and its association with what is 'improved' and what is 'degraded' has been largely shaped by economic factors, rather than purely ecological ones. As discussed, heather (*Calluna vulgaris*) had been one of several species of dwarf shrub which existed under woodlands and in scrub, but which had begun to spread with the felling of woodlands combined with the grazing of livestock. With the advent of the improvements, grasslands were favoured because more sheep could be supported on grassland per hectare than on heather. Efforts were made to replace heather with what are considered 'species rich' pastures in hill areas and 'improved' (monoculture) pastures in what had once been inbye land (Dodgshon and Olsson, 2006). With further overgrazing and muir burning, grasslands in the hills declined in diversity and also in their ability to support grazing sheep, and it is at this point that much of the concerns about degradation of upland pastures, and calls to 'restore' pastures back to heather and species rich grasslands, were expressed (Orr and Fraser, 1932).

As the next chapter discusses, heather moors and species rich grasslands eventually came to be supported and protected by government grant schemes. Today, heather moor in particular is revered as a 'cultural landscape,' defined by its emergence and maintenance resulting from ongoing interactions between farmers (and more recently sporting estate managers) and ecosystems (Gimingham, 1995: 224). Yet the emergence of heather moors within a trajectory of an ecological succession which occurred with the disorientation of land use from societal food needs in the Highlands raises questions about why this ecosystem in particular merits conserving at the expense of other ecosystems emerging.

In terms of landscape-level ecology, during the period of agrarian transition analysed in this chapter, it appears that there has been a reduction in the types of ecologies present in the Highlands. Whereas under clanship, the Highland landscape comprised a mosaic of land uses, the majority of (permanently and temporarily) cultivated land and woodland scrub was replaced by heath and grassland following the transition to capitalism. Arable land was in effect 'shifted' to the lowlands, rather than integrated with or rotated with land oriented towards the grazing of animals. The small in-byes of crofts represent the primary exception to this. In terms of the connection of 'islands' of biodiversity across a landscape 'matrix' discussed in Chapter 3, the mosaic of the uplands (and lowlands) was replaced by the specialisation in capitalism by a significant division between livestock farming in the uplands and arable farming in the lowlands.

While much scholarship on agroecology focuses on chemical inputs, the history of the agrarian transition in the Highlands presents a strong case that unsustainability is not limited to the use of inputs or other modern practices. This chapter has demonstrated that the shift towards commodity production and specialisation which occurred with the privatisation and individualisation of land led to environmentally detrimental agriculture in the Highlands. The delinking of production and consumption in the Highlands not only eroded the resilience of the population but it also shifted production to other localities, often at the expense of overseas ecologies and populations.

The next chapter provides an overview of the agrarian changes in the uplands from the 20th century to present, in order to complete the account of the factors which have led to the existing land use system of the uplands today.

Chapter 5: The institutionalisation of livestock farming in the Scottish Uplands, through productivist and 'post-productivist' policy

Introduction

This section discusses the political environment which shaped Scottish upland agriculture through the course of the 20th century, from the First World War to the Second, with its initial and inconsistent support for productivism; through the Second World War and the post-war productivist era which more consistently stimulated increased and intensified livestock farming; to the 'post-productivist' neoliberal era, the advent of agri-environment schemes and up to the present framing of agriculture as 'multifunctional,' particularly in 'marginal' areas such as the uplands.

After the establishment of crofting, the political area of the 'Highlands' largely became associated with the crofting counties, which as discussed left out a great deal of the uplands above the Highland Line and of course the Southern Uplands. However, this was not immediate, and many writers interpreted the 'Highlands' and the 'uplands' variously. In this chapter and onwards, the thesis differentiates the broader designation of the 'uplands' from the politically defined area of the 'Highlands.' As discussed, the Highlands of Scotland could have been considered a periphery in the context of the UK from the mid-18th through the 19th century. However, during the 20th century the population in the Highlands increasingly benefit from the UK's 'core' status at a global level as the state begins to take a more active role in the uplands and begins to more explicitly elevate citizen rights across Scotland.

Section 1: Fordism, 'Political Productivism,' forestry and land redistribution

The period leading up to and following the first and second World Wars, and after the latter, saw an increased overt role of the state in managing capital accumulation and engaging in socially redistributive policies. This may be termed the era of 'Fordism,' or, in terms of agri-rural policy, that of 'political productivism' (Tilzey, 2000), whereby the state engaged in 'positive coordination' of capitalism (Tilzey and Potter, 2007). During this time, there was an increased focused on agricultural productivism in the uplands. In the Highland areas, the Congested Districts Board was established in 1897 and provided agricultural 'assistance' through encouraging fencing and draining, providing 'improved' seed varieties, and

encouraging the spraying of crofters' potatoes to protect them from blight (Hunter, 1976:184). It also reinforced the perception that the land was 'more suited to pastoral than to agricultural farming' and strongly focused on educating crofters about breeding practices and encouraged the cultivation of turnips and kale for fodder. Britain's free trade orientation resulted in low grain prices at the turn of the century, driven by imports from Canada, Australia, India, the US and Argentina. Meat and dairy prices were also affected due to imports from Australia and New Zealand. While many food producers would have supported tariffs on imported foods to mitigate the fall in prices of grain and meat, the influence of food buyers dissuaded Parliament from raising food prices (Whetham, 1978: 67). While this led to agricultural decline in Britain as a whole, the livestock sector at least partly benefited from the cheap grains for animal feed (Adams, 1986: 13) and buyers of animal feed opposed any measures which would increase grain prices (Whetham, 1978: 69). Further, British capital had been purposefully invested in farms, railways, docks and harbours in Canada, South America, Australia and New Zealand, and the sale of agricultural products from these areas in British markets were seen to pay 'interest' on these investments (*Ibid*.).

Through the course of the Great War, however, Britain as a whole turned towards greater domestic production due to a decreasing stability of imports from overseas (from the loss of ships bringing in food) and steadily increasing food prices. Policies also emphasized greater efficiency of labour, given that many farm workers and farmers were recruited into the war (Ibid). The Defence of the Realm Act of 1914, which was instituted by the Scottish Board of Agriculture and implemented by local committees, intended to increase agricultural production in the uplands through increasing the land area in agricultural use (with only temporary success[47]) and increasing the quantities of livestock held (Robertson, 1997: 113).

The Coalition Government which came to power at the end of the First World War declared in its election manifesto to support its 'soldiers and sailors, officers and men' through enabling them to 'acquire land on simple economical bases…with grants provided to assist in training and in initial equipment' (Leneman, 1989: 56). The 1919 Land Settlement (Scotland) Act (see Chapter 4), eventually led to the creation of smallholdings and crofts to 'satisfy Highland land

[47] While it had attempted to convert deer hunting estates over to sheep grazing—in part to increase production but also to stem the land raids occurring at the time—it was only temporarily successful in this: tenancies negotiated during the time of the war had expired by 1920 and estate owners did not renew them afterwards (Robertson, 1997: 113)

hunger.' In the context of the Russian Civil War and the fear of the spread of revolution 'or at least an undermining of the established order of society' in Britain (Gregory, 2003), land resettlement, from a Regulation Theory perspective, could be interpreted as a way for the British state to maintain or increase its legitimacy.

The 1919 Act also allocated funds for loans to smallholders for the purchase of seeds and fertilisers. The National Farmers Union (NFU) which had formed in 1908, had grown to 80,000 members by 1921 and strongly advocated for continued support for domestic production (Adams, 1986: 19). However, the price supports which had existed in the face of food shortages and high prices during the First World War were removed as farm prices began to fall from the early 1920s and continued to decline in the years following the onset of the depression (Whetham, 1978: 98). The repealing of price supports and continued free trade in food, particularly from the British empire, highlights that the agricultural orientation of the British government was based on its social legitimacy functions rather than increasing production *per se*.

While British trade policy was liberal during and after the First World War, from the 1930s trade policies began to put 'the home producer first' via increased tariffs on 'foreign' or non-Empire countries (Richardson, 1936: 138). Imports of frozen mutton and lamb and frozen and chilled beef were subject to quotas from 1933 to 1937 and Australia and New Zealand voluntarily agreed to reduce their exports (de Bromhead et al., 2017: 333).

Another factor affecting agriculture in the uplands was British forestry. From the end of the first World War onwards, Britain oriented towards producing its own timber through expanding its forestry. The Forestry Commission was established at the end of the Great War based on a perception that Britain's dependence on imported timber had weakened the war effort. The commission also indicated that forestry would 'increase the productiveness and population of large areas of the British Isles which are now little better than waste' (Acland Committee, 1918: 25, cited in Mather, 1996:84). Specifically, it indicated that areas which would benefit most from forestry would be 'those which are now poorest and most backward, such as the hilly regions of northern England, Wales and Ireland, the Border Country, and *most of all, the Highlands of Scotland'* (*Ibid*., emphasis added).

During and after the Second World War, given that Britain saw it essential to protect its lowland arable land for food production, the Highlands and other upland areas of Britain were also favoured for forestry during this time of productivism (Mather, 1996: 84, Oosthoek, 2013: 69). However, the Forestry Commission plantations were less than twenty years old at the time of the second war and in order to meet the demand for timber, felling occurred in many of the older forests of Scotland and the remainder of Britain. In light of this, in 1943, while the war was still going on, the Government requested the Forestry Commission to review the forestry policy, and this review served as the basis for the Forestry Act of 1945 which proposed the creation of two million hectares of additional forestry (Oosthoek, 2013: 86). While the 1943 report indicated that afforestation would bring social advantages such as 'the development and settlement of rural Britain,' particularly in the 'unproductive' upland areas (Forestry Commission, 1943, cited in Oosthoek, 2013: 71), afforestation tended to cause depopulation, as land was consolidated and managed with less labour intensity than in agriculture (Mather, 1996). While the climate in the west of Scotland was more amenable to forestry than in the east, it was more difficult to convert tenanted land into forestry compared with owner-occupied land. The development of the Cuthbertson plough in the 1940s and the ability to use aerial fertiliser and mechanical drainage allowed plantations to be established in the non-crofting areas of the uplands (Mather, 1996: 85). Forestry entailed single species plantations of Scots pine, and later, Sitka spruce, with trees of identical age to facilitate harvesting and processing (Oosthoek, 2013: 25). Over the course of the 20th century, the amount of forestry land in Scotland increased three-fold, mostly in the uplands. Once the need for timber was fulfilled, further forestry initiatives were justified on the basis of their provision of employment and economic growth, recreation and landscape improvements, though the latter was particularly controversial (Oosthoek, 2013: 102). Mather (1996) argues that by 1991 (notably before the advent of carbon trading), forestry was seen as an end in itself.

The Second World War reinforced sheep farming alongside forestry in the uplands of Britain. Subsidies encouraged sheep production in the uplands and arable and mixed farming outside the uplands. During this time, the British government sought to reduce its dependence on imported animal feed and this was to be achieved through increasing its production of cereals and root crops (Bowers, 1985). Given that the landscape of the lowlands permitted the use

of large-scale labour-saving mechanisation for arable crops, arable production continued to concentrate there. This left animal pasturing, another low labour productive activity, to the uplands. In 1940 the first headage payment (i.e. payment per unit of livestock) was introduced for sheep farming in the hill and upland areas. This encouraged an increase in stocking density which enabled the number of sheep to remain constant or even increase in the uplands despite the simultaneous increase in land use for forestry (Hart, 1956: 273, Mather, 1996). Sheep were also one of the products included in the price guarantees.[48] The Hill Farming Act of 1946 offered support for capital improvements on upland sheep farms, particularly for 'improving' pastures so that upland sheep farmers could be self-sufficient in finishing their sheep, rather than relying on lowland farms to purchase and finish their stock (*Ibid*.). 'Improving' pasture entailed ploughing up grassland or moorland vegetation (often referred to as 'rough grazing') in order to promote a 'productive monoculture' of rye grass (*Lolium perenne*) which responded well to nitrogen fertiliser and would support significantly more animals per hectare. However, its uniformity in structure and plant species has had significant negative impacts on the populations and diversity of birds and insects in addition to reducing vegetal diversity in the grassland itself (Andrews and Rebane, 1994, Henderson et al., 2004, Wilson et al., 1999, Potts et al., 2009).

Following the Second World War, food production remained a top priority for Britain and the 1947 Agriculture Act sought to achieve British self-sufficiency in food production (Robinson and Sutherland, 2002: 158). Policies particularly emphasized domestic meat production, which was 'most expensive to import and which at present is in the shortest supply' (Highland Panel, 1947, cited in Hunter, 1991: 76). Livestock farming in the uplands continued to receive support via hill sheep and hill cattle subsidies, though sheep were by far the primary upland grazing animals (Fenton, 1937: 424). The government also sought to reduce imports of animal feed, given the post-war dollar crisis and a world shortage of grain (Marsden, 1993). To achieve this, support was offered to increase the productivity of grasslands, again through the use of fertilisers and 'improved' grass species. The logic of this was that improvements in pasture could support more animals per hectare, which in turn could free up land (1 million acres, primarily in the lowlands and in England) to produce cereal feed (Bowers, 1985: 69).

[48] However, stock sheep—sheep raised in the uplands which required 'finishing' in lowlands—were not included in price guarantees (Hunter 1991: 87)

Taxes on imports were lifted, though price guarantees were replaced with 'deficiency payments,' which made up the difference between guaranteed prices and market averages. Thus, Britain's trade was open, but it aimed to protect its producers (*Ibid*).

Farm sizes greatly increased across all of the UK during this productivist era (Robinson and Sutherland, 2002), including in the uplands where economies of scale were promoted for both sheep grazing and forestry plantations. Economies of scale and intensification were also essential for continued financial viability. Hunter notes that the farm size that would have been adequate for a full-time financially viable holding significantly increased during the post-war period, and that the stocking level required for the same has doubled over the 20th century (Hunter, 1991: 207). Whereas prior to the wars, the formation of smallholdings was encouraged, including via the 1919 Resettlement Act (Cameron, 1997, Hunter, 1976: 206), after the end of the Second World War, small farmers were offered grants to leave the industry in order to amalgamate farms into 'viable economic units' (Bowers, 1984: 73). In this productivist era, the ideal farmer was seen to be a commercial producer for the nation, providing cheap and abundant food for the industrial workforce, and also facilitating capital accumulation. Any reductions in agricultural labour forces could, in theory, be absorbed into the growing industrial sector (*Ibid*.) and were thus were not seen as threatening to state legitimacy. As such, there was synergy between the 'accumulation' and the 'legitimacy' functions (see Clark and Dear, 1981, Jessop and Sum, 2006, Jessop, 2014) of the British capitalist state.

With the amalgamation and enlargement of land holdings came extensive depopulation in the uplands. The crofting areas of the Highlands, which were protected via security of tenure, however, witnessed far less depopulation than other areas of the uplands. The Department of Agriculture viewed the crofting areas as problematic in terms of productivity and profitability. In short, crofting went against the Keynesian feedback loop model of increasing production to increase income and increase consumption (Boulding, 1945), which is associated with Fordism (Jessop and Sum, 2006: 62). The Department of Agriculture wished to extend the provision of the Agriculture (Scotland) Act of 1948 to crofting areas. This Act stipulated that the government had the power to dispossess owners and occupiers 'on grounds of bad estate management or bad husbandry…in the event of failure to improve' (Hunter, 1991: 76). In 1955, the Crofters Commission was given this remit (*Ibid.*).

From 1951, deficiency payments began to decrease, and the emphasis of government support shifted more strongly towards encouraging higher labour efficiency through subsidies on capital and chemical inputs (Bowers, 1985: 68). The intense focus on productivity combined with the use of chemical inputs had significant detrimental effects on biodiversity and soils on both lowland and upland agricultural land. The Nature Conservancy in 1984 found that lowland habitats such as grasslands and hay meadows were reduced to just 3% of their pre-war levels (Adams, 1986: 2-4, Council, 1984); 80% of chalk and limestone grasslands had been damaged and 40% of lowland heathland was destroyed. While figures in the uplands are less extreme, they are still significant: approximately 30 percent of upland grasslands and moorlands in Britain were ploughed, treated with herbicide and inorganic fertilisers and were reseeded with 'improved' varieties between 1950 and 1980 (Council, 1984). This figure is likely an under-estimate, given that the 1937 and 1939 Agriculture Acts provided subsidies per acre of ploughed grassland (Adams, 1986: 20-21).

Frank Fraser Darling's West Highland Survey, which commenced in 1947 and was published in 1955 indicated that the Highlands were a 'devastated countryside' (Darling, 1955: 192) largely as a result of the 'real and dangerous' overgrazing, muir burning, high sheep to cattle ratios and tree felling and tree suppression in the west Highlands (*Ibid*.: 412-414). These factors were leading to high levels of soil erosion, damage to soil flora and composition, the spread of bracken (*Pteridium*) and mat grass (*Nardus stricta*), and the breaking of the 'intricate' and 'circulatory' ecosystem of woodlands—including their soil-improving fauna such as earthworms and bacteria—which had preceded the clearances (*Ibid.*: 167-176, Fenton, 1937: 424). Overgrazing of sheep was also beginning to threaten the establishment of heather (*Calluna vulgaris*) as other species began to encroach on the bare ground left by sheep and by muirburning (Fenton, 1937: 242-245, Fenton, 1936a, Fenton, 1936b). Again, as sheep are selective grazers, they are associated with reduced biodiversity and erosion over time (Toth et al., 2018) particularly if not integrated with other grazers who complement or compensate for sheep's selectivity (Darling, 1955: 171). Studies have also indicated that the intensive management of sheep on the uplands from the 1940s onwards resulted in an overall reduction in plant biomass, leading to the exposure of soil and rocks, effecting evapotranspiration and an increased radiation of heat in the uplands (Orr, 1997, Sansom, 1999).

Inorganic fertilisers (i.e. nitrates and phosphates) were imported from South America in significant quantities to allow for increased yields and more intensive production (Adams, 1986). They were subsidised in the 1937 Agriculture Act, particularly for their use on grasslands (*Ibid*.). While in the Clanship era, organic fertilisers (e.g. seaweeds, manure), the additions of household waste (e.g. thatch) and fallowing had been used to maintain fertility (see Chapter 4), the intensification of production (i.e. higher stocking densities and denser monocultures of grass species) required more concentrated applications of nutrients. The use of nitrogenous fertilisers is toxic to many heathland species, and has caused a decrease in heathland plant diversity (Maskell et al., 2010). It also causes increased soil acidity which further negatively affects heathland species and is also detrimental to grassland species (*Ibid.*). With their higher concentration of nutrients and high solubility, the use of inorganic fertilisers has been linked to the pollution and eutrophication of streams, rivers and lakes (Daniel et al., 1998, Sims et al., 1998, Newbould, 1989). Eutrophication of grasslands also reduces species richness of these habitats (Maskell et al., 2010). Inorganic nitrogenous fertilisers are also associated with climate change through their emission of nitrous oxide (N_20) and depend on the extraction of fossil fuels, typically natural gas, in their manufacture, further limiting their sustainability (Kindred et al., 2008, Berry et al., 2008). Inorganic nitrogenous fertiliser is also linked to a reduction of soil organic matter, which not only affects soil structure but also reduces the capacity for soils to retain nutrients (Chalmers et al., 1990, Robinson and Sutherland, 2002). Further, inorganic fertiliser only increases the concentration of a few gross nutrients and thus does not address the depletion of trace elements in soils over time (FAO, 1972). The high usage of such fertilisers would not have been possible without the ability for Britain to extract these inputs from countries such as Chile and Peru (Adams, 1986: 11). It also would not have been possible without the high levels of subsidies allocated by the British government for their use, as detailed above.

The use of pesticides (including herbicides, fungicides and insecticides) was encouraged not only for agricultural productivity but also to support industrial growth (Marsden, 1993). Their use, combined with habitat loss, has resulted in drastic declines in wildlife. Approximately half of plants, one third of insects and four fifths of bird species in Britain have experienced population decline as a result of post-war farming practices (Robinson and Sutherland, 2002). The use of pesticides and inorganic fertilisers has also permitted continuous cereal cropping

in lowland areas, replacing the use of fallow and rotation (Stoate, 1995, Robinson and Sutherland, 2002: 164).

In the context of falling world food prices in the late 1950s, price support for agricultural products was cut. While a zero growth policy was also imposed, successful lobbying by the NFU about the 'valuable contribution' of agriculture for the balance of payments and the potential to use food surpluses for overseas aid led the British government to reinstate protectionism and encourage productivism once again (Bowers, 1984). Import controls such as minimum import price schemes were introduced for certain products and 'market management' shifted the cost of British food production from the Treasury to the consumer. However, the focus remained on labour efficiency, in part to 'release' labour for other industries.

Throughout this period, support for sheep farming in the uplands continued. In 1965 headage payments were increased and secured on a long-term basis for hill and upland farmers and hill ploughing grants were introduced in 1967 to again facilitate the creation of 'improved' pasture. By this time, farm profits in the upland areas were nearly entirely comprised of headage payments and other agricultural grants (Duthie, 1958) and the intensity of sheep farming had increased still further from the early 1950s, when Darling was observing its negative ecological impacts.[49] Continued support for sheep could be attributed in part to the influence of the National Farmers Union of Scotland and the Hill Farming Research Organisation.[50] Together with the Department of Agriculture and Fisheries for Scotland, they argued to the Select Committee on Land Resource Use in Scotland that no ecological deterioration was taking place in sheep grazing areas despite strong arguments by Darling and other ecologists. The Committee concluded that there was 'some doubt' as to whether land had deteriorated as a result of sheep grazing in the uplands (Mather, 1978: 184).

[49] Agricultural census data indicate that sheep numbers in Scotland overall averaged 6.89 million between 1944 and 1952, when Darling would have been conducting his survey. In 1969 they were 7.62 million and in 1978 they were 7.35 million. During this time, however, the rise of forestry reduced the amount of land available for sheep grazing. As governmental divisions changed during this time it is difficult to compare for the uplands themselves, or for the Highlands and Islands. See Department of Agriculture for Scotland (1952, 1978).

[50] The Hill Farming Research Organisation later merged with the Macaulay Institute for Soil Research, which in the 1960s developed the Land Use Capability (LUC) system which designated nearly all of the uplands as capable of either rough grazing only or 'improved' grassland. This system is still widely used today (James Hutton 2019)

Meanwhile forestry continued to expand in the uplands. While a review of the Forestry Commission's achievements in the 1960s indicated a need to emphasize the recreational and landscape aspects of forestry, measures to address this were primarily applied in the south of England. In the uplands of Scotland, monoculture plantations continued to dominate, particularly in Caithness and Sutherland which were not regarded as tourist destinations (Oosthoek, 2013: 91-92). An estimated 91,120 hectares of conifers were planted between 1969 and 1975 in Scotland, primarily in the uplands. In comparison, only 120 hectares of diverse broadleaf trees were planted.

It appears that during and following the war period, the perceived difference between the uplands and lowlands in terms of agricultural potential was further entrenched. The productivist orientation of the war and post-war period seems to have reinforced the standpoint of the improvers that the uplands and hill areas should be dedicated to sheep (and, later also to tree) production, and that the lowlands should to be dedicated to arable and mixed farming and also to absorbing and 'finishing' the stock sheep of the uplands and hills. As the next section illustrates, the distinction was reinforced further after the need for 'national' or 'political' (Tilzey, 2000) productivism had passed.

Section 2: Neoliberalism and 'post-productivist' policies

When the UK joined the European Economic Community in 1973 it also came under the Common Agricultural Policy (CAP). During negotiations on the UK's entry to the EEC, its headage payments to hill farmers were influential (Winter et al., 1998). In 1975, the ECC passed Directive 75/268 on 'Mountain and Hill Farming and Farming in Less Favoured Areas.' This established an ability for Member States of the EU to designate areas as 'Less Favoured' and provide direct payments to farmers in those areas in order to compensate them for the 'special conditions' under which they farm. The Directive aimed to prevent the 'abandonment of land which was previously maintained,' and support farms in areas 'associated with tourist and craft activities' which were not adequately covered by other Directives on the modernisation of farms. It specifically sought to encourage the production of livestock products (beef, veal, mutton and lamb) and support areas in which such production might cease in the absence of assistance. The Directive also indicated that support

should be given where the continuation of farming was important to 'conserve the countryside,' yet simultaneously indicated the need for support for 'land improvement'. The latter, as discussed earlier, entails the ploughing of semi-natural habitats in order to increase stocking density. The Directive is notable for instituting support for the continuation of farming on the grounds that certain types of farming are 'necessary to protect the countryside, particularly for reasons of protection against erosion,' 'in order to meet leisure needs' and in order to support 'the maintenance of a minimum population' (EEC, 1975: Article 3.1). It marked the beginning of support for farming beyond the production of food.

Following the 1975 Directive, Hill Livestock Compensatory Allowances (HLCAs) were established allowing for direct payments to livestock farmers in the uplands (Winter et al., 1998: 277). However, these payments were based on headage and thus further favoured intensification (i.e. increasing the density of animals on grazing areas). The UK also had a 'variable premium scheme,' which operated in a way similar to a deficiency payment scheme and offered payments for fattened lambs. This further encouraged an increase in lamb production in the uplands, as lowland lamb fattening operations expanded (Winter et al., 1998: 278). Some upland farmers even fattened their lambs themselves on their 'improved' grasslands and with the use of feed (*Ibid*.).

The headage payments for livestock also contributed to the consolidation of farms. Hunter (1991) remarks on the ways in which the scheme favoured larger landowners, calculating the support payments received by two different sheep producers in the uplands of Scotland in 1988:

> 'One is a crofter with 50 ewes which he keeps in a very hard, wet, exposed part of Lewis. The other maintains 3,000 ewes on his extensive estate in a comparatively fertile and sheltered mainland strath. The crofter, in the course of the year in question received under £700 in the shape of sheep annual premium and hill livestock compensatory allowance cheques. The landlord collected over £40,000' (Hunter, 1991: 214).

The CAP had been established with the explicit objective of permitting free trade in agricultural and industrial products, in part through removing 'distortions of competition.' (European Commission, 1980). A 1980 review of the CAP praised it for having increased the

goods available for consumption both at home and abroad (including through food aid), while reducing the labour requirements for agriculture. The 1980 review indicates that this 'contributed to the remarkable boom in the industrial and tertiary sectors' by supplying them with the labour no longer required in agriculture (ECC, 1980: 7). The population working in agriculture across the EU member countries reduced from 18 million in 1958 to 8 million in 1979, which the report calculates was the equivalent to one person leaving the sector per minute, implying this to be a successful outcome (*Ibid*.). These statements illustrate the values underpinning the CAP in terms of facilitating a transition from agrarian to industrialised society through the reduction of labour requirements in agriculture.

From the 1980s, disposing of agricultural surpluses became more expensive, entailing costly export refunds or subsidies for internal disposal,[51] which at times amounted to up to 80 percent of the value of the product (ECC, 1980: 8), in part due to a depression of world commodity prices (Marsden, 1993: 63). Public concerns were also voiced about the rationale for subsidising overproduction, for allocating government funding to wealthy farm businesses, and about environmental and animal welfare impacts (*Ibid*., Almstedt 2013). Further, the productivist ideology of the agricultural sector came into conflict with the neoliberal politics espoused by Thatcher at the time: the concept of agricultural 'exceptionalism' and the agricultural 'welfare state' was incongruent with the free market ideology of neoliberalism (Marsden, 1993: 63). The Uruguay Round of 1986-1994 also brought agriculture into the GATT more than ever before and committed signatories to rules-based policy procedures under the WTO. It set an agenda for progressively liberalising agricultural markets through eliminating export subsidies and decoupling domestic support (Potter and Burney, 2002: 37, Tangermann, 1999). Overall, the global movement towards neoliberalism signified a shift towards post-Fordism, or a mode of social regulation which, among other things, viewed farmers not as producers of food for the nation but as entrepreneurs in the global economy (Tilzey and Potter, 2007: 124, drawing on Coleman 1998).

[51] Internal disposal has entailed a variety of subsidies for domestic use of surpluses, including subsidising animal feed manufacturers to incorporate milk powder into feed, providing food subsidies to people receiving welfare payments and subsidising food in schools (Buckwell et al. 1982).

With these factors combined, agricultural policy shifted away from the productivism of the post war period, which Tilzey (2000) termed 'political productivism.' Some scholars have framed this as a new era of 'post-productivism,' indicating that it represented a shift away from intensification, concentration, specialisation and the singular focus of farming on the production of food and fibre over all other considerations (Woods, 2011, Ilbery and Bowler, 1998). Reforms to the CAP included limiting production (notably starting with the milk quotas in 1984), reducing guaranteed prices, promoting farm diversification and removing land from production. However, as discussed below, productivism—or what Tilzey (2000) terms 'market productivism' in the increasingly neoliberal context of Europe—still continued in much of the UK (and European) countryside, and from a Regulation Theory perspective the post-productivist policies have enabled this to occur.

The variable premiums on fattened sheep and on finished cattle were replaced by the Sheep Annual Premium Scheme (SAPS) which provided annual payments for ewes and a Suckler Cow Premium Scheme (SCPS) which offered annual payments for calves. These schemes shifted payments from finished animals to animals kept and remained based on headage. Thus, producers had continued incentive to maintain large flocks to receive more subsidy payments.

A. Agri-Environmental Policy (AES) Schemes

Following the release of an EC regulation in 1985, the UK's 1986 Agriculture Act provided for the designation of Environmentally Sensitive Areas in the UK, comprising one of the first agri-environmental schemes to be introduced into agricultural policy. The legislation aimed to support farmers in areas of 'high conservation value' to either continue to practice or adopt 'environmentally friendly' practices on all or part of their farms. The scheme was (and is) voluntary and farmers were offered payments for participating on a per hectare basis, which of course benefitted larger landholders more than smaller ones. An area could be designated an ESA if it was 'particularly desirable to protect natural beauty, flora or fauna or historical or archaeological features and if this objective is likely to be assisted by the maintenance or adoption of particular agricultural methods' (Robinson, 1994: 216). This support was available to all farmers in the designated areas, and was, in other words an 'entitlement' scheme (as opposed to a competitive scheme) (Tilzey, 2000).

While it was possible to designate ESAs anywhere in the country, in Scotland, all of the ESAs designated by the Secretary of State for Scotland—in consultation with the Nature Conservancy Council and the Countryside Commission for Scotland—were in upland areas dominated by livestock farms. It was determined that only 'traditional systems and styles of farming' could 'conserve' the upland landscapes as they were (Robinson, 1994: 216, drawing on Potter et al., 1991). The Scheme was administered through the Scottish Office Agriculture and Fisheries Department (SOAFD) and payment was made to farmers who continued 'traditional' crofting and sheep grazing and agreed to avoid certain 'modern' farming methods such as the use of pesticides and fertilisers. More ESAs were designated over time. There are currently six ESAs in the Highlands and Islands of Scotland, comprising 13 percent of the land area (H&I European Rural Development Fund 2006) and the other Scottish ESAs are located in the Southern Uplands and comprise the majority of upland land in that area (Scottish Government, 2018c). While these ESAs are continuing, the scheme has been closed to new entrants (RSPB, 2007). The emphasis of the ESA scheme on maintaining farming practices, and preventing depopulation in certain areas, can be considered a form of 'social income support' or 'social welfare' discourse (Tilzey, 2006).

ESAs represented a policy of supporting farmers to integrate environmental conservation with farming practices in areas exhibiting high concentrations of biodiversity. In some ways this aligns with an agroecological approach in that it recognised that certain ecosystems could be conserved through the continuation of the low-input farming systems which had created them. In contrast, previous ecological conservation efforts were focused on relatively small Sites of Special Scientific Interest (SSSIs)[52] and National Nature Reserves (NNRs) (Adams et al., 2014). On 'unimproved' or 'permanent' grasslands and rough and heather moorland, herbicides and pesticides are not permitted, nitrogenous fertiliser applications limited, and no new drainage permitted (Defra, 2003). However, as the schemes do not orient production towards societal needs, ESAs also represent some divergence from agroecology.

Relatedly, there are questions about the types of farming and ecologies which or are not supported under the ESA scheme. The scheme is based on a concept of 'conserving' traditional ecosystems. While this entails preventing the decline of certain species, it similarly

[52] From 1981, there were government payments to compensate landowners for the income foregone from protecting SSSIs (Adams et al 2014).

prevents the emergence of others (including those which may provide food for human society) and is based on the establishment of what Deary and Warren (2017: 2) consider an 'unavoidably arbitrary' ecological baseline which has been subjectively chosen. While the ESAs were ostensibly designed to prevent the ploughing up and reseeding of pastures with monocrops and the associated use of inorganic fertilisers and other agro-chemicals (practices which had been previously subsidised by the government as discussed earlier), the ESA framing of 'traditional' or 'permanent' ecosystems potentially locks in agricultural practices which have been identified as ecologically problematic, such as sheep grazing without adequate balance from cattle, as discussed above. The ESA designations, in conserving a 'traditional' type of farming neglect that farming and land use radically changed in the agrarian transition two centuries ago and that a diversity of foods had once been cultivated and foraged relatively sustainably, as elaborated in Chapter 4. Further, ESA regulations also prevent new forms of ecologically sound farming from taking place. Farming practices which incorporate a wide diversity of food products, including, for example, through the cultivation of trees, vegetables, fruits, herbs or other plants and which might be considered to be agroecological in nature, are not permitted within the ESA scheme. Nonetheless, the principle of 'entitlement' and the provision of a social income safety net insulates farmers from market dependency. Combined with the requirement of the delivery of public benefits (i.e. healthy equitable food provision and ecological regeneration), this could, in theory, be adapted to support agroecological food systems.

Selective zonal targeting of agri-environmental policies such as the ESA has been justified based on a belief that targeting 'maximises' the social and environmental benefits in areas of 'high environmental value,' particularly in the face of limited environmental budgets. It is based on the premise that 'not all farm areas…support traditional forms of agriculture that need to be protected' (Wilson, 1997: 199-200, citing Felton, 1993, Potter et al., 1993, Webster and Felton, 1993). Again, from a Regulation Theory perspective, the perceived efforts at conservation of 'traditional' ecosystems in the uplands have arguably allowed 'non-traditional' agricultural land to be farmed intensively, both within Scotland and abroad, at the expense of ecologies on those farms and in surrounding areas.

Another agri-environmental scheme, the 'stewardship scheme' was also introduced in 1991[53] and was not restricted to 'sensitive' areas.' However, most of the measures were (and still are) oriented towards land which is additional to agricultural areas, such as surplus fields and field margins, with the exception of restoring grass and moorland grazing sites. Farming practices such as ploughing, inorganic fertiliser usage and pesticide applications, which run counter to agroecology, were (and are) not challenged under these schemes. Compensation to farmers for dedicating part of their farmland towards conservation efforts is based on a concept of 'public goods,' in which governmental funds attempt to pay for what the market does not reward. As will be discussed further below, this concept from neoclassical economics fits well within a neoliberal orientation in that it seeks to create a quasi-market for environmental services. In sum, agri-environmental policies as implemented in Scotland have a number of limitations and do not necessarily support diverse farming systems which could be considered to be agroecological. However, these policies were to be reinforced in later rounds of CAP reform.

B. Celebration of Crofting and Extensive Farming

The recognition and support for what was (and is) considered 'traditional' farming practices, through for example, the ESA schemes marked a significant departure from previous thinking about extensive farming in the uplands, such as that practiced by crofters. Whereas during the productivism of the war and post-war era, consolidation and intensification were favoured, the ESA scheme recognised smaller scale and extensive production systems such as crofting as ecologically beneficial. With this shift in agricultural policy emphasis, the first president of the Scottish Crofters Union, Frank Rennie claimed that the 'small scale, low-input style of agriculture' which crofters practice contributed to the 'great variety of wildlife in crofting areas' (Hunter, 1991: 211). The ecological merits of crofting, and of extensive livestock production in the uplands in general, were arguably strengthened by the comparison with the 'massive cereal-producing farms' of other areas of the UK. Hunter (1991) proposes that these arguments about the environmental benefits of the 'traditional' farming approaches of crofters influenced the government and led to the first ESA in the north of

[53] Known as the Countryside Stewardship Scheme in the UK, it became the Rural Stewardship Scheme in Scotland after devolution and has since become the Agri-Environment and Climate Scheme (AECS)

Scotland being designated in 1988 in the coastal areas of Uist and Barra, which are home to a large number of crofters (*Ibid*.).

Crofting also started to be celebrated for maintaining rural populations without producing a surplus of food. The first president of the Scottish Crofters Union proclaimed how crofting could finally be celebrated in the aftermath of the productivist era:

> '…Now that there is an urgent, and universally recognised, requirement to devise rural policies designed to meet the circumstances created by agricultural overproduction, the case for crofting is an extremely strong one. Far from being a mildly embarrassing relic from the distant past crofting points the way to the diversified rural economy which is being sought on all sides.' (Frank Rennie 1989, in Hunter 1991: 21).

These grassroots claims about the merits of crofting stem from the establishment of the Scottish Crofters Union in 1985, to which Hunter and Rennie were integral. While crofting may have been better at population retention than non-crofting areas, a survey of crofting populations and agricultural practices in the 1980s in Sutherland indicates that depopulation had occurred and agricultural practices were in decline (MacGregor, 1986). Many crofts became used as holiday homes and many of those which continued to be used for agriculture were amalgamated (*Ibid*.).

C. The MacSharry Reforms

In 1992 the CAP was substantively revised with ostensible aims of limiting production and protecting the environment, in what were called the MacSharry reforms (after the Irish EU Agricultural Commissioner at the time Ray MacSharry). Included in the reforms were measures to dramatically reduce support for farm products, renumerate farmers for taking intensively farmed land out of production (i.e. 'set-aside'), and to encourage retirement and afforestation. Set-aside initiatives targeted arable land and did not apply to upland areas (Firbank et al., 1993). The reforms also diverted subsidies away from the amount produced and instead based payments on the acreage of agricultural land farmed, referred to as 'area-based payments.' This policy rewarded further expansion in farm size which largely occurred through the amalgamation of farms, despite the recent shift in discourse about the merits of smaller scale farming.

The 1992 Directive further required all Member States to apply agri-environmental measures, though the total for this was only 4% of the total CAP budget (Potter and Goodwin, 1998: 292). Member states interpreted these measures in widely differing ways. While some countries such as Finland and Switzerland established country-wide schemes, the UK primarily targeted its agri-environmental support zonally, through the ESAs (Buller, 2000, Kleijn and Sutherland, 2003). However, it also continued with its stewardship scheme and in 1994 introduced an Organic Aid Scheme, which was much smaller still in budget (*Ibid*.).

The MacSharry reforms were partly a result of a movement to demonstrate a commitment to liberalisation in order to have greater influence over GATT (General Agreement on Tariffs and Trade) Uruguay Round negotiations (Rausser and Irwin, 1989). Large farming, processing and retailing factions in Europe, and particularly the UK, were lobbying for greater market liberalisation, including for agriculture (Tilzey and Potter, 2007). To these factions, state support was an impediment to the ability to compete globally, i.e. to source from and supply to a wider global market (*Ibid*.). The formation of the World Trade Organisation (WTO) in 1994 reduced restrictions on the free movement of goods and increased competition in the name of efficiency and fairness. Domestic subsidies and state regulations considered by the WTO to be 'trade distorting' were to be phased out (Potter and Tilzey, 2005, Losch, 2004). Article 20 of the Uruguay Round Agriculture Agreement of 1994 brought agriculture into negotiations on trade liberalisation. Whereas previously food had an 'exceptional' status, food would instead be treated as any other traded commodity. Accordingly, the EC needed to 'decouple' its subsidies from production and phase out export subsidies (Potter and Burney, 2002: 35).

While production subsidies continued, they were decreased, and measures were taken ostensibly to reduce environmental damage. In the upland livestock sector, ceilings were introduced for ewe and suckler cow premiums in 1993, capping the number of animals eligible for payment. Farmers also had to comply with stocking density limits to receive payment, which were progressively lowered from 1993 onwards. However, rather than reducing the number of animals held, many farmers tended to acquire more land area in order to 'extensify.' Some also reduced the number of animals claimed for, but not the number of animals held, to reduce their 'official' stocking density (Winter et al., 1998: 283-284). As such, sheep and cattle farming continued in the uplands, supported by government subsidy, but

was perceived to have become more environmentally sustainable. The consolidation of farms further reduced the number of farmers per area of farmland and per head of livestock, despite claims that special support to 'hill and mountain areas' was designed to maintain people in the countryside.

D. Expanding forestry

During this time, forestry continued to expand and intensify in the uplands. Despite its use of intensive and ecologically eroding practices of ploughing, monoculture and large-scale fertiliser spraying, the Forestry Commission identified itself as a custodian of 'magnificent scenery and a great variety of wildlife' (Oosthoek, 2013: 87). It is likely that the lack of urgency for upland sheep and cattle production from the 1980s enabled the Forestry Commission to continue acquiring agricultural land in the uplands for new projects.

In 1991, the Crofter Forestry (Scotland) Act gave crofters the ability to plant trees – and apply for funding to do so – on common grazing areas and on individual crofts, though it also required landlord permission and thus did not constitute a crofter 'right' (Brown, 1996, Crofting Commission, 2019). This act was seen as a symbolic victory by the Scottish Crofters Union in that it 'broke the hegemony of landlords as the only group entitled to engage in [forestry]' (*Ibid.*), and has since been celebrated as an environmental achievement (Point and Sandwick Trust, 2009). However, rather than having an environmental focus, the main purpose of the act was to facilitate economic development and diversify local economies away from sheep production, particularly in the post-productivist climate (Brown, 1996: 90). While the trees which have been planted (on an estimated 2% of crofting land, (Point and Sandwick Trust, 2019) have not reduced grazing levels per se and have typically not been commodified for timber as was originally intended[54] (Brown, 1996), the Act signified a departure from common grazing areas being viewed as exclusively suitable for rearing animals and cutting peat (Point and Sandwick Trust, 2019).

[54] This could be interpreted as a testament to a lack of market orientation of crofters.

Section 3: Multifunctionality, further liberalisation and strengthened neomercantilism

A. The creation of two pillars

In 1999, the CAP was reformed again in 'Agenda 2000' to further comply with the Uruguay Round. Reforms included the creation of two 'pillars' of support – the first (Pillar 1) continuing to support production (comprising the majority of the CAP budget) and the second (Pillar 2) supporting rural development, consolidating the environmental and rural development schemes which had previously existed. Under Pillar 1, direct payments, viz. those which were not linked to production quantities, formed the largest component of subsidies to producers. Coupled payments—payments for the production of certain crops—were still supported under Pillar 1, though the level of support for production further decreased, again in order to better position the EU in WTO negotiations (Swinbank and Tanner, 1996, Coleman and Tangermann, 1999).

The second pillar, the Rural Development Regulation (RDR), directed support for environmental and social schemes. However, payments under this scheme were (and are) linked to the 'income foregone' from agricultural production when landholders voluntarily produce agri-environmental 'goods' (i.e. the opportunity costs of delivering environmental benefits), and/or compensation for 'additional costs' in areas with 'constraints' (Council of the European Union, 1999). This concept of payment for 'income foregone' in Pillar 2 accords with the philosophy of the public good model (Falconer and Ward, 2000: 273, Marsden and Sonnino, 2008: 425). It results in much lower support payments for extensive producers in marginal areas (who have extremely low incomes) than intensive producers in high yielding areas. The scheme also extended support to non-farmers and non-agricultural activities in rural areas, with the aim of benefitting rural ecologies and societies, but again with payments calculated based on agricultural income foregone.

Potter and Tilzey (2005) and Midgley and Renwick (2012) argue that the CAP reform of 1999 represented a compromise between three main interest groups and their respective agendas: the neoliberalism of agribusinesses, processors and retailers; the neomercantilism of farmers and their unions; and the multifunctional stance of environmental lobby groups who argued that subsidies should be targeted towards the delivery of public goods. The result could be described as an 'embedded' neoliberal mode of governance (Potter and Tilzey, 2005): i.e. neoliberalism is mitigated or 'regulated' (Bieler and Morton, 2004) by governmental support

for ‘maintenance’ of at least part of the farming population (Tilzey and Potter, 2008, Tilzey, 2006, Potter and Tilzey, 2005). However, as farm subsidies plainly favour larger scale operations it is clear that they have limits to their ability – and arguably their intention – to support a thriving agriculturally based population in the uplands.

Potter and Burney (2002: 38) argue that by philosophically reframing its agricultural support programmes in terms of facilitating a continuation of agriculture’s ‘multifunctional’ role in society (a ‘non-trade concern’), it was able to continue direct payments to its farmers while complying with the liberalisation requirements of the WTO. The EU justified its support for farmers on grounds that agriculture provided environmental and social benefits, including protecting or conserving rural areas (Daniel and Perraud, 2009). Payments for the ‘multifunctionality’ of farming were not linked to the production of a commodity and were thus protected in the WTO’s ‘green box’ (Potter and Burney, 2002: 35). However, some subsidies, such as those based on land area and livestock headage (so-called ‘blue box’ subsidies), were able to continue based on a concession or ‘peace clause’ agreed between the US and EU in the Uruguay Round (also known as the Blair House Accord), despite objections from the Cairns Group of exporting nations (Potter and Burney, 2002: 36, Tilzey and Potter, 2007). These ‘blue box’ subsidies were permitted so long as they required farmers to limit production, and did not count towards the ‘Aggregate Measure of Support’ (AMS) which was the main focus of concern for those wishing to liberalise agricultural policy and which had budgetary limits (Potter and Goodwin, 1998: 289). ‘Blue box’ payments more than doubled from 1986 to 1998, and by 1999, comprised the majority of the CAP budget (27 billion out of 33 billion) (Potter and Burney, 2002: 39). The predominance of ‘blue box’ subsidies arguably reflect the power of neomercantile interests in the EU at the time.

Rather than integrating ecological, food production and social aims, the two-pillar approach concretised a division of the countryside into ‘specific and functional parcels’ of productive, ecological, social and aesthetic, with the productive parcels continuing to follow intensive commodity production (Marsden and Sonnino, 2008: 423). The support for productivist agriculture also trumped that for the ‘multifunctional’ or ‘environmental’ farming areas. Funds for Pillar I came out of central EU funds and were (and are) disbursed on an entitlement, not a competitive basis. However, Pillar 2 budgets require individual member states to match fund, and the budgets are much lower. As such, Pillar 1 (i.e. productivist) payments comprised

80 percent of the agricultural budget as of 2010 (Scottish Government, 2010: 47-51). While farmers need to fulfil environmental cross-compliance criteria to receive Pillar 1 payments (i.e. 'greening' measures), these requirements are minimal (*Ibid.*) and do not move farmers much closer to agroecological production. Further, as discussed above, agri-environmental measures have been limited in the extent to which they support or encourage agroecological farming.

Pillar 1 payments in 'marginal areas' are much lower than payments per hectare for lowland farms. In 2015, farms in 'Region 1,' or areas used for arable cropping, temporary or permanent grassland are eligible to receive payments of €240 per ha, whereas those farms in Regions 2 and 3, which include grazing areas of LFAs receive payments of €35 and €12 per hectare respectively (SRUC, 2015). With its vast area of land designated as LFA, Scotland is a striking example of inequality in payments, with the more productive (i.e. lowland) areas receiving far more of the agricultural budget than the 'marginal' (i.e. upland) areas. Most of the expenditure on agri-environmental schemes is also 'broad but shallow' income support to 'maintain marginal farming systems over large stretches of territory' (Potter and Burney, 2002: 40).

Predictably, with low levels of support and difficulties competing in markets, many farmers in upland areas have sold their land and farms have been amalgamated (Thomson and Midgley, 2008: 7). The number of livestock[55] has decreased in Scotland overall, though decreases have been more significant in the north west area or Highlands. While most of the decline has been due to attrition and downsizing, there has been a corresponding trend for some upland livestock farming to expand and intensify (*Ibid.*). Upland land, including that held in crofting communities, has also been remodelled towards renewable energy generation, which gives a much better financial return than farming (Mackenzie, 2007).

A further reform of the CAP in 2003 introduced the Single Payment Scheme (SPS) or Single Farm Payments (SFPs), which enabled landholders to claim for acreage of land maintained in 'good agricultural and environmental condition' and did not require this land to be actively farmed. This, combined with the fact that the payments are based on land area, resulted in an even more unequal distribution of subsidies. In 2013, 10 percent of claimants received 45

[55] Numbers of sheep have declined more than those of cattle, which could be beneficial for ecosystems.

percent of the subsidies for Scotland, with one individual receiving £3.2 million (Wightman, 2014). It also marked a departure from the EU rhetoric of needing to produce food in order to maintain the landscape. It implied that one could in theory maintain agricultural ecosystems without practicing any agriculture, through mowing rather than grazing for example. Importantly, this allowed for sporting estates to be able to claim subsidies, though many sporting estates also host sheep farming and thus already qualified for agricultural subsidies (Wightman, 2019). The number of livestock kept significantly dropped further after the introduction of SFPs in Scotland (Thomson and Midgley, 2008, Holland et al., 2011). The reform was seen as a way for the European Commission to strengthen its hand in the Doha round of WTO negotiations in order to secure better access to non-EU markets (Allen, 2014). As SFPs are decoupled from production, they are considered to be in the 'Green Box' of the WTO with no limits on expenditure. Implemented from 2005, these so-called green box payments overtook blue box payments (*Ibid.*).

In 2007, the Scottish National Party (SNP) came into power and challenged, at least in discourse, the neoliberalism of the UK's agricultural policy stance. While Scottish agricultural policy was devolved to the Scottish Government from 1999, the first two post-devolution administrations in Scotland were coalitions of the Labour and Liberal Democrat parties and did not differ greatly from the Labour stance in Westminster at the time. However, the SNP had a strong rural base and connections to the agricultural industry and thus tended to adopt a neomercantilist orientation, defending the need to maintain agricultural subsidies (Midgley and Renwick, 2012: 130). This was strengthened by the global food crisis of 2008/9, which led farmers and their representative organisations to argue that agriculture merited financial support on the grounds that its primary purpose is to feed the world's growing population (Midgley and Renwick, 2012: 125). The Cabinet Secretary for Rural Affairs and Environment in Scotland communicated this clearly in 2009 at the Oxford Farming Conference:

> 'Let me be clear. The central purpose of farming is to produce food for the world's growing population. So, maintaining a capacity to produce food is not only a public good but a global responsibility. I firmly believe it would be irresponsible for any government to fail to make maintaining the ability to produce food a national priority. (Lochhead, 2009, cited in Midgley and Renwick 2012: 125).

This change in framing has not yet translated to a change in policy (*Ibid.*), but as Chapter 7 will discuss, has been used to justify a continuation of direct support to farmers or a neomercantile approach through reinterpreting the concept of 'public goods' to include food, which does not fit within the classical definition[56] (Musgrave, 1959).

Agenda 2000 had offered member states the ability to impose upper ceilings on direct payments to farmers in order to redirect funds towards rural development and/or apply degressivity to payments so that payments per hectare above a certain limit (e.g. 54 acres in Wales) are reduced by a certain percentage (Wilson et al., 1997: 306, European Commission, 2017: 2). However, it was not until 2015 that Scotland voluntarily adopted an upper limit of €600,000 on payments (European Commission, 2017:2). While this has ameliorated the extreme high end of inequality in payments, it has not necessarily resulted in more funds going towards smaller scale producers, not least because smaller unit sizes receive smaller payments due to the area-based system. Further, following the 2015 revision of the CAP, EU Member States were given the option to voluntarily fix a minimum size of holdings eligible to claim for payments. While the EU body suggested that the minimum size should not be higher than one hectare (previously it had been 0.3 hectares), Scotland set the minimum at three hectares, signalling further preferential support for more commercial, larger scale operations and quite possibly responding to the very low (again just €12 to €35 per hectare annually) payments for upland areas. With common grazings, most crofters achieve the 3-hectare threshold; however, smallholders outside of crofting areas tend to be without access to common grazings and do not meet this limit (Interview Y, 2018, Interview L, 2018, Interview CC, 2016).

Previous iterations of the CAP in Scotland did not require recipients of the rural development fund (Pillar 2) to be farmers. Grasslands, for example, could be maintained through mowing instead of grazing (Scottish Government, 2019) and heather moors could be conserved or

[56] The concept of 'public goods' emerged from neoclassical economics and is defined as a category of 'goods' based on concepts of 'rivalry' (i.e. one person's consumption of the good prevents others from consuming it, and 'exclusivity' (the ability to privatise a good, or exclude others from 'consuming' it) (Musgrave 1945). According to this definition, a food commodity, e.g. a single apple, is often offered as a classic example of rivalry (e.g. if one person eats an apple, another cannot eat the same apple). A commodified apple can also be exclusive: one needs to pay the specified price for the apple to eat it. The view of a landscape, however, is not rival in that can be enjoyed by many (up to a point) without one person's 'consumption' (or enjoyment) of a landscape preventing another from 'consuming' it. A landscape is also non-exclusive when there is no payment or entry requirements for enjoying a landscape.

maintained by muir burning on sporting estates. While reforms in 2015 reintroduced a clause for people to be 'active farmers' in order to receive area-based payments, which in grazing regions requires a person to keep a certain number of livestock units per hectare[57] to be considered a farmer, claimants have an alternative of completing an environmental assessment of the holding instead of meeting active farming requirements (Scottish Government, 2017b). Thus, landholders who are not actively engaged in farming still can claim for agricultural support payments in Scotland. In either case, there is little or no requirement for food to be produced on agricultural land, reflecting that the main social justification for supporting agriculture in the 'less favoured' uplands relates to landscape preservation, environmental effects and rural livelihoods, but not to the production of foods pertinent to the societal needs of the population in Scotland.

B. Outlier agroecological farms

Meanwhile a small but not insignificant number of farmers, crofters and smallholders have practiced what could be considered to be farm-scale agroecology. As their holdings tend to be smaller than the minimum required to benefit from agricultural subsidies, they have not been incentivised to preserve certain habitats or maintain grazing animals, though some of them do engage in extensive livestock production on at least half of their land. In interviews, they indicated that it was important to still maintain habitats such as heather moors and peatlands, but also that it was not very feasible to cultivate on these areas due to the high labour requirements of adding nutrients to the soil through the collection of seaweeds (Interview DD, 2019, Interview II, 2018). Rather, they had been adept at finding the areas of land which were suited to cultivation, even if others had not perceived them in this way. One producer interviewed, for example, is producing a wide variety of vegetables on land located at 400m with steep slopes. He keeps chickens and ducks but also keeps heritage breeds of cattle, which, due to their small size, can graze underneath fruit and nut trees. By contrast, his neighbour farms 1,300 acres of land of similar altitude and steepness but produces only cattle, sheep and a small amount of barley for his cattle (Interview CC, 2016). No other farms in his area produce vegetables.

[57] For Regions 2 and 3 (i.e. areas classified as grasslands and LFAs), the minimum requirement is maintaining 0.05 livestock units per hectare for 183 days of the year, on all hectares of claimed land unless another agreement is in place with Scottish Natural Heritage (Scottish Government, 2017b).

In relation to the potential of the uplands for food production beyond livestock, one expert in fruit trees stated,

> 'the upland areas have these little niches, these little microclimates and it's a case of hoping that growers who want to produce fruit can find these microclimates to grow in. There are walled gardens up and down the Highlands which I think indicates that people used to know how to create shelter for cultivation.'

He went on to talk about some of the favourable attributes of the north west uplands for fruit and nut tree cultivation, stating:

> 'Certainly, as you go on the west coast you find a lack of frost, that enables good yields of growing tree fruits. And the soils are good, you've got outwash from glacial lochs, and can have some really good sandy soils, there are areas that are really good and deep and great for cultivating. There's also scope for protected crops. I think we'll see more of the polycrubs[58] from Orkney up and down the west coast. I sell a lot of [fruit and nut trees] to Mull, Skye, Lewis, there's quite a lot of plants going north and west just not so big in quantity because people are reluctant to plant too many because of the perceived vagaries of the climate and weather in these areas. Until you start to see examples of success…if people see apples and pears hanging off trees, next year they'll be thinking, 'oh it's possible, I want one' (Interview II, 2018).

In terms of environmental or climatic limitations of producing in the uplands, producers cited the challenges of keeping deer at bay from crops and trees (Interview CC, Interview AL, Interview SR, Interview DM) which could be done with fencing but which was expensive. The growing season was cited as short by producers in the Shetlands, but the additional light during the summer also facilitated the production of fruits (e.g. grapes, apricots peaches) and vegetables (e.g. aubergines, peppers, etc.) which are typically confined to more southern countries.

The main limitations of these producers were not climatic or environmental but rather financial. With a relatively low income from the production of foods and without agricultural subsidies, some producers found it difficult to invest in infrastructure such as protective areas

[58] A polycrub is a wind resistant plastic greenhouse

for growing (e.g. polytunnels, polycrubs, deer fencing, walled gardens). Labour costs were more limiting than infrastructure, however, and affected what was produced. Agroecological production is typically considered to be more labour intensive than conventional production (Laughton, 2017, Parmentier, 2014), and interviews with producers for this study appear to confirm this is also the case in the uplands. Soil fertility on interviewed farms is built and maintained through adding seaweeds, making and adding compost and mulching in crop residues by hand (Interview EE, 2019, Interview X, 2017, Interview EE, 2019, Interview CC, 2016). Producing a diversity of foods also requires manual harvesting, but for some crops the labour costs associated with this are higher than those producing crops at scale using mechanisation. One farmer stated,

> 'with potatoes it's about how many manhours it takes to get them in, get them harvested and the returns. Potatoes are cheap and people can get them cheaply. It takes about 45 man hours to produce 20 kg of potatoes so we cannot compete with other people who grow them at large scales and with machinery…with peas it's about harvesting, it can take us three and a half manhours to harvest two 50m rows, though you can't get fresh peas in Shetland and with more volunteers this year we're doing them again.'

In terms of products, the following vegetables and fruits were produced by farmers and gardeners interviewed:

- Root vegetables: potatoes, turnips, beetroots, carrots, celeriac, parsnips, radishes
- Alliums: leeks, onions, garlic, chives
- Brassicas: kale, cabbage, broccoli
- Legumes: peas, broad beans
- Leaf vegetables: chard, spinach, lettuces
- Orchard and soft fruits: apples, pears, hazelnuts, currants, raspberries,

While not a rigorous assessment of all of the challenges, approaches and products of non-livestock agriculture in the uplands, interviews conducted for this study combined with historical production in the Highlands, indicate that social property relations more than climate or environment limit what is agriculturally produced in the uplands.

Only one farm interviewed received government support and it was for start-up infrastructure rather than an ongoing annual subsidy payment. Interviews with agroecological producers in the uplands indicated that without government support, they were either market dependent or had their financial needs met outside of agriculture, through either separate livelihoods or inheritance. Those which are market dependent report benefitting from a lack of competition in the supply of seasonal and fresh produce. This indicates that they operate in a niche market and that if more people began producing agroecologically nearby, competition and its negative effects for agroecological food systems would result. Those with other jobs found that their livelihoods competed for their time and thus limited what they could produce (Interview EE, 2019). This indicates that in the absence of state or societal support to enable this type of agriculture to spread, it is likely to remain confined to niches and to financially endowed enthusiasts.

The experiences of these outlier producers are reinforced by a recent initiative which investigated crofting agricultural land which had previously been cultivated but which is now considered to be 'rank, overgrown and derelict' (Blackland Centre, 2010a). This initiative seeks to demonstrate that areas of crofts, known as 'blacklands,' can be cultivated or pastured once again through the use of traditional techniques to enhance soils (Knox et al., 2015). Speaking of the project, one crofter in Skye, expressing anger over the classification of nearly all the uplands as only suitable for rough grazing or improved pasture, stated that he has been 'astounded by the quality of our mineral-rich, free-draining volcanic soil,' but that in other areas of northwest Scotland, 'where nature has not been so kind, fertile soil is still to be found on most crofts, thanks to the efforts of our forebears' (Murdie, 2019: 4). This statement reminds us that agriculture represents a dialectic between human society and the natural environment (see Chapter 2), which is not fully captured in current discourse or agricultural policies shaping the uplands. The Blacklands project advocates that soils are not simply 'natural' (i.e. supra-human) but are 'anthropogenic' entities, shaped by human endeavours over time (Blackland Centre, 2010b). Building on current soil investigations and Darling's (1955) previous work, it estimates that over 100,000 hectares of blacklands exist in Scotland (*Ibid*.). While this estimate merits further inquiry, it is an indication that there is significant potential for the uplands to be utilised for agriculture in ways which depart from

the mainstream livestock farming of today and better contribute to agroecological food systems.

Agroforestry, or the integration of trees and woodlands into agricultural production systems, has been advocated in Scotland by Scottish Natural Heritage and included in a recent Scottish Forestry grant scheme (Scottish Government, 2018a). However, at present there are 'precious few examples' in Scotland of agroforestry taking place, despite the grant scheme. One interviewee discussed how the tree stocking levels required in the scheme (200 or 400 trees per hectare) are reportedly too high to allow for adequate grazing by animals and resemble more of a plantation than a silvopastoral system (Interview ZZ, 2019). Further, the grant scheme only permits up to 20 percent of trees to be fruit and nut trees and only supports trees on a maximum of 5 hectares of a given landholding (Scottish Government, 2018a). At present, only an estimated 20 hectares of land are supported by this scheme (Interview ZZ, 2019), despite estimates that woodland expansion is ecologically feasible on a significant proportion of Scotland's uplands (Sing et al., 2014, Armstrong, 2015), and despite previous integration of woodlands with livestock under clanship.

Conclusion

Overall, policy support in the 20th century (and to date in the 21st) has both led to continued productivist agricultural practices which are incongruent with agroecological principles and has concretised the divide between uplands as livestock farming areas and lowlands as arable farming areas, further reducing the possibilities for mosaic landscapes incorporating ecological farming (see Chapters 2 and 4). The productivism of the war and post-war eras encouraged intensive grazing, 'improved' pasture and a high degree of specialisation in the uplands. The divide between upland livestock and lowland arable was based on concerns about efficiency and the comparatively intensive and productivist arable farming occurring in the lowlands of Scotland and in England. Mechanised arable farming in the lowlands required low levels of labour. To be economically viable within a capitalist system, the labour requirements of upland agriculture would need to be similarly low, as they were and are with livestock grazing. Intensifying upland livestock production also facilitated the expansion of forestry plantations in the uplands.

In the face of costly surpluses, ecological degradation and the neoliberal orientation of Britain, government support shifted from production support to supposed environmental support. However, while early post-productivist or environmental measures were intended to reduce production, they were not always successful. Much of the production decreases in the uplands were due to attrition. Some of the upland farmers who stayed in the industry enlarged their holdings to avoid the stocking limits, or simply did not claim for stock held. Later, post-productivist measures did result in decreased upland production, particularly as land only needed to be maintained in 'good condition' in order to receive subsidies and did not need to be farmed. Again, landholders have only needed to complete environmental surveys of their land and/or maintain what are considered to be 'permanent' or high species grasslands by preventing the growth of trees. Meanwhile, productivist practices have continued largely unabated in lowland areas.

As Tilzey and Potter (2008) argue at the level of the EU, post-productivist policies have been subordinate to a continued focus on market productivism. Policies encouraged post-productivism in areas which were less economically viable or important (i.e. 'marginal' or 'environmentally sensitive' upland areas in Scotland) while productivism continued in those areas with higher productivity and profitability (i.e. farms in lowland areas and some intensive upland farms). From a Regulation Theory perspective, post-productivist policies have legitimated and enabled the continuation of productivist policy and practice. Productivism primarily occurs in areas outside of those considered to be 'ecologically valuable' but has also taken place in upland areas often considered to be of 'high-nature value.'

The shift towards neoliberalism with its 'regulation' by agri-environmental schemes marked a beginning of the 'public goods' approach, first embodied in the environmental 'stewardship' scheme and progressively becoming more prominent in policy discourse (Potter and Goodwin 1998), particularly in post-Brexit agricultural policy debates as discussed further in Chapter 7. The concept of public goods assumes that the state is needed to resolve environmental problems (e.g. from agriculture) precisely because of a lack of ability to privatise all aspects of the environment. In assuming that it is the absence of markets which is the problem, public goods policies attempt to create a 'quasi-market' in response (Tilzey and Potter, 2007). By contrast, from a counter-hegemonic perspective, environmental and social problems are seen

to have arisen precisely because of market imperatives, as discussed theoretically in Chapter 2 and empirically in Chapter 4. Effective counter-hegemonic strategies therefore must address the nature of market imperatives and their pressure to externalise environmental and social costs in order to facilitate the establishment of more agroecological food systems. However, as will be discussed further in Chapter 7, both environmental and farming movements have largely embraced the concept that government support for agriculture should be tied to the 'delivery' of 'public goods.'

Environmental and social costs have been unaccounted for in the policy environment governing Scottish agriculture. Again, productivism aimed to minimise labour costs. Imported inorganic fertilisers, agro-chemicals and machinery could 'substitute' for labour and ecological balance on farms (Goodman et al., 1987) and were more economically efficient than many of the high labour agricultural practices which characterised pre-capitalist farming (Chapter 4) and much of today's agroecological agriculture in the UK (Laughton, 2017). In the shift towards post-productivism within a neoliberal context, livestock farming, again, a low-labour activity, continued in the uplands while mechanised, intensive arable farming continued in the lowlands, as the drivers for labour minimisation were not addressed.

While, in large part due to the power of the neomercantilist actors in Britain, subsidies allow for farming and land management practices which are not the most economically efficient, there has been little incentive for integrating food production and ecology beyond the types of farming which have been deemed to conserve the 'semi-natural' habitats which co-evolved with sheep and cattle grazing in the uplands. While the conservation of these habitats may represent a shift in some ways towards more ecological land use within Scotland, it is also based on conserving a relatively arbitrary ecological state (namely, one which developed out of the agrarian transition as detailed in Chapter 4). In other words, this approach does not reflect past (political) ecological changes nor allow future (agro)ecological evolution. Forms of production which might otherwise be considered to be agroecological are not supported by policy. A farm might minimise or avoid the use of external inputs, build soil health and provide food to be consumed locally in non-commodified markets through horticulture or mixed farming approaches. However, if it does not preserve a certain kind of habitat, this type of farming is not rewarded in the agri-environmental schemes which depend on 'conserving' certain farming practices. Without non-market support, the use of such high

labour approaches either renders a farm uncompetitive or requires that they supply to a niche market.

Within the 'stewardship' schemes, 'set aside' payments do not encourage farming practices which enhance wildlife, soils and biodiversity throughout the farm. Instead, schemes reward allocating part of a landholding for wildlife support, while allowing the continued use of degenerative practices such as inorganic fertilisers, pesticides and large scale ploughing (Scottish Government, 2019). These ecologically unsound approaches are predominant in Scottish lowland agriculture, and yet it is this part of Scotland which receives the vast majority of agricultural payments within the country. The manufacture of fertilisers additionally benefits from government fossil fuel subsidies (Rademaekers et al., 2018). Despite commitments to reduce fossil fuel subsidies as part of climate change agreements, subsidies for fossil fuels have continued, with the UK's support for fossil fuel energy proportionally higher than other European countries (Trilling et al., 2017, European Commission, 2019b). Further, only larger, more profitable farms have the ability to 'set aside' a large enough portion of their farm to qualify for agricultural payments. Meanwhile, the social income support for environmentally sensitive areas is not enough to sustain less-commercial farmers' livelihoods, resulting in farmers leaving the industry or downsizing (Vipond and Hill, 2008). Where small scale producers do benefit from agri-environmental policies, as in the case of many crofters who qualify for payments based on the areas of land held under common grazings, support is minimal and pales in comparison with that received by more productive enterprises. Because environmental payments are based on income foregone from agricultural production, they are much lower in less profitable farming areas than they are in more profitable areas (Barnes et al., 2011).

The neoliberal trade orientation of Britain and the relative position of Britain as a 'core' country in the global food system allows Scotland to import a large proportion of its food from other countries which continue to engage in unsustainable farming practices (see Chapter 1). Thus, any environmental 'gains' in Scotland which have continued to be disoriented from the food needs of society in Scotland have externalised the environmental costs of productivist agriculture to other parts of the world. The conservation of Scottish uplands and its dissociation from the food needs of Scottish society could be considered a 'land sparing' approach at an international level.

In sum, both the productivist and post-productivist policies of the UK, Scotland and EU have institutionalised upland livestock farming, first through its identification as necessary for feeding the country in the face of high import prices and second through its identification as 'multifunctional' in order to justify continued direct payments to producers in the context of liberalising pressure from the WTO and GATT. Breaking down the divide between the uplands as dedicated towards (or predetermined for) grazing or conservation, and the lowlands as dedicated towards arable and/or intensive production, could allow for more integration of cultivation practices into the uplands and a redirection of agricultural land towards societal needs, particularly given that the uplands comprise the vast majority of Scotland's agricultural land. This would not necessarily entail the cultivation of all grazing areas. Grazing areas existed prior to capitalism and can be sustainably managed to foster important biodiversity. However, other forms of ecological food production could take place in the uplands. This, however, would require a change to the capitalist and political drivers of labour-saving farming practices.

This establishment of 'traditional' upland livestock farming demonstrates the interplay between ecological and political factors in shaping upland land use. The liberal movement of goods (including stock sheep) between Scotland and England and the rest of the EU, and the continued productivism on arable farmland outside of the uplands, enabled the uplands of Scotland to remain highly specialised in sheep and to a lesser extent cattle throughout the 20th century. As discussed in the previous chapter, the dominance of livestock farming has reduced the ease with which land could be utilised for non-livestock farming such as for arable, horticulture or orchard production. This is because long-term and relatively intensive grazing has resulted in changes to upland flora, water levels and soil composition, and policy 'path dependency' together with the structures of the CAP have made it very difficult to support different upland farming systems. However, as discussed in this chapter, a small number of producers (including but not limited to crofters) cultivate a wider diversity of foods in the uplands, including vegetables, fruits, dairy, eggs and fowl (i.e. chicken, ducks, geese) through building ecologically diverse farms and gardens. Yet producers such as these have remained by far the minority, outliers of highly dedicated and/or capital endowed individuals supplying niche and limited markets within a capitalist system. The following two chapters discusses the trajectory of Scotland in terms of land property rights and food policy discourse

in order to analyse the extent to which a more diversified, agroecological food system, might (re)develop in the uplands in the future.

Chapter 6: 21st century land reform in Scotland and its potentials to contribute to agroecology and food sovereignty in the uplands

Introduction

'Alternatives result from navigating continuously back and forth between what is ideal and what is do-able. Land reform may initially appear to be impossible, until implementation starts and it gains momentum and takes on its own dynamic.' (Borras et al., 2015: 609)

As discussed in Chapter 4, the introduction of individualised private property rights over land resulted in a profound change to society in Scotland and led to a dramatic shift in how land was used for agriculture. The pre-existing hierarchical system of clanship, combined with drivers for later land consolidation, led to a pattern of highly unequal land distribution, which has persisted despite some land redistribution and resettlement as part of the Crofting legislation (Crofters Holdings (Scotland) Act 1886; Highland Congested Districts (Scotland) Act 1897) and post-war resettlement (i.e. via Land Settlement (Scotland) Act 1919). It is estimated that in 1970, 50 percent of Scotland's land area was owned by 579 owners (LRRG, 2014: 161). While this is less concentration than in 1870 (when 118 owners controlled 50% of Scotland's land area), it is still recognised as one of the most unequal concentrations of land ownership internationally (Peacock, 2018:1). Estimations of the ownership of private rural land indicate that concentration has increased between 1970 and 2012,[59] which is partly attributed to an amalgamation of farmland (LRRG, 2014: 162-163). Until the early 2000s, this unequal distribution and control of land was largely protected through legislation enforcing nearly[60] absolute private property rights (hereafter referred to as 'individualised private property rights'), with exceptions to this in crofting areas[61] as discussed in Chapter 4, and some exceptions for tenanted farmland.[62] Further, in the post-Fordist era, the ability to rent

[59] An estimated 1180 landowners held 60% of private rural land in 1970 and in 2012, this number was 963, in what the Land Reform Review Group termed a 'likely re-concentration' (LRRG, 2014: 163).
[60] Until the Abolition of Feudal Tenure (Scotland) Act 2000, Scotland property ownership was still under feudal tenure, in which a 'superior' could enforce duties or fees to the land owner, including annual payments to the church or to the laird. This Act was complemented by the Title Conditions (Scotland) Act 2003 and the Tenements (Scotland) Act 2004.
[61] From the late 19th century onwards, crofters were given the right to secure tenancies, fair rents and the ability to assign their crofts (Hunter, 1976), see Chapter 4 for more details.
[62] The Agricultural Holdings (Scotland) Act 1883 recognised farmers' rights to compensation for improvements and the Agricultural Holdings (Scotland) Act 1906 allowed tenanted farmers to farm the land as they chose, so long as soil fertility was maintained (UK Parliament, ND).

land for farming also became limited, due to subsidy regimes which encouraged owners to farm or to contract farm, rather than to let to tenants, even into old age, as the subsidies are relied on for retirement (McKee et al., 2018: 12). This has contributed to the current situation in which demand for farm tenancies is higher than that which is on offer (Moody, 2018: 4).

The highly unequal distribution of ownership coupled with the reluctance of owners to let out farmland has contributed to low numbers of people using agricultural land for food production. With land use decisions largely taken by the owners of the land, a very small number of people control land use decisions in Scotland, as will be discussed further in this chapter. This runs counter to principles of the food sovereignty movement, which call for a right of peoples to control over and access to land (LVC, 2007: 33-35). Individualised ownership of land—particularly in the absence of social support and accountability measures—tends to prevent the realisation of agroecological food systems because it requires producers to minimise costs and/or maximise outputs (either in quantity or in price terms), which runs counter to the agroecological principles of ecologically sound production of healthy foods for all (see Chapter 3 for more detail). Thus, the proprietary land system in Scotland has inhibited the realisation of food sovereignty and agroecology.

In the 21st century, however, significant reforms to land tenure in Scotland have begun to directly challenge individualised private property rights. This section details these land reform efforts in Scotland and analyses their potential counter-hegemonic and sub-hegemonic aspects. This is followed by a discussion of the limitations of the reforms in relation to the realisation of agroecology and food sovereignty.

Section 1: Overview of Scottish Land Reform in the 21st Century

Scotland's Land Reform in the 21st century can be partly linked with Scottish devolution which occurred in 1997. Following the vote for devolution, a Land Reform Policy Group (LRPG) was formed and released a report in 1999, immediately preceding the formation of the devolved Scottish Parliament in the same year (LRPG, 1999). The momentum around land reform can also be partly attributed to ongoing land reform efforts in the crofting areas and the ongoing legacy of the Highland Clearances (Sellar, 2006). A codification of crofters rights and responsibilities in law occurred in the Crofters (1993) Act (Crofting Commission, 2019).[63]

[63] This Act was subsequently revised in 2007, 2010 and 2013 (Crofting Commission, 2019).

Crofting communities also began buying the land they had been renting from landowners, starting with the Assynt Crofters Trust Community buyout in 1992 (Bryden and Geisler, 2005) and subsequent buyouts by the communities on the Isles of Eigg and Knoydart (Chenevix-Trench and Philip, 2001). In 1997, the Transfer of Crofting Estates (Scotland) Act 1997 allowed the transfer of Government land to crofting communities, though only one crofting community has acquired land as a result of this Act (LRRG, 2014: 185, 188-189). The land reform movement in Scotland was arguably accelerated by the work of Andy Wightman,[64] particularly his 1996 book which exposed the extent of inequality in the distribution of land ownership in Scotland. Wightman's publication and its figure of 432 people owning half of Scotland is regularly cited in parliamentary debates and in the publications of Community Land Scotland and the Scottish Land Commission.[65] Recent climate change legislation (i.e. the Climate Change (Scotland) Act 2009) has also contributed to land reform, through mandating a Land Use Strategy to be presented to and approved by parliament every five years (Scottish Government, 2016d).

An Act in 2000 abolished feudal tenure, shifting land ownership as tenure by the Crown with burdens of use to outright ownership without burdens (Reid, 2015). The Land Reform (Scotland) Act of 2003 introduced the first community rights to buy land in Scotland. Communities of fewer than 10,000 people could register their interest in land and would have the first option to refuse (or buy) the land if and when it went onto the market (i.e. pre-emption). Communities could enact a compulsory purchase of land if the land was deemed to be abandoned, neglected or causing harm to the environmental wellbeing of the community, and the owner had not rectified the situation after attempts by the community to make contact (Scottish Parliament, 2003a, Scottish Government, 2018b). The underpinning principle of this compulsory purchase right was that of the public interest: communities needed to demonstrate that the existing land was not being used in the public interest and that they had plans and capacities to further the public interest through their

[64] Wightman also coordinated the Land Action Scotland campaign and has subsequently served terms as an MSP for the Green Party

[65] Wightman's 1999 publication and its figure of 432 people owning half of Scotland is often cited in parliamentary debates and in Community Land Scotland and Scottish Land Commission publications. See, for example Peacock (2019) and LRRG (2014)

ownership of the land (Reid, 2015). A Scottish Land Fund[66] was established in 2001 to support these buyouts (Bryden and Geisler, 2007).

The Act also introduced the Crofting Community Right to Buy, which allowed crofting community bodies to purchase crofts and associated land from the owners if they wished, even if the owner was a non-willing seller (i.e. compulsory right of purchase). For crofters, no public interest test was required, but general crofting ownership and tenure is governed by the Crofting Commission, which seeks to ensure that no croft land is neglected, abandoned or unused (Crofting Commission, 2019a). The Act also introduced the 'right to roam' in which all land was opened to 'responsible access' under conditions set out in the Scottish Outdoor Access Code. The right to hunting and fishing was not included in this access (*Ibid*).

These reforms were largely supported by the SNP, Labour and Green parties, but largely opposed by the Conservatives and some members of the SNP. The NFU of Scotland and the Scottish Land and Estates supported the land reform movements in name, but largely opposed any compulsory purchase. Scottish Land & Estates indicated, 'it is a fundamental property right for anyone that the sale of an asset should be on the basis of willing seller, willing buyer,' (McKenna, 2013) thus exemplifying the organisation's prioritisation of private property rights over the orientation of land towards the public interest.

Complementary to the Land Reform (Scotland) Act of 2003, an Agricultural Holdings (Scotland) Act 2003 allowed certain tenants the option of purchasing their land, if they registered interest and the owner was transferring the land (i.e. a right of refusal) (Reid, 2015). It granted tenants the ability to claim compensation for improvements they make to tenanted land. It also allowed tenants to upgrade their limited partnership tenancies to secure and open-ended tenancies. The security of tenure had been granted to crofters in 1886 and likely influenced the introduction of this right for all agricultural tenants. In an effort to prevent landowners from pre-emptively evicting their tenants, the legislation stipulated a retrospective security for tenancies. However, the retrospective aspect of the act was repealed in the UK Supreme Court case of Salvesen-Riddell, in which the landowner had indeed ended the partnership in anticipation of the bill and subsequent act (2010). The court

[66] The Land Fund ran from 2001 to 2006 when it was replaced by a broader 'Growing Communities Assets' fund but was then reinstated in 2012 (National Lottery Community Fund 2012; Carell 2012).

ruled that part of the Act went against Article 1 of the First Protocol of the European Convention of Human Rights which protects the 'peaceful enjoyment of [one's] possessions' though not as an absolute right (UK Supreme Court, 2012: 15). One lawyer working on land reform in Scotland believed that this case was a deterrent to more radical land reform in the country, indicating that there was some fear of Scotland losing credibility in the early phase of its relative independence (Shields, 2019). Yet others believe that the severity of this case, in which a long-standing tenant farmer was evicted (and subsequently took his life), fuelled further land reform efforts (Ritchie, 2019). The case has been held up as a blatant example of injustice in Scottish land tenure by land reform campaigns in the years following the ruling (see e.g. Brooks (2015)).

In 2011, the Scottish Government established a Land Reform Review Group (LRRG), an independent group to feed into the land reform process. The group was specifically tasked to identify how land reform could 'enable more people in rural and urban Scotland to have a stake in the ownership, governance, management and use of land;' to 'assist with the acquisition and management of land by communities;' and, to 'generate, support, promote, and deliver new relationships between land, people, economy and environment in Scotland' (LRRG, 2014).

Following the recommendations of the LRRG in 2014, two significant acts were passed in close succession: the Community Empowerment (Scotland) Act of 2015 and Land Reform (Scotland) Act of 2016. The former extended the right to request an asset transfer to communities of any size (i.e. including those larger than 10,000 people), in any area of Scotland, including urban areas (Scottish Parliament, 2015). The act also reformed the establishment of Common Good Property, requiring local authorities to establish and maintain registrars of property considered to be 'common good' and also consult local community bodies before any changes to or transfers of such property. It further required local authorities to create more allotments[67] should demand exceed a certain threshold and allowed allotment tenants to sell food on a not-for-profit basis (*Ibid*.). Complementing this, the Land Reform (Scotland) Act of 2016 extended the community right to compulsory purchase to situations in which community ownership of the land would better the interests of sustainable development, as

[67] Allotments are small (250 square meter) parcels of land for gardening. Residents can apply to rent an allotment based on the location of their residency and must maintain the land in 'good' condition to retain it.

assessed by ministers (Scottish Parliament, 2016). The concept of 'sustainable development' is defined here as relating to the ability of *future* generations to meet their needs. This differs from the 'public interest' framing of previous land reform legislation, which relates to the people *currently* living in the area and the wider public beyond the area (Thomson, 2018). The 2016 Act also required a public register of 'controlling interests' of landlords and tenants, thus facilitating communities to approach landowners in relation to land use decisions (Scottish Government, 2018f).

The 2016 Act also required a statement of Scottish Land Rights and Responsibilities, which was published in 2017 to provide guidance on ongoing land reform processes (Scottish Government, 2017e). This statement, comprising a vision and objectives, is intended to inform both land reform and related legislation, including that pertaining to agriculture, rural development, food and drink, biodiversity, climate change, pollinators and forestry (*Ibid*.: 6). It indicates that 'the overall framework of land rights, responsibilities and public policies' should further the realisation of human rights in relation to land. It also indicates that the framework should 'support sustainable economic development, protect and enhance the environment, help achieve social justice and build a fairer society.' (*Ibid.:* 3).

The 2016 Act established the Scottish Land Commission (SLC) to take forward the land reform process, including that related to agricultural tenancies (i.e. what had previously been the work of the Tenant Farming Commissioner). One of the aims of the Scottish Land Commission is to 'encourage a more diverse pattern of land ownership with the benefits of land spread more inclusively.' In relation to agriculture, one of its indicators for success is that 'the number of agricultural units managed through a lease or joint venture will be rising' (Scottish Land Commission, 2018a). The SLC has also indicated its aims to review barriers to entry for agriculture and specifically to 'assess options for new or adjusted letting, joint venture and other models that would *increase the availability of land to new entrants*' (McKee et al., 2017: 5, emphasis added).

Two amendments to the 2016 act were proposed but rejected. These were a limit on the amount of land that any individual could own, and the prohibition of land ownership by companies and trusts which are not based in the EU, thus limiting the ownership of Scotland's land as a 'tax haven'. These amendments were tabled and supported by the Green and

Labour parties but opposed by the Conservatives and by a portion of the SNP (Maclean, 2016, Carrell, 2015).

Yet even without these amendments, the acts which have been passed since Scottish devolution pose significant challenges to individualised private property rights across Scotland. Yet there are also limitations to the extent to which property rights are challenged and further limitations to the extent to which reforms have impacted on the food systems of Scotland, including the uplands. The following sections discuss the counter-hegemonic aspects and the sub-hegemonic aspects of the reforms in turn, followed by a discussion of the lack of agrarian change despite the reforms.

Section 2: Counter-hegemonic aspects of Scottish land reform in the 21st century

In addition to practical changes to property rights themselves, the land reforms of the 21st century in Scotland have resulted in new framings of land and property and new framings of wilderness and the place of people in rural landscapes. Both of these reframings could be considered to be counter-hegemonic and are discussed in turn below.

A. Opening up new framings of land and property

Land reform in Scotland in the 21st century has entailed a strong 'counter-hegemonic' orientation, challenging in many ways one of the foundations of capitalism, individualisation of property ownership. The Land Reform movement has represented an effort to limit the rights of landowners and thus challenge the notion of individualised private property rights. Even the property rights of public authorities and charitable organisations have been challenged (Glenn et al., 2019). While the land reform movement has an explicit aim of addressing inequalities, the reforms have not simply been an attack on large-scale ownership or on the elite, but have entailed a challenge to the notion of property as a set of rights without an adequate set of responsibilities vis-à-vis the public interest.

The Land Reform movement in 21st century Scotland to date has been driven by a notion that land should serve the 'common good' and that land governance should be 'people centred' (LRRG, 2014) for the wider public interest. The First Minister stated in 2014 that, 'Scotland's land must be an asset that benefits the many, not the few' (Peacock, 2018: 3). Further, the Land Rights and Responsibilities statement has indicated that ownership and the use of land must be based on a 'democratically accountable and transparent system' (Scottish

Government, 2017e). The 2019 report by the SLC proposes a 'public interest test' for significant land transfers or acquisitions and indicates a need to democratise land use decisions (Glenn et al., 2019).

The Scottish Land Rights and Responsibilities Statement (Scottish Government, 2017e) links land reform efforts to the fulfilment of human rights obligations including the right to work, the right to adequate standard of living, the right to health, the right to education, and the right to cultural life (under the International Covenant on Economic, Social and Cultural Rights). This represents a formal recognition by the Scottish Government of the link between the control, management and ownership of land and the fulfilment of all of these human endeavours. The 2016 Act also required Scottish Ministers to 'have regard to the desirability of promoting respect for internationally accepted principles and standards for responsible practices in relation to land…to include the UN Voluntary Guidelines on the Responsible Governance of Tenure' (*Ibid*.), to which the Land Reform (Scotland) Bill of 2015 has already been compared as part of the work of Community Land Scotland (MacInnes, 2015).

The changes in discourse and the legal frameworks are significant, and they indicate the possibility for changes to the distribution of the control of land in the future. Current land reform discourse in Scotland indicates that land is perceived as a 'crucial and finite resource' that should be 'owned and used in the public interest and for the common good' (Peacock, 2018, Reid, 2015). The policy director of Community Land Scotland has contrasted this discourse with the cover story of a magazine in the 1990s targeting wealthy individuals about 'how to buy a Scottish island' (MacLeod, 2018). Similarly, a representative from Nourish stated,

> 'The most important thing is the change in philosophy. The statement of land rights and responsibilities spelled out that owning land doesn't give the right to decide what can be done with it. It's clawing back rights and responsibilities. It opens up the possibility to ask questions like, 'could there be a limit on how much land can be owned?' That's a question that wouldn't have been asked before' (Ritchie, 2018a).

In an analysis of responses from 400 individuals about scale and concentration of land ownership, the Scottish Land Commission explicitly attempted to move the debate away from an analysis of scale *per se* and into a discussion about control and power (Glenn et al., 2019).

While it rejected claims that large-scale ownership was beneficial to the management of the 'historic environment' or for facilitating private investment, it decisively differentiates between large-scale ownership and 'concentrated' landownership. The latter does not relate simply to scale, but rather to control. Specifically, it discusses the problems which stem from a concentration of decision-making power or control over how land is used (*Ibid*.: 56-57), even when the owners are public bodies, NGOs or communities (*Ibid*.: 4). The SLC report 'urgently' recommended formal mechanisms to enable a change in management or ownership (*Ibid*.: 57). It recommended legislation to encourage 'greater diversity in land ownership' (*Ibid*.: 57) and improvements to land-use planning and decision making to allow rural communities to influence significant land use changes in their local areas. In this way, the land reform movement in Scotland has departed from a sole focus on distribution of resources to an emphasis on redistributing the control of resources. Wightman and other leaders of the land reform movement repeatedly quote Tony Benn's articulation of power and accountability in a democratic system, relating them to Scotland's land system (Scottish Parliament, 2019, Wightman, 2016, MacLeod, 2018).[68] In a 2019 parliamentary debate, Wightman further stated:

> 'The core challenge that Parliament faces is how to redistribute power over land in the public interest—in the interest of the many, not the few. In short, it is about how to democratise land' (Scottish Parliament, 2019).

The SLC recommended to parliament in 2019 that 'more robust mechanisms' are put in place to 'ensure local democratic influence on land use change' (Glenn et al., 2019: 2).

In some ways, anecdotal evidence indicates that some increases in accountability are already occurring within community land projects. In Gigha, for example, one person reports,

> 'with the landlord, they could sell it and you didn't have any say in it…the islanders can solve problems together now in a way that maybe in the past you relied on the laird to speak for you' (BBC, 2018).

[68] Tony Benn is quoted as saying, "What power do you have; where did you get it; in whose interests do you exercise it; to whom are you accountable; and, how can we get rid of you?...Anyone who cannot answer the last of those questions does not live in a democratic system." (House of Commons, 1998)

A member of a different community indicated that with the land under community ownership, they know that there is no one who will 'ride in and fix it'. Instead, 'we have to argue with ourselves and each other.' This community member indicated that while certain problems will not be resolved 'in a few years or even a lifetime', the overall situation is better for addressing problems with long term solutions, which have been reflected on, debated and decided as a collective (Panel Member, 2018).

In addition to a general reframing of land as a common resource which should be democratically controlled, the land reform movement has also advocated a reframing of 'wilderness' and unpeopled landscapes in Scotland.

B. Contesting wilderness and getting people on the land

The land reform process has opened up challenges to concepts of 'wilderness' and desirable landscapes. It is significant that the Scottish Government has indicated that land reform should drive 'new relationships between land, people, economy and environment in Scotland' (Scottish Government, 2012). While there is not necessarily a consensus vision of an ideal landscape, conversations have challenged the idea that Scotland's sparsely populated or unpopulated rural areas are 'wild' and 'natural.' Community Land Scotland co-hosted an event in 2018 entitled, 'Wild Land / Our Land'. It asked, 'can a landscape scattered with the remains of thousands of years of human habitation and cultivation be considered 'wild' and how might successful resettlement be realised?' (Fearann, 2018). CLS used this event as a launching platform in its campaign for Scottish Government ministers to be required by 'duty' to consider the desirability of repopulation and resettlement in planning decisions and a 'duty' of the SG to create a map of 'no longer existing communities' to counter the hegemony of the 'wild' mapping which conservation organisations and researchers have produced (MacLeod, 2018).

Discussions of rural repopulation have been at least partly influenced by the ongoing legacy of the Highland Clearances. Jim Hunter—whose account and interpretation of the clearances is highly influential in Scotland—served on the board of Community Land Scotland and participated in many of its events. He was quoted by one speaker at a CLS event as having said that, 'the average highland glen is about as 'natural' as a national motorway

embankment' (MacPhail, 2018). Another speaker at the community land ownership event encouraged participants to remember that 'the narrative of 'wild land' comes from the romantics and serves a political elite' (McFayden, 2018).

Andy Wightman, an MSP and leader in the land reform movement, has criticised the concept of 'wilderness' often associated with the uplands of Scotland and linked this hegemonic concept of wilderness with private property rights. In 2018, a national public authority oriented towards tourism, 'Visit Scotland' posted on social media about the 'beauty' of the Cairngorms. In response, Wightman replied on the same media, 'A devastated, blasted, deforested, burnt & over-grazed terrain. Come and visit the ecological devastation wrought over the centuries.' In later comments he attributed this ecological degradation to problems related to accountability and regulation of land use, stemming from inappropriate rights for private landowners (Wightman, 2018).

Overall, the land reform movement has been oriented towards enabling more people to live in rural areas, primarily through population retention. The Community Right to Buy only applies to people who are already living in the locality of the land. While some people do move into an area following community land buyouts (BBC, 2018, Panel Member, 2018, Land Rights Now, 2016), community land buyouts are focused more on retention than repopulation. Similarly, the Crofting Commission of the Scottish Government aims to support crofting for the retention of the population (Crofting Commission, 2017). Agricultural tenancy legislation is concerned somewhat more with repopulation, at least to recent levels (see below for discussion). The LRRG report of 2014 dedicated an entire section to discussing the decline in agricultural tenancies. The LRRG noted how tenancies have declined sharply throughout the 20th and 21st centuries, documenting a shift from 90% of farmers being tenants in 1880[69] to just 29% of farmers in 2013 (LRRG, 2014: 195-197). The Scottish Land Commission has a strategic aim to "increase access to land for those who want to farm, improve the relationships between landowners and tenant farmers, and stimulate the tenant farming sector" (Scottish Land Commission, 2018a). In accordance with this, the SLC has

[69] What the LRRG fails to acknowledge is that the high rate of tenancies in 1880 is likely a reflection of the high concentration of ownership and the high rate of dispossession of previous residents at the time, and not necessarily a situation to which Scotland should aspire today.

commissioned two papers on the subject of increasing the number of agricultural tenants (Moody, 2018, McKee et al., 2018). These attempts at repopulating or at least retaining rural populations are important for the prospects of agroecology in the uplands: without people on the land, it is difficult to imagine a more democratic and ecological food system. Yet there are significant challenges and limitations to the land reform movement, particularly in relation to rural populations and food production. The following section first discusses the sub-hegemonic aspects of the land reform movement in general and then the particular challenges for the realisation of agroecology and food sovereignty.

Section 3: Sub-Hegemonic aspects of Land Reform

While the land reform movement in Scotland has been in many ways counter-hegemonic, there are several aspects of the movement which reproduce the hegemonic order, namely the continuation of private ownership; a transfer of resources to landowning elites; and economic drivers behind the reforms. This section discusses these limitations, noting that many advocates of the land reform process have also acknowledged that land reform to date has not yet achieved all its ambitions and that there is a commitment to continuing the process. A member of the Green Party, for example, stated, 'It's an ongoing process and we've not got it right yet; we still need to tweak things and work on it.' (Interview A, 2018). Similarly, a representative from Nourish stated: 'We just have to be patient that it's not going to change things overnight. We are redefining what we mean by land ownership and in the long run that will have more impact on anything than anything else, but it's going to take a while' (Interview C, 2018). With this in mind, this section discusses the limitations of the reforms to date.

While the general land reform movement has challenged the rights of property owners, the movement also has the aim of encouraging a 'diversity' of types of ownership. The SLC 2019 report indicated that small scale private ownership was important for rural development, stating, 'There is a requirement to develop new mechanisms for attracting alternative sources of capital to support rural development, *particularly smaller scale private ownership*' (Glenn et al., 2019: 59, emphasis added). Further, interviews indicated that when communities decide to purchase land, the community landowners typically offer tenant farmers the

opportunity to buy their farmland (Interview J, 2018 Interview C, 2018).[70] While this is viewed favourably by many, again it is another driver of private land ownership and counter to the more recent conclusion of the SLC about control and democratic process. In the case of agriculture, as we have seen, private and individualised ownership of land can lead not just to concentrated land ownership patterns but also to pressures to reduce labour costs through the intensification of agricultural practices and exploitation of workers; the tendency to produce for high value markets at the expense of public food needs; and the tendency to pollute or degrade environmental resources on or off farms.

The orientation of land reform in favour of private, small scale ownership and/or the increased creation of farming tenancies could potentially lead to a populist type approach (e.g. akin to van der Ploeg's peasantries) in which *relatively* small-scale ownership and tenancy is associated with positive outcomes. The application of measures for accountability and democratic choice about land use decisions, even when land parcels are small, would be essential to prevent the counter-hegemonic aspects of the land reform movement from being watered down. It is unclear at the time of writing whether this might be undertaken. The report speaks at length about distinguishing scale of ownership from concentration of power, recognising both as problematic. It is unclear, however, whether smaller scale units would be seen by the SLC to automatically result in a diffusion of power or whether there might also be an effort to focus these units on the public interest, particularly in relation to food. The possibility for this to happen, however, may require changes to the Land Use Strategy which governs land use policy, but does not include consideration of food production, as discussed later in this chapter.

A second limitation at present in the land reform movement is that, in the process of community buyouts, public money is transferred to private landlords. Land owners could in theory use this money to purchase land elsewhere in Scotland or abroad, though future

[70] Tenants covered under the 1991 Agriculture Holdings (Scotland) Act can register their interest to buy their tenanted land if it becomes available. However, under the Agriculture Holdings (Scotland) Act 2003 Section 27, this does not apply in instances of community right to buy or compulsory purchase. However, it is reported that in practice, communities do offer tenants the option to buy their land, in part because it makes it easier for the community to manage the remaining land and in part to keep good relations with these members of the community. However, this is anecdotal and would require further research to confirm.

iterations of land reform legislation may prevent the former.[71] The payment of 'market-rate' compensation to landlords for their land represents a transfer of resources from the Scottish Government to the landowning elite, though in the current political climate there is little that can be done to avoid this. This problem was also recognised by the director of policy of Community Land Scotland during a 2018 event (MacLeod, 2018). Even with market-rate compensation to landowners in the relatively few instances of community buy outs, Scotland's land reform has been accused by some as 'Mugabe style land grabs' (Cramb, 2003).

Thirdly, the legislation and discourse underpinning the land reform movement refers more to the economic and cultural aspects of land reform than to anything related to food. The Scottish Land Commission's strategic aim is 'to drive increased economic, social and cultural value from our land' (Scottish Land Commission, 2018a). The Land Rights and Responsibilities statement also indicates that the framework of land rights should support 'sustainable economic development.'[72] While the focus on 'economic development' could be part of an attempt to incorporate a relatively radical approach within a relatively neoliberal government, it could represent an acceptance of 'economic development' as a goal in itself by those driving the land reform agenda.

To date, the land reform movement has had limited effect on farming practices. As discussed in Chapter 4, changes to property rights related to land in particular led to widespread significant changes to the agrarian systems of the uplands of Scotland during the shift towards capitalism. Scotland's recent land reform has discursively challenged and legislated against individualised property rights, and yet agrarian systems have not become more equitable, ecological or food oriented. The following section provides further detail about the problems of access to farmland in Scotland, particularly in relation to fostering more agroecological food systems.

[71] The proposed public interest test for significant land transfers or acquisitions and changes to use (SLC 2019) could prohibit large scale land acquisitions in the future

[72] The Scottish government interprets it in terms of 'the ability for future generations to meet their needs' (Dave Thomson, 2018 CLS event).

Section 4: Shortcomings of the land reform movement for agroecology

Land reform has not resulted in a change in access to land for people wishing to farm in general, nor has it resulted in changed farming practices or new farming activities on community owned land. This section discusses these two issues in turn.

A. Lack of land accessibility for agroecology: high prices, low availabilities and large sizes

At present, access to land in Scotland is highly restricted for prospective food producers. This is widely recognised amongst both conservative and radical actors alike. The Scottish Land Commission has noted that lack of land access has led to stagnation in the agricultural sector. As discussed above, it aims to 'increase access to land for those who want to farm, improve the relationships between landowners and tenant farmers, and stimulate the tenant farming sector' (Scottish Land Commission, 2018a), and commissioned a report on how to address the problem of low access to land for prospective farmers (McKee et al., 2018). The commissioning of this report was endorsed by both the NFU Scotland and the Tenant Farmers Association of Scotland (Scottish Land Commission, 2018b). The lack of widespread access to farm land was identified as the most common barrier for new entrants in a 2018 report commissioned by the Scottish Government to the Tenant Farming Forum (Cook et al., 2008). The Scottish Food Coalition similarly recognise a need for land and growing spaces to be more available, though present this within a context of sustainability and ensuring everyone has access to adequate nutritious food (SFC, 2016). The lack of access to farmland has been identified as a particular barrier to agroecological production. The inaccessibility of land suitable for agroecology was discussed at a 2018 gathering of ecological farmers (and aspiring farmers) convened by the Land Workers' Alliance in Glasgow (Farmer participants, 2018) and has been the focus of research commissioned by the Scottish Farmland Trust and conducted by Nourish (Nourish Scotland, 2017).

Actors looking to improve land access for first generation farmers and crofters such as the Scottish Farm Land Trust, Nourish, the Land Workers' Alliance and Community Land Scotland, have largely attributed the lack of access to farmland to high land prices, large landholding sizes (concentrated land ownership), and a lack of availability of land on the market (for both rental and purchase). These are attributed in turn to incentive structures which lead to agricultural land consolidation (namely agricultural area-based subsidies) and fiscal incentives

which contribute to people purchasing land to avoid taxation and using land as a financial investment (Interview H, 2018, Peacock, 2016, Panel Member, 2018).

In 2019, the SLC reported that agricultural land prices increased by 85% between 2007 and 2017, yet total income from farming has only increased by 15% (Glenn et al., 2019). It attributed the divergence between land values and agricultural incomes to the fact that agricultural land is being used for the creation of private non-agricultural value. It highlighted that significant amounts of agricultural land are being purchased for forestry or for commercial investments, hence making a link between the use of land for financial gain and the decline of available farmland. At a Community Land Scotland event, a speaker stated, 'part of the reason why there's no access to land is value - the way in which land is valued – it's treated as a commodity which is traded' (Panel Member, 2018). A Scottish Green Party member, in discussing the ability of both communities and farmers to purchase land for agroecological use stated, 'You have to buy it at market price, and for agricultural land it's bloody expensive' (Interview A, 2018).

While land prices are high for domestic populations, the prices of Scottish farmland are low compared to many other places (including but not limited to England). This is resulting in increased foreign ownership of farmland and increased concentration of farmland ownership for commercial purposes. A Scotland based real estate company states how this enables so-called 'upsizers' from other countries 'the opportunity to enter the market on a larger scale at a lesser base cost' (Saint Property Search, 2015).

The problem of land being used as a financial investment was recognised by some advocates of land reform as evidenced by the proposed amendments in 2016 to both instate an upper limit on the amount of land that any one entity could hold and to prohibit the use of land as a financial investment by non-European based entities. While the latter would not have directly challenged the existing investments by English, Dutch and other investors within the UK and Europe, it would have been a step towards explicitly recognising the effect of such investments on the availability of land for people in Scotland.

By contrast, the 2018 report of the Agriculture Champions, commissioned by the Scottish Government to inform future agricultural policy, does not mention access to land or land reform as issues related to the future of farming in Scotland (Scottish Government, 2018d).

The Scottish Government's 2015 'Future of Scottish Agriculture' discussion document mentions the challenge of low availability of tenanted land, yet only cites 'flexible tenancies' as a possibility for addressing this and makes no mention of land reform (Scottish Government, 2015b).

As discussed above, changes to agricultural tenancies, particularly changes to make them more secure, have resulted in less land being let out by landowners to tenant farmers. Instead, land has been increasingly farmed via contract farming, which in many cases results in even more concentration of farming power, as one contractor tends to cover a multitude of farms (LRRG, 2014, Moody, 2018). While flexibility could provide an important transitioning step for new entrants, the shift to flexible, short term tenancies and contract farming upholds private property rights within the agricultural sector. Further, advocating a more 'flexible' farming sector in which 'land moves between farmers in response to market signals,' as recommended in one of the SLC working papers, negates the value of stability, ongoing connection to land and the inherent risk and uncertainty in farming (Moody, 2018: 6). Instead it values the most 'entrepreneurial' of farmers, with 'high performance businesses being best placed to be resilient and thrive' (*Ibid*.), thus reproducing a capitalist narrative of competition and market dependency as positive drivers of success in food and farming.

Further, actors looking to increase access to land for agroecological farming have recognised that the size of land parcels available on the market is a problem. Firstly, the large size results in the overall price of a parcel being out of reach for most people. In a report commissioned by the Scottish Land Commission, Peacock (2018: 5) states that the 'significant scale' of land on the market results in a situation in which 'with limited exceptions, only wealthy elites can really participate' in the land market. Organisations promoting agroecology have further argued that the scale of land parcels available is much higher than would be appropriate or feasible for individuals or communities wishing to engage in agroecological food production. The SFLT commissioned research notes that the average size of farmland on the market in 2015 was 150ha, yet the majority of people aspiring to start an agroecological farm (989 people surveyed) were seeking parcels of less than 20 hectares (Nourish Scotland, 2017).

The Scottish Farm Land Trust has particularly focused on the attributes of land parcels which would be suitable for practicing agroecology (Nourish Scotland, 2017). A representative of the Scottish Farm Land Trust stated, "the community gardening movement is quite strong

but…there's the difficulty of people wanting to move from community gardening in urban areas to become market gardeners in peri-urban or rural areas" (Interview H, 2018). The size of parcels combined with the cost of land has led to a concentration of agroecological producers in urban areas where they remain at a small (micro) sizes.

B. Lack of food production in the Land Use Strategy

The Scottish Land Use Strategy was developed in 2011 to establish a vision and objectives for 'sustainable land use' and has been a requirement of the 2009 Climate Change (Scotland) Act (Scottish Parliament, 2009). The vision and objectives which were set in 2011 were reiterated in the 2016-2021 Land Use Strategy (Scottish Government, 2016d). The three equally weighted objectives are as follows:

- "Land based businesses working with nature to contribute more to Scotland's prosperity;
- Responsible stewardship of Scotland's natural resources delivering more benefits to Scotland's people; and,
- Urban and rural communities better connected to the land, with more people enjoying the land and positively influencing land use" (Scottish Government, 2016d: 7).

As noted earlier, these objectives do not explicitly mention food. Food production could be an outcome of contributing to Scotland's 'prosperity' (i.e. in terms of rural incomes, trade or GDP) and may also be related to the stewarding of natural resources (as implied in the conservation of semi-natural habitats through grazing). However, the production of food as an outcome in itself, in relation to meeting the dietary needs of its residents and/or in relation to reducing Scotland's dependency on imported products is not mentioned. This in many ways represents the dominant political framing of agriculture in Scotland at present: agriculture is framed as contributing to economic or environmental outcomes but is not yet explicit about how this relates to the food needs of society. This helps to explain why agroecology, which aims to integrate these objectives, is as yet under-supported in Scotland. While the establishment of agroecological food systems could contribute to the 'social justice' aim of the Scottish Government outlined in the 2016 Act, the link between Scotland's food system and social justice does not yet predominate in discourse related to food and

agriculture in Scotland, though there may be the beginnings of a movement in this direction, as discussed in Chapter 7.

C. Lack of food production orientation in community land trusts

The Government of Scotland has set a target of 1 million acres of community owned land by 2020 (Scottish Government, 2016e), though at the time of writing, nearly half of this target remains to be achieved: 562,230 acres were in community ownership in Scotland as of the end of 2017 (Scottish Government, 2017d). In terms of area, this target is the equivalent of 7 percent of Scotland's agricultural land, and as much of it is located in the Highlands and Islands, there is a strong overlap with upland farming systems. Yet interviews with representatives of Community Land Scotland as well as those who have been involved in community buyouts have confirmed that none of the community buyouts have resulted in any changes in the ways in which farming is undertaken (Interview F, 2018, Interview L, 2018, Interview D, 2018, Interview C, 2018). While two communities[73] have initiated some gardening activities, overall, the legislation which has facilitated communities and crofters to buy land has not resulted in the creation of new farms nor resulted in changed farming practices. During interviews, members of community land trusts as well as those working in the food and farming sectors commented on this. Again, the issue of scale was mentioned. A representative from Nourish commented on the challenges of managing relatively large parcels of land:

> 'To manage 35,000 acres of land is a big thing to do…It's a huge undertaking, and these communities who end up buying thousands of acres, the easiest thing to do is to get the people who were running it before to just keep running it. You also have to have a strong justification and authority about why you're going to do something very different here' (Interview C, 2018).

Another common perception was that communities do not engage in food production because farming is seen as hard work and does not pay well, or even enough.

[73] In one buyout, the community initiated a fruit orchard, yet the main focus of the land initiative has been on recreational activities for deprived children on the beaches of the site. Another community started a polytunnel.

> "The perception [is] that it's incredibly hard (to farm) and not something you can generate much of an income from, so a lot of community buyouts try to focus on off farm income and support for existing crofters rather than try to regenerate farming with new entrants to the area" (Interview H, 2018)

Returns from farming are indeed low, and many farmers lose money on agricultural activities (Scottish Government, 2016a). By contrast, the localities of new communities – primarily in scenic parts of Scotland with high winds – have opportunities for more lucrative income generation through tourism and renewable energy. Nearly every interviewee identified the income generated from renewable energy schemes and from tourism as disincentives for food production, particularly at community levels. The income generation from renewables and from tourism were discussed extensively in the Community Land Scotland 2018 event which brought together representatives of nearly all the community-owned land initiatives. Income generation from tourism and renewable energy is shared within the community itself.

In some ways, this collective income generation represents an erosion of the requirement for people to sell their labour for survival, one of the key tenets of capitalism. Combined with the challenge of individualised private property rights, this could indicate at least a partial departure from capitalist society. Further, community members indicated that the nature of tourism is starting to shift, at least in certain areas, from a visitation to 'wild' and 'unpeopled' landscapes to a tourism of *communities*, with their unique social organisation and ecological focus. However, it has also been noted that some community land trusts aim to support new business ventures and entrepreneurship (including those related to tourist trade), in part through the funds generated from renewable energy schemes (West Harris Trust, ND). In these cases, community land initiatives could be seen as representing a sub- or alter-hegemonic approach, rather than a counter-hegemonic approach.

However, this departure from capitalism is not total. At the CLS event, one community member indicated that 'in some ways it's the commodification of lifestyle' (Lucy, CLS event 2018) and another panellist at the event reminded the audience that 'tourism was invented with the invention of capitalism' (Panel Member, 2018). Further, community members do still pay rent—though at lower rates than elsewhere—and do still need to sell their labour. In relation to food, people are still almost entirely market dependent, as both producers and consumers. In rural areas, most people depend on large supermarkets. As one interviewee

from a radical food organisation stated, 'Tesco home deliveries has it covered' (Interview D, 2018), implying there is no need—or capacity—for people to be producing food in these rural areas. While some island communities such as Eigg have an independently run shop, it is primarily stocked with food which comes over on the ferry (Interview HH, 2018). Other research has confirmed that the majority of food consumed by islanders in the Highlands and Islands is brought over on ferries from the mainland, reflecting a broader trend in the uplands for rural communities to be dependent on commodity markets for their food (Eden and McIntosh, 2014).

Several interviewees indicated that community buyouts have not focused on food production due to the pre-existing disconnect between farming and the local community. Because the majority of farmers are already selling into large-scale supply chains, local communities may not perceive the possibility for them to start supplying locally (Interview H, 2018, Interview D, 2018). As discussed, the majority of farmers in the uplands—from crofters and smallholders to large-scale farmers—tend to sell their lambs as stock for finishing further down south. Thus, the majority at present do not produce a food product ready for consumption (Interview W, 2019). Of course, the outliers to this type of farming indicate that other forms of production are possible, but in terms of the perceptions of community members, commercial sheep stock farming is typically not challenged (Interview E, 2018, Interview B, 2018, Interview Y, 2018, Interview II, 2018, Interview AA, 2018, Interview W, 2019).

One community, in South Uist undertook a feasibility study on local food but encountered several obstacles. For example, there are no abattoirs on South Uist. Thus to take advantage of the local deer population for local food, deer would need to be taken to North Uist to be slaughtered and then brought back, though as of June 2019 the North Uist abattoir has been at risk of closure in part due to the costs involved in compliance with food safety regulations. An even more extreme scenario existed in Isle of Skye: travel to the nearest abattoir requires an approximately 200-mile round trip which reportedly traumatises the animals en route. While some producers do undertake the journey, it is costly and typically undertaken for either high end restaurants or by people very dedicated to finishing their own lambs (instead of sending animals away to be fattened in England or the Scottish lowlands, as discussed previously) (Interview M, 2018, Interview X, 2017). Less formal facilities are reported to exist

near or on Skye though this is likely to be restricted to producing meat for home consumption (MacKinnon, 2019).

In some areas, new farmers have moved into community land projects, yet it is not always easy for them to integrate (Interview JJ, 2018, Interview D, 2018, Panel Member, 2018). To initiate a community, people need to be already living in the area (Scottish Government, 2018b). This represents a barrier for new entrant farmers, especially those wishing to practice agroecology, many of whom are located in urban or peri-urban areas, where working in community gardens has been the source of their experience (Interview H, 2018, Interview D, 2018). Thus, the community land ownership movement does not enable them to acquire land in rural areas unless they first relocate, though of course doing so would not guarantee that a community land trust would form, or that such a trust would allocate land for food production.

Perhaps one of the reasons why land reform in the Scottish context has yet to engage with issues of food is because of the pervasive perception that the majority of Scottish farmland (i.e. the uplands) is only suitable for the grazing of animals. The SLC 2019 report replicates the narrative that the vast majority of Scottish farmland is only suitable for 'rough grazing' (Glenn et al., 2019: 48), undoubtedly following the Macaulay Land Use Capability system (James Hutton Institute, 2019). In doing so, it has overlooked the agrarian history of upland areas (see Chapter 4) and current agricultural outliers which together instantiate the potentials in the uplands for arable crops, horticulture and mixed holdings. The SLC even overlooks the existing 'improved pasture' which as a seeded and fertilised crop does not constitute 'rough grazing' or agroecological land use, but does represent a significant portion of Scotland's current upland agricultural land use (Scottish Government, 2018g).

Finally, it is unclear what types of farming the SLC deems to be 'beneficial' to society. The report notes that the 'minimum scale' required for a 'viable agriculture business' is likely to be influenced by subsidy policies (Glenn et al., 2019: 54), and also concludes that large landownership patterns can be 'beneficial' in agriculture (*Ibid*.: 56). Here the 'benefits' are seen as commercial viability rather than societal benefits from ecological agricultural production as in agroecology. While it recommends a review of fiscal incentives related to agriculture – as well as forestry and renewable energy – the report focuses on financial viability and environmental management but fails to discuss food as a public interest output

of Scotland's vast agricultural land. With a dominant framing that Scottish farming is better suited for providing incomes, population retention and landscape benefits (see Chapter 7), rather than food for its population, it is understandable that the land reform movement has not explicitly supported the generation of agroecological food systems. A representative from Nourish clarified that land reform legislation had never intended to enable people in Scotland to 'reclaim their food systems.' He states:

> "It was about trying to get some housing round here or trying to deal with the fact with the landlord was never there or trying to get you know some community development, make some jobs in the area, but it's not really been about food sovereignty or taking back control of the food system" (Interview C, 2018).

Conclusion

The land reform movement in Scotland since devolution within the UK and the establishment of a Scottish parliament has largely challenged one of the foundations of capitalism, the rights of private property owners, and is therefore largely counter-hegemonic. It has resulted in shifts in discourse and framings related to the nature of land and property. Land reform campaigners have been at least partly successful in reframing land as a 'common good' rather than a 'private good' and have been largely successful in embedding the concept that land must be used in the public interest within the Scottish government and legislation. There is explicit discussion of how the public interest and private interest may not always coincide. The movement has also explicitly linked access to and control over land to the upholding of basic human rights.

The reforms continue to allow for private property to exist, as part of the 'diversity' of land ownership patterns which the Scottish Government seeks to support. The most recent recommendations by the SLC, the governmental body tasked with directing future land reform in the country, indicated support for small scale private ownership in particular. Yet the commission has also urgently recommended mechanisms to ensure more democratic oversight of land use decisions. If such democratic oversight applies to both small and large landholdings, and agroecological food systems become seen as contributing to the public interest, then there could be scope in the future for a shift away from commercial,

competitive farming and towards farming models more aligned with the principles of food sovereignty and agroecology. However, at present, supplying the food needs of society and doing so in an ecologically sound manner has not been embodied in land reform efforts to date, as evidenced by its exclusion from the Land Use Strategy and in discourse related to land reform more generally.

While land reform has relinked land ownership to the public good and has evoked 'social justice' as one of its aims, the land reform movement also positions itself within an overall economic rationale which conforms to a capitalist model and as such could be considered sub-hegemonic. The economic framing of land reform and the market-rate remuneration to landowners in community buyouts resonate with the 'market friendly' land reform advocated by the World Bank (IFAD, 2001: 75) and 'efficiency' arguments of sub-hegemonic land redistribution efforts (Griffin et al., 2002). It is challenging to discern, however, whether economic framings represent an effort to speak the language of those in power or whether they reflect the internalisation of the hegemony of economy on the part of land reformers. In either case, the economic emphasis has arguably prevented the land reform movement from linking changes to property rights to changes in Scotland's food systems. On the one hand, community land trusts are encouraged to generate incomes for themselves, though agriculture at present is not a particularly strong income generating activity in the uplands of Scotland, where most of the buyouts have occurred, particularly not when compared with tourism and renewable energy. On the other hand, the 'public interest' framings of the land movement, combined with the recent calls for democratic accountability of land use, potentially represent a break from the 'efficiency' arguments vis-a-vis what the population of Scotland perceives as the public interest is not necessarily in the interest of economic growth. The SLC's explicit distinction between scale of ownership and concentration of power further distinguishes the land reform effort in Scotland from other land redistribution efforts.

Notwithstanding the lack of engagement of the land reform movement with food production and relatively low emphasis on agrarian development, Scottish land reform nevertheless represents a break from the 'efficiency' and 'developmentalist' arguments of redistributive land reform movements (Bernstein, 2004, Byres, 2004). Yet the this lack of focus on agrarian production efficiency could well be attributed to the continued framings of Scotland's agriculture as limited to rough grazing, the primary purpose of which has recently been

perceived to be the support of livelihoods and landscapes, rather than food systems, as discussed in Chapter 5. Meanwhile, changes to tenancy regulation have had the unintended effect of tightening the grip of landowners on agricultural land as they fear a loss of control.

In sum, the 21st century land reforms in Scotland to date, while strongly counter-hegemonic, include some sub-hegemonic elements. At the time of writing, they have not necessarily improved the prospects for agroecology and food sovereignty in Scotland. The next chapter provides an analysis of the wider discourse and policy related to food and agriculture in Scotland, which has arguably influenced the land reform movement.

Chapter 7: Food discourse as reinforcing, enabling or challenging hegemony

Introduction

The previous chapter presented the ways in which land reform to date has not yet focused on supporting agroecological food systems in Scotland. Through an analysis of the main discourses related to Scottish food and agriculture, this chapter seeks to provide clarity as to why a largely counter-hegemonic land reform movement has not yet coincided with the counter-hegemonic movements of agroecology and food sovereignty.

Scottish agriculture is shaped by a variety of discourses, espoused by a range of stakeholders, from the neoliberal to the radical. Overall, the dominant discourse and resulting policies could be summarised as 'embedded neoliberalism,' in which neoliberal ideals are tempered by environmental and social income support provisions, including payment for public goods, support for food production (particularly high quality foods and exports) as a 'public benefit,' and support to farmers in Less Favoured Areas and practicing High Nature Value Farming. These provisions ameliorate, at least in theory, the contradictions of capitalism without addressing the origins of these contradictions. This is similar to the ''embedded' neoliberal mode of governance' of agriculture at the level of the EU, in which anti-free market small and medium farms mitigate the neoliberal mode of governance (Tilzey and Potter 2008, Potter and Tilzey 2005, Tilzey 2006).

However, there are multiple variations and divergences of discourse. Further, many actors advocate a variety of approaches, and may simultaneously espouse subordination to and opposition to hegemonic neoliberal capitalism. While recognising that discourse of a single actor often crosses over into multiple categories, this chapter breaks down the main strands of discourse and advocacy into six main approaches, ranging from strong neoliberalism to a counter-hegemonic integration of social justice, ecology and food. It then discusses the potential for the latter radical discourse to become realised in Scotland in the context of oppositional interests and framings. Analysis is based on publicly available documents (e.g. strategies, press releases, policy statements), semi-structured interviews and statements during events, as discussed in Chapter 2.

Section 1: Neoliberal Discourse: Entrepreneurialism and compliance

Following a referendum in 2016 for Britain to leave the European Union, the Scottish Government commissioned a group of four individuals, termed 'Agriculture Champions' to 'advise on the development of a strategy' for the agricultural sector once Scotland was no longer accountable to the EU's Common Agriculture Policy (Scottish Government, 2017a). The four members of this group represented strong industry bodies: ALDI, a discount supermarket; the Scottish Food and Drink Federation, a food industry membership organisation with an 'internationalisation agenda' (Interview R, 2018); Lantra, an industry training company, and the National Farmers Union of Scotland, which represents a 'wide church' of farmers (and crofters) and which is one of the most influential organisations with respect to agriculture and rural areas (Jordan and Halpin, 2006). Recommendations from the Agriculture Champions were referenced 20 times in the Scottish Government's draft agriculture policy, 'Stability and Simplicity,' released by the Scottish Government in 2018 (Scottish Government, 2018j).[74]

The Agriculture Champions note that 'past policies have led to dependency, inefficiency and inequality in many cases and will not work for the future.' It indicates that 'industry must not sit back' (Scottish Government, 2018d: 5). The paper goes on to assert that 'all businesses must keep pace with the evolution of *demand* and societal preferences, and farming is no different' (*Ibid*.: 6, emphasis added). The interim report stated, 'Public-funded farm support is not an automatic right, it is an asset offered to promote self-betterment and it should be used as such.' Reading this statement in the context of the much-criticised area-based payments, it can *appear* to be a progressive stance, as it indicates the possibility of shifting payments away from undeserving farms. However, it signals a potential removal of the 'exceptional status' of agriculture in the future and represents a neoliberal approach (Tilzey, 2006: 8). Yet it is also combined with discourse favouring the continuation of less favoured areas and support for farms which are providing 'public benefits,' as noted in Chapter 5 and further discussed in the next section.

[74] This Scottish Government policy has primarily provided a plan for a 'transition' period of 5 years following the UK's departure from the EU, and a primary orientation of this transition is 'stability,' which is referenced throughout the document and in the title of the policy.

The Agriculture Champions report accepts that the 'market economy' is a 'fundamental economic reality' and that 'most farmers and crofters are small businesses selling their products to much bigger businesses' (Scottish Government, 2018c: 10). While it does suggest a role for 'short, local supply chains' it indicates that these should feed into 'niche' markets (*Ibid*.). In discussing whether food production might be considered a 'public value,' it states, 'we believe the public interest in this area lies in having security of food supply, produced from the most appropriate land, and safeguarding the best land for food production wherever possible' (Scottish Government, 2018c: 3). While somewhat ambiguous, this could be read to be a 'land sparing' approach. The report does not engage with the notion that much of Scotland's agricultural land (e.g. sporting estates and forestry plantations) is not used for food production.

One of the biggest and most prominent claims of the Agriculture Champions report is that farmers need to become more entrepreneurial, and that farming is no different from other business sectors which are unsupported by the government. The panel states, 'We recommend that a top priority starting immediately is mindset change, to help farmers and crofters to become more progressive, entrepreneurial and resilient in a way that is already the culture in the unsupported sectors' (Scottish Government, 2018c: 6). It recommends that farm advice 'delivers more on mindset change and business skills' and even suggests that developing these skills be a requirement for support. A more 'entrepreneurial' type of agriculture is likely to orient farms towards greater intensification, or towards more niche and high value food production, both of which run counter to agroecological food systems.

This entrepreneurialism is also encouraged by policies and activities undertaken by Highlands & Islands Enterprise (HIE)[75] and Scotland Food and Drink. The HIE has a remit from the Scottish Government to 'integrate economic and community development' and is operates with a view to 'scaling up high growth' in the food sector, among other sectors (Interview S, 2019). HIE had a key role in developing the strategy for Scotland Food and Drink which is outlined in a document entitled 'Ambition 2030' (Scotland Food and Drink Partnership, 2017).

[75] HIE evolved from the Highland & Island Development Board, which was established in 1965 and restructured by the Conservative government in 1991 as the HIE. The aims of the HIDB were to support forestry, tourism, manufacturing, and industrial 'growth points' (Alexander, 1985: 220), whereas the HIE focuses on enterprise development and individual projects (McEwan-Fujita, 2005). There are currently efforts to replicate the HIE in other areas of Scotland. The South of Scotland Enterprise Agency is one such replica (SFLT p8).

The strategy was supported by the First Minister and allocated £10 million of government funding (Farming UK Team, 2017). The Ambition 2030 strategy aims to attract international and domestic investment in Scotland's food and drink sector with the goal of doubling the turnover in farming, fishing, food and drink by 2030. It celebrates the increase in exports and the high food manufacturing growth rate in Scotland as successes, and looks towards further 'internationalisation, investment and innovation' to improve results in coming years (Interview S, 2019). Overall, emphasis is on competitiveness and (economic) growth.

In the Agriculture Champions discussions on entrepreneurialism, its report states that producers need to 'work with the needs and preferences of their customer' (Scottish Government, 2018d: 9). It implies not only that farmers should be business savvy but also that they be compliant with the demands of their customers. In the context of the approaching exit from the European Union (and upcoming changes to the EU CAP in any case), it states that 'farmers and crofters [must] face up to the reality of the challenges the sector will face and to take advantage of all available initiatives, whether from government, industry or others.' (*Ibid.*). This discourse provides an interesting contradiction to its earlier criticism of producers as 'dependent,' perhaps advocating new forms of dependency. Further, it implies that any support offered by the 'government or industry' would aspire to serve the interests of producers. In doing so it contradicts a strong tenet of food sovereignty about control, choice and democratic decision making in food systems (Borras et al., 2015).

The entrepreneurialism narrative does not fully engage with the nature of neoliberal capitalist markets which expose producers to downward price pressures. It does not take into account that food could be considered to be more than a mere commodity and does not mention inequalities or public health. When asked about the lack of public health focus within Scotland Food and Drink, a representative indicated:

> 'We've got a programme just starting with health and wellness and we've been researching market opportunities for foods in that sector…there's big opportunities in the snack industry to provide heathy snacks and higher protein foods for people to feel fuller longer…we are coming at it from a business opportunity point of view, in a way it's good because it also ticks a box in government public health agenda' (Interview S, 2019).

In other words, this industry body, which has the support of government, looks favourably on situations which represent a 'win win' for both business and public aims supported by the Scottish Government. What is missing in this approach is consideration of who does not 'win' from such approaches, including not only certain consumers but also producers, labourers and the environment which tend to be compromised in competitive growth strategies, or any entrepreneurial behaviour within capitalism as discussed previously in this dissertation. Overall, the approach assumes that problems such as healthy diets and sustainability can be 'resolved' through markets, as characteristic of a strongly neoliberal discourse (Tilzey, 2006: 8).

The Agriculture Champions report recommended that farm support be allocated on more competitive criteria, indicating 'there will always be more potential demand than there is money' (Scottish Government, 2018d: 12). It indicates that government should '*squeeze* the most benefit for the industry out of whatever budget is available' (*Ibid*., emphasis added) and recommends that loans or other 'financial instruments' be used *in lieu* of public money. While the SG policy did not indicate a total abandonment of governmental support, it embraced the discourse of competitiveness and also discussed loans as support instead of grants. Acknowledging that not everyone will be competitive enough to stay in business, the Champions report recommends that farmers should have the option of leaving 'the industry', a recommendation incorporated in the ensuing Scottish Government policy (Scottish Government, 2018j: 17).

In terms of environmental measures, the Agriculture Champions report focuses on 'natural capital' including 'improved nutrient management and water quality, improved performance, reduced GHG emissions and soil erosion.' There is a notable lack of acknowledgement of biodiversity and food, and 'improved performance' likely refers to increased productivity and profitability. In terms of agrochemical use, it only notes that reductions are likely to be necessary in the context of 'pressure from lobby groups' which would put 'increasing downward pressure on the availability of agrochemicals' (Scottish Government, 2018c: 10). Strategies recommended to overcome this include advanced breeding techniques, biocontrol technologies, animal husbandry best practice (undefined) and 'products to replace synthetic chemicals.' This aligns with a sustainable intensification or ecological modernisation type approach, with input substitution and the use of high tech for reducing some inputs. It says

nothing about changing farming techniques or farm structures to better integrate ecology and introduce greater diversity. In a separate section of its document it notes that collective purchasing could reduce the cost of consumables such as 'fuels and oils, fertilisers and medicines' which indicates that such products are essential to the type of farming that it recognises as viable and desirable. Thus, while there is some discourse about 'greening' agricultural production, it is largely divergent from the agroecological practices which foster diversity, functional ecosystems and minimise external inputs. The Scotland Food and Drink strategy only superficially engages with sustainability, through reducing food waste, and does not mention other measures.

The Agriculture Champions report and the process behind it was opposed by Nourish, who commented on both the 'opaqueness' of the process as well as the inadequacy of the review of evidence (Interview C, 2018). Nourish called for a Task Force to be established in a transparent and open way to ameliorate the flawed process (*Ibid*.). Yet despite its recommendations for a greater neoliberalisation of agriculture in Scotland and an erosion of bargaining power and agency of farmers, crofters and other producers, the Agriculture Champions report was endorsed by producer organisations including both the Scottish Crofting Federation and the NFU Scotland[76] (NFUS, 2017b, SCF, 2018a). The endorsements from the SCF is related, in part, to discourse indicating a continued support for producers based on their provision of public goods, which crofting is seen to provide (SCF, 2018a). While the concept of 'public goods' reinforces a neoliberal agenda in practice, as the next section discusses, it is conceptually palatable to organisations representing producers and environmental organisations.

Section 2: Environmentally tinged neoliberalism – public money for public goods

Despite its strongly neoliberal tone, the Agriculture Champions report does indicate the need for some public support for agriculture, though it indicates that support should only be given for the delivery of public goods, which as discussed in Chapter 5, was first introduced into agriculture policy in the UK through environmental stewardship schemes in the early 1990s. However, more recently the concept has been promoted more explicitly by a range of actors,

[76] The support by NFUS is unsurprising given that a representative of NFUS was one of the four agriculture champions who authored the report. There were no publicly available documents indicating NSA's position on the final report of the Agriculture Champions

including environmental and producer organisations. The theme of the bi-annual Land Use and Environment Conference in 2018 was, for example, 'Rewarding the delivery of Public Goods in Practice.' The underlying logic of the 'public goods' concept pervades policy documents even when the term is not used. The Agriculture Champions document indicates that 'farm support…is an asset given by the public…to deliver what the marketplace does not fund' (Scottish Government, 2018c: 6). The Westminster-based Defra[77] (covering England and Wales) has proposed steering all agri-environmental payments towards the provision of public goods (DEFRA, 2018a, DEFRA, 2018b) though in Scotland advocacy for continued support for farming in 'Less Favoured Areas' has tempered this somewhat, as discussed in the next section.

The public goods approach has been advocated by numerous environmental and land management organisations, including RSPB Scotland, the National Trust, Soil Association, SNH, the Game and Wildlife Conservation Trust and World Wildlife Fund (Dean, 2018, Barnes et al., 2011, Rayment, 2019, Juniper, 2018). It is also supported by the Green Party, which indicates that payments for public goods will facilitate the creation of 'particular farming' which is providing certain habitats for species (Interview A, 2018). It is supported by Nourish, the Scottish Crofting Federation, the NFU and, with caveats, by the Land Workers' Alliance (LWA) a UK-wide affiliate of La Via Campesina[78] (Nourish Scotland, 2015, SCF, 2018c, LWA, 2018).

Yet the public goods approach is unlikely to lead to a spreading of agroecology or the realisation of food sovereignty in the Scottish uplands, even though it appears to be both environmentally beneficial and has been supported by advocates of food sovereignty in Scotland.[79] As discussed in Chapter 5, the concept of public goods indicates that environmental and social problems arise because these sectors cannot be privatised. The Agriculture Champions report, for example, indicates there is a need to support public goods

[77] Department for Environment, Farming and Rural Affairs

[78] LWA is UK-wide, but most of its membership had been in England and Wales until recently. In 2018, LWA did a membership push in Scotland resulting in a growing number of members in Scotland.

[79] The Land Workers' Alliance is an active member of ECVC. The Scottish Crofting Federation was until 2018 a member of ECVC. While it still supports the aims of food sovereignty it ceased its membership due to budgetary constraints.

such as carbon sequestration because 'there is no market mechanism, *at least at present*' (Scottish Government, 2018c: 6, emphasis added).

Producer and environmental organisations alike have lobbied for the continuation of Less Favoured Area (LFA) payments (see Chapter 5 and Section D below). More recently, these organisations have advocated for LFA support to be tied to 'High Nature Value' (HNV) farming. HNV farming is defined as low input farming which protects biodiversity and/or certain agricultural ecosystems. UK upland livestock farming is cited as a 'typical example' of HNV farming, in contrast with intensive arable farms (EEA, 2004: 4). Scottish organisations also strongly associate HNV with upland livestock farming systems, and particularly with crofting practice (Scottish Government, 2011, Scottish Environment LINK, 2011). A crofting union representative, for example, celebrated how crofters are supporting the delivery of public goods through keeping land clear for walkers:

> 'Public goods are a consequence of the way that crofters are managing the land…You know people love walking in the Scottish hills and they can do that because of the fact that they are grazed hills, and if they weren't grazed they would be, you know, bush. And you can't walk in the bush!' (Interview E, 2018).

As discussed in Chapters 4 and 5, livestock—and particularly sheep—farming has had a unique impact on upland ecosystems since its spread following the agrarian transition. While many of the changes to upland ecologies resulting from widespread sheep farming have been considered to be ecologically damaging, extensive sheep farming has been reframed as ecologically beneficial since the mid-1980s as discussed in Chapter 5. While controversy continues about the ecological merits of sheep farming, as previously discussed this form of production fails to integrate consumption needs into production and is dependent on commodified markets. While extensive livestock farming is supported through the 'public goods' approach, other forms of production which might otherwise be considered to be agroecological are not. A farm might minimise or avoid the use of external inputs, build soil health and provide food to be consumed locally in non-commodified markets through horticulture or mixed farming approaches. However, if they do not preserve a certain kind of habitat, this type of farming is thus not rewarded in the public goods approach.

In some cases, the public goods approach may preclude farming, even if it is considered HNV, in favour of tree planting or general conservation (Interview A, 2018, Interview V, 2019). This was referred to in the Agriculture Champions paper, which indicated that changes in land use away from farming and towards either commercial purposes (e.g. in the case of timber or tourism) or conservation, should be welcomed by rural communities rather than perceived as threats (Scottish Government, 2018c: 11). This follows on from the clause in CAP policy in 2003 which provided subsidies for maintaining land in 'good condition' even if it was not farmed. Given that the uplands are the areas with the least competitive farming enterprises, it is not unlikely that upcoming policies, focused on both competitiveness and making way for 'public goods' will lead to a further division between areas for farming and areas for conservation and tourism.

In short, the public goods approach, as applied to agriculture in Scotland, has the potential to both facilitate the continuation of intensive farming and deepen the divides between this type of farming and conservation (whether through HNV farming or strict habitat preservation). The Agriculture Champions document indicates that in the face of multiple outcomes of land use, 'policies should be aimed at the *twin* objectives of enhancing natural capital and improving production efficiency.' (Scottish Government, 2018c: 10, emphasis added). The notion of natural capital has been associated with neoliberalisation (Boehnert 2016) and its application in the upland context aligns with the aims of capital accumulation in that the 'opportunity costs' of converting land use towards environmental aims at the expense of production are lower in the 'marginal' areas of the uplands than in the more lucrative lowlands. Thus, natural capital and production efficiency can complement one another in a neoliberal frame and represent a land sparing approach.

A representative from Nourish recognised this potential for dichotomy, in the following terms: 'the [public money for public goods] stuff is depressing because it's accentuated this gulf between 'real farming' (you know, using big machines) and all that 'looking after nature stuff'' (Interview C, 2018). Yet Nourish has also supported the payment for public goods in its policy advocacy (Nourish Scotland, 2015, Nourish Scotland, 2016). In relation to the reform of the CAP in 2016, one of its main points was that, 'Any reform should ensure that public money is spent on public goods such as stewardship, access and ecosystem services, rather than simply income support' (Nourish Scotland, 2016: 11). The Land Workers' Alliance also

argued that payments for public goods alone could create a dichotomy between intensive, commercially viable farms and environmental land management which does not produce food and has advocated public goods payments to be provided only if they are the product of agroecological farming systems (LWA, 2018). The Scottish Crofting Federation similarly claims that crofters have been providing public goods for many years through their crofting practices (Interview E, 2018). Both the SCF and LWA support public goods payments to be awarded if they are outputs of farming systems themselves, rather than for environmental conservation which is separate from or marginal to farming. However, while the LWA advocates a specific transition to agroecological practices, the SCF claims that all crofting is inherently ecological, as discussed further in the next section. The support by environmental and agroecological organisations for tying farm support to the delivery of public goods may partly result from the ease with which the term 'public goods,' a narrow concept from neoclassical economics (see Chapter 5) can be conflated with the concept of public support or public benefit, in what Tilzey (2000) refers to as a 'semantic sleight of hand.'

Section 3: Neoproductivism and neomercantilism

The NFUS has advocated a continuation of Pillar 1 payments, which subsidise any kind of agricultural activity, and has actively opposed a capping of these payments[80] (NFUS, 2018a). The NFUS states, 'Viable agricultural businesses and food production need not run contrary to achieving positive environmental outcomes and public goods' (NFUS, 2018b: 6) and notes that financial sustainability must be ensured through 'productivity and environmental measures' (NFUS, 2018b: 3). The NFUS, in its advocacy related to reforms to the CAP, argued for policies to ensure that support retains 'active farms and crofts that can then deliver for the economy, the environment and rural communities' (NFUS, 2014). While this appears somewhat balanced (though notably lacks mention of food), the NFUS most strongly stresses the economic contributions of farming. Out of NFUS's ten bullet points about the Scottish 'Farming and the Food Supply Chain', seven relate to economic growth and two relate to employment figures. Only one out of the ten points relates to food for consumption. It states, 'the UK is only 60 percent self-sufficient in food, meaning that if we could eat only Scottish and British food we would run out by August each year' (NFUS, 2019a). This statement implies

[80] In contrast, SCF actively supports capping (SCF 2018) and Nourish proposes eliminating all Pillar 1 payments (Nourish 2018).

the need for both neoliberal trade (see Potter and Tilzey, 2007) and neoproductivist approaches (i.e. productivism with an emphasis on economies of scope as well as scale, see Tilzey, 2006).

While all major producer organisations in Scotland currently advocate rewarding public goods as discussed above, a recent movement has been to reframe the production of food as a 'public benefit.' The NFUS states, 'Efficient food production and the delivery of public benefits must be at the forefront of any new agricultural policy' (NFUS, 2018b: 3). In its response to a Scottish Government consultation related to greenhouse gas emissions in agriculture, NFUS states that carbon neutral farming would 'dramatically reduce *food* production in Scotland, therefore harming the Scottish agriculture and food and drink sector and, in effect, exporting our emissions' (NFUS, 2018a: 3). The statement implies that Scottish agriculture is currently linked to food consumed in Scotland, though as discussed elsewhere the evidence for this link is largely lacking. The SCF also advocates support be directed towards the provision of 'public benefits' (e.g. subsidised food and carbon sequestration, which do not fit the criteria of public goods) in addition to supporting the provision of public goods (SCF, 2018b).

Presumably at least partly in response to this lobbying, the Secretary of State for Scotland indicated that all food production is to be considered a 'public good' or 'public benefit' (Interview V, 2019, Interview A, 2018).[81] The departure from a 'classical' interpretation of public goods to consider 'food' production to be of 'public benefit' allows for almost any kind of farming to continue to receive support, and for this support to be largely tied to land areas (Interview A, 2018, Interview O, 2018). Here, the term 'food' refers to all agricultural products, including many which could be challenged as to whether they indeed constitute 'food': e.g. barley for whisky, grains for biofuels, crops for animal feed and highly processed biscuits. Thus, with this reframing and such a loose concept of 'food', even a farm which is producing commodities for export in environmentally unsound ways which do not contribute to public health would be contributing to the public benefit. As discussed further below, this reframing of agriculture as a public good is justifying a neo-productivist approach.

[81] Given that food does not technically fit the definition of a 'public good,' Scottish policy discourse has at times favoured the terms 'public benefits' and 'public value', though these are often used interchangeably with public goods (Interview V, 2019).

Midgley and Renwick (2012) demonstrate how the Scottish Government invoked the food shortages of the 2008/9 food security crisis to reinforce its support for agricultural productivism.[82] However, this shift in discourse, they argue, did nothing to try to link food production with consumption. Despite its claims, the food security discourse enabled the continuation of a neomercantilist approach. As discussed above, producer unions focus on the economic outputs of agriculture, rather than attempting to reconnect food production to the dietary needs of the population in Scotland. As will be discussed below, their attempts at domestic supply rely largely on the use of branding and provenance. A representative from conservation organisation RSPB Scotland has critiqued the food security arguments underpinning productivist policies on the basis of this strong orientation towards commodity export markets (Brand, 2018).

The NFUS has strongly advocated for 'improving productivity' (NFUS, 2018b) and this is also dominant in Scottish Government policy (Scottish Government, 2018j). The NFUS policy statement for a post-Brexit agricultural policy calls for increasing domestic food production in order to improve the UK GDP and 'continue to provide us all with safe, quality and affordable food' (NFUS, 2017a). It indicates that what is necessary to achieve this is improvements in productivity through incentivising farmers to farm 'for the market' rather than for 'compliance' with subsidy requirements; 'investing in new talent'; 'providing investment for innovation and productive technologies;' working with colleges to promote 'industry led, relevant technical skills;' and, securing the ability to employ non-UK agricultural and horticultural workers (NFUS, 2017a). In short, it argues that a productivist approach is essential for food security.

At the UK level the NFU has actively campaigned against regulations that might disrupt trade within the EU and particularly against policies that could impact on the amount of soya feed imported into the UK (ABC, 2015). Soya feed, particularly genetically modified soya, which is traded at a lower cost than non-GM soya, is the main source of protein in animal feed for chickens, pigs, cows and sheep (ABC, 2015, Driver, 2015). In this campaign, food prices were invoked, implying challenges for UK consumers to purchase British meats (ABC, 2015). The

[82] Midgley and Renwick (2012) argue that while the shift in discourse occurred around the time of the 2008/2009 financial and food security crisis, it was not related to the food crisis in itself but rather its intersection with the rise of Scottish nationalists in parliament and their backlash to Westminster's neoliberal stance.

interests of the producers are couched in terms of the interests of the consumers. Yet interviews conducted for this study confirmed that upland agriculture in Scotland primarily produces for markets outside of Scotland[83] (Interview W, 2019, Interview C, 2018, Interview A, 2018).

The National Sheep Association (NSA) campaigns strongly to maintain open trade within the UK (e.g. between Scotland and England) and between the UK and Europe. The majority of lamb which is reared in Scotland is 'finished' (i.e. fattened) in England.[84] This lamb (and mutton) is either slaughtered in England or sent over to Germany and France, with these three countries representing the largest consumers of Scottish reared sheep products (Interview W, 2019). A small number of companies control the sheep meat industry, through concentrated ownership of abattoirs. This concentration makes it difficult for sheep to be slaughtered and consumed more locally. Standardisation within these large-scale abattoir businesses makes it difficult for producers to raise heritage breeds, as they are a different size and shape than the abattoirs are designed to process (Interview M, 2018, Interview W, 2019). With tight margins, farmers orient towards the 'ideal' fat-to-weight ratio, limit the type of breeds used and sell into large-scale supply chains. This is likely affecting the agrobiodiversity of upland farming, particularly given that the sheep breeds predominant today are those which became popular with the commercialisation of upland agriculture (NSA, 2019), as Darling had found in the middle of the 20th century (Darling, 1955). As discussed in Chapter 4, these were breeds from England which could remain on the hills for longer throughout the winter, exposing the uplands to more grazing pressure than had occurred under clanship.

The advocacy of the NSA and NFUS is aimed at securing a better position for Scottish (and British) producers within the UK and Europe, rather than attempting to refocus the system away from commodity markets or towards greater food security or public health for Scotland (Interview W, 2019, Interview E, 2018). Specifically, they seek to establish provenance and certifications for Scottish products and grow domestic demand for these products amongst

[83] Government data about agricultural exports and imports are collected at a UK level and to the author's knowledge, data about the flow of agricultural goods to and from Scotland is not available for the agricultural sector as a whole. However, information is available for certain sectors such as lamb, mutton and beef through Quality Meat Scotland. This data indicates that the majority of food products are exported from Scotland to other countries of the UK and abroad (QMS 2017).

[84] Because Scottish lamb is finished in England, most lamb originating in Scotland is labelled as British, even if most of its life was spent in Scotland (Interview W, 2019)

the British and international consumers (*Ibid*). The NFUS has promoted the provenance of Scottish products such as Scotch Whisky, Scotch Beef, Orkney Lamb and Stornoway Black Pudding which are 'Protected Geographical Indication' and 'Protected Geographical Indicator' products under the European name protection scheme and specifically advocated for these to be continued post-Brexit (NFUS, 2018c). While there is a case for consumers having the 'right to know' the provenance of their food, which has been advocated as a tenet of food sovereignty (Smyth, 2010), this provenance scheme is more a means of generating a niche market, rather than consumer awareness. NFUS Post-Brexit policy for farming up to 2027 also called for 'new markets' which value 'Scotland's premium products' (NFUS, 2017a). The NFUS website also highlights how the 'quality' and 'provenance' of Scottish meat results in 70 per cent of the economic value of sales of red meat being generated outside of Scotland (NFUS, 2019a). However, this is arguably incongruent with supporting an agroecological food system within Scotland.

The SCF has strongly advocated support for local food systems, such as supporting local abattoirs, markets and marts (SCF, 2018c) and has also indicated that Scottish food security should be the primary objective of agricultural policy (Ibid). Yet the SCF has also focused on the branding of crofting produce for 'the discerning consumer,' who desires 'the best quality natural food' (SCF, ND). This attention to provenance and certified products of quality represents a neoproductivist approach, in which 'economies of scope' (i.e. quality) are the focus, rather than simply economies of scale (Tilzey, 2006:8).

The efforts related to certification and premium products represent another approach of trying to work within the capitalist market to address inequalities, again without attention to the social relational dynamics within capitalist markets which inherently perpetuate inequalities. Premium products depend on people with higher incomes purchasing them, with those higher incomes in turn dependent on inequalities and exploitations inherent in capitalist market relations. As discussed in Chapters 2 and 3, premium products also exclude the majority of consumers.

Further, premium products do not necessarily reflect a more ecological process of production. Instead they seem to imply that crofters and Scottish producers in general should be upheld as inherently delivering public benefits by the mere act of being engaged in agricultural activities, in somewhat of a populist interpretation of producers. The NSA and NFUS for

example, consider the overall production of sheep products as 'inextricably linked with positive environmental management' (NSA and NFU, 2014: 15). In its 2014 advocacy related to CAP reforms, NFUS was 'adamant' that 'greening rules must not be 'gold plated' in Scotland', and that farmers in Scotland should qualify for payments based on the minimum European requirements for greening measures, actively opposing any improvements or additions to these standards (NFUS, 2014).

The championing of all agricultural producers as sustainable and beneficial to society fails to differentiate between different types of farming. This producer focused framing fits within populist interpretations of food sovereignty which views all farms as equal. While ensuring that people remain on the land is important for e.g. avoiding land consolidation, the discourse of the NFUS and NSA does not differentiate between different types of producers. Shucksmith and Ronningen (2011: 284) discuss how large-scale intensive farms receive support 'under the cloak' of small multifunctional upland farms in the UK. Yet even amongst the small upland farms there is strong variation, ranging from those which are engaging in genuine integration of ecology and food in non-capitalist ways (e.g. through CSAs producing diverse foods in ecologically sound ways) to those which, though producing extensively, are wholly specialising in commodity production (e.g. export oriented producers). [85]

The SCF on the other hand champions crofters in particular as intrinsically ecological. The SCF in response to a Scottish Government consultation on greening stated, 'greening is not an issue for most crofters as they are green in practice' (SCF, 2018c). A representative from the crofters union stated, 'crofters are doing good environmental management…they are managing the land to produce livestock and they're doing it in a way that they're going to survive. As a consequence, you get good environmental management' (Interview E, 2018). However, in interviews, none of the agricultural informants noted a difference in the types of production or production practices of crofters compared with other upland producers (Interview N, 2018, Interview Q, 2018, Interview O, 2018, Interview C, 2018, Interview V, 2018, Interview B, 2018).[86] While these interviews do not represent a rigorous comparison

[85] See Tilzey (2006) footnotes on page 8 for a discussion of 5 discrete types of multifunctionality, ranging from neoliberal to radical.

[86] None of the interviewees noted any difference in practices, except one interviewee who indicated that in his personal experience, many crofters because they are engaged in other income generation activities to remain viable, do not put enough energy into their crofts and thus do not look after their animals as well (Interview B, 2018).

of crofting and non-crofting practices, the responses indicate that crofters face many of the same constraints as other producers operating within capitalist markets. In discussing the SCF, one interviewee involved in the food sovereignty movement stated,

> 'This is no criticism of the people who are there, but…it's an organisation that works primarily to protect and defend its members' legal rights…its starting point is what's good for crofters rather than what's good for Scotland or what's good for the planet or what's good for the international movement of food sovereignty' (Interview C, 2018).

This statement, and related interviews, contradicts the discourse of the SCF which tends to indicate that what is good for crofters is beneficial for Scotland and for environment. In theoretical terms, most crofters who practice agriculture[87] could be considered, according to van der Ploeg's (2009, 2018) typology, to be engaging in petty commodity production: partially but not wholly reliant on markets and thus producing commodities but not fully capitalist. Their security of tenure arguably contributes to decision making for long-term benefits (e.g. well-maintained peatland and machair), and the fair rents somewhat reduce the reliance of crofters on markets for their survival (Interview N, 2018). Nearly all crofters also have multiple income streams to their households and engage in crofting part time (Holland et al., 2011, Committee of Inquiry on Crofting, 2008, Smith, 2014), though some crofters farm the land of multiple crofts in order to earn more of their income from agriculture (Agnew, 2015: 87, Committee of Inquiry on Crofting, 2008: 22). However, as discussed in Chapter 3, contra van der Ploeg's understanding of relative distantiation from markets, as crofters are still ultimately market dependent, their activities do not necessarily contribute to the realisation of agroecological food systems.

In the absence of targeted public support, a recent study indicates that crofters undertake more 'modern' and intensive practices to the detriment of their ecologies (Smith, 2014). There is also evidence of crofters amalgamating grazing shares (Committee of Inquiry on Crofting, 2008). The financial investments that crofters make in equipment and animals—in addition to land rents—prevents agricultural crofters from turning away from markets if

[87] Many crofters do not necessarily engage in agricultural production. Current regulations only require that they put the land to 'good use' and keep it in a 'fit state of cultivation' (Crofting Commission, 2019) and shares of common grazings are at times separated from croft tenure (Agnew 2015: 87).

prices are low[88] (Smith, 2014). The upland specialisation in producing stock lambs prevents upland producers from holding onto their sheep for another year as they need to be sent on to lower pastures for finishing by a certain age (Interview W, 2019). There is thus at least some element of market dependence for crofters, which subjects them to the contradictions of capitalist markets, albeit to a lesser degree than other tenant farmers.

The advocacy of producer organisations in Scotland, including that of the SCF, emphasizes the economic needs of farmers and crofters and the contributions of agriculture to the economy. They also equate agriculture with good environmental management, despite many claims to the contrary. In attempting to shape the markets to their advantage, create branding for provenance and orient towards premium consumers, producer organisations overlook the possibility and the need for better connecting agriculture with consumption needs in a way that benefits public health and the public interest. In short, they do not necessarily contribute to the creation of more agroecological *food systems* even if some of their production is relatively low on inputs. Producer organisations instead seek protection for Scottish and British producers while seeking beneficial exports elsewhere.

This neomercantile producer-oriented (populist) approach is strongly embedded into Scottish Government policies, despite the neoliberal pulls (i.e. that producers need to become more entrepreneurial or exit farming) from within Scotland and from Westminster. The construal of food as a 'public good' demonstrates the discursive power of this term in conflating the restricted neoclassical definition with more inclusive connotations of 'public benefit.' Including both food production and environmental 'goods' in this category *without integration between the two*, is likely to encourage productivism and neoproductivism. As discussed in Chapter 5, strong environmental measures are not required for farming practices themselves but can instead be met by field margins and set aside areas. Further, the dichotomy between production and environmental goods could lead to smaller farming units, with their lower productivity per unit, being ushered away from production either to engage in environmental conservation or to simply 'leave' the industry as previously discussed. Thus, incorporation of neoproductivist and neomercantile advocacy into SG policy is divergent from

[88] A further incentive to continue farming in the face of low prices is to continue receiving agricultural payments, which are based on the requirement to be 'actively farming' land. Most crofters qualify for subsidies based on common grazing land, which ostensibly is used for grazing animals. While minimum stocking densities are relatively low, crofters do need to maintain some grazing animals to obtain subsidies.

the aims of agroecological food systems, in which food production is ecologically sound, is oriented towards common needs and in which access to quality food is universal (i.e. not reserved for upper classes).

Section 4: Social Income Support – LFASS and agri-environmental payments

While the Agriculture Champions argued that farmers need to be more entrepreneurial and economically efficient and productive, continued support has been offered for crofters and farmers in 'marginal' areas, even if they are not economically efficient or particularly productive, as in the uplands. The Scottish government explicitly decided to continue with the Less Favoured Area Support Scheme (LFASS) when England and Wales opted to stop these payments (Taylor, 2018). Continued support for 'less favoured' or 'marginal' areas after Brexit was advocated for by the NFUS (NFUS 2018a, 2018b) and the SCF (SCF, 2018a, SCF, 2018b, SCF, 2018c) and has been incorporated into the Scottish Government's draft post-Brexit policy (Scottish Government, 2018j). The RSPB supports the concept of LFASS in principle but wishes to see more specific targeting to areas designated as 'High Nature Value' (RSPB, 2015).

Former UK Secretary of State Damian Green stated that the Scottish Government was willing to 'go to war' to protect sheep farming. In 2018, Scottish Government Cabinet Secretary for Rural Economy Fergus Ewing stated:

> 'I have sought to be a champion for sheep farmers. Unless we can continue support for hill and upland farming, it will be under serious threat and thousands of hill farmers and crofters will stop, there will be land abandonment and we have seen that already in some cases, the hillside we take for granted which is so beloved by our tourists changes into something which is not pleasant to look at and the environmental terms become degraded very quickly. Not to mention we will lose their rural contributions to the community of which they are the heart' (Ewing, cited in Taylor, 2018).

The support to enable upland sheep (and cattle) farmers to continue in the face of lack of profitability could be considered to be a social welfarist or social income support approach to farming (see Tilzey, 2006). As the above quote indicates, this support has been justified through the upholding of farmers and crofters as important for stewardship of the countryside and Scotland's natural assets (Ewing, 2019). This includes maintaining rural

populations and a system of extensive livestock farming associated with High Nature Value habitats (RSPB, 2012, Barnes et al., 2011, Holland et al., 2011, Scottish Government, 2011).

However, changes at the level of the EU require members of the CAP to phase out its LFASS payments and switch over to another system called 'Areas facing Natural Constraint' (ANC). As such, Scotland is required to reduce its payments for Less Favoured Areas to 80% of current levels by 2020 and to 40% thereafter.[89] Scotland had the option of shifting towards an ANC approach immediately or continuing with two years of lower LFASS payments. The Scottish government decided not to pursue the ANC route. Speaking to this, the Rural Economy Secretary Fergus Ewing stated:

> "I consulted industry bodies and key influencers on moving to the Area of Natural Constraint scheme shortly after the EU referendum vote and the majority response was not to do so, particularly in the light of Brexit" (Ewing, 2019)

On the issue there has been a difference of opinion between the NFUS and the SCF. The NFUS has (successfully) advocated staying with the LFASS scheme for the remaining two years of CAP influence on Scotland's agricultural policy, as opposed to transferring over to the ANC scheme. Its rationale has been that some areas which are currently classified as 'less favoured' would not qualify for support under the ANC. The ANC requires that the area classified as constrained be 'fine-tuned' to exclude areas in which natural constraints have been 'overcome' by 'human intervention or technical progress.' Drainage and irrigation are offered as examples of overcoming constraints (European Commission, 2019a). Further, NFUS is opposed to the ANC scheme in that it requires 'degressivity,' or a reduction of payments over a threshold of EUR 150,000. Combined, these two factors of 'fine tuning' and 'degressivity' would likely exclude larger, high earning intensive farms from LFASS support, which may be a significant factor underpinning the NFUS opposition to the ANC scheme and the SCF advocacy for it. While the NFUS has expressed the view that the proposed cuts to LFASS payments are 'unacceptable', (NFUS, 2018a), it proposes that reductions are compensated for through a 'top-up' of BPS (i.e. Pillar 1 payments) and 'greening' (i.e. agri-environmental) payments or through enhanced rates under the Scottish Suckler Beef Support

[89] For the two years following Brexit, the UK will continue to adhere to EU regulations related to agriculture. As such, it is required to phase out the LFASS as required at a European level.

Scheme and the Scottish Upland Sheep Support Scheme (*Ibid*.), both of which are production based subsidies under Pillar 1 which provide money per head of animal (Scottish Government, 2018h, Scottish Government, 2018i). As discussed in Chapter 5, these payment schemes direct funds primarily towards larger farming operations. Beef and Sheep support schemes would obviously continue to encourage the production of these livestock in the uplands.

By contrast, the SCF has argued against performance-linked schemes. It argued that the shortfall in LFASS payments must be used for remote and fragile areas, through e.g. 'subsidised ferries and supporting marts' (SCF, 2018c). Given that crofting areas would likely fit the definition of 'fine-tuned' ANCs,[90] it is unlikely that any crofters would fail to receive payments in the shift from LFASS to ANC. The SCF has actively supported capping or limiting payments which could be received by any given farmer, which is understandable given that relatively small-scale producers comprise its membership base. Again, the NFUS is actively opposed to capping payments.

Another area on which SCF and NFUS disagree in relation to LFASS payments is related to 'income foregone.' As discussed in Chapter 5, agri-environmental payments are based on 'income foregone.' For farms which have low or no profitability, 'income foregone' is redundant (Barnes et al., 2011). In effect, more profitable farms receive more benefits while less profitable farms in marginal areas receive lower benefits (*Ibid*.). The SCF stated in its response to the draft post-Brexit policy that LFASS 'should not be based on historic claims or a theoretical 'income foregone' which has been used to increase payments to those with least disadvantage – i.e. on better land and closer to markets' (SCF, 2018c). Instead, the SCF argued, the Scottish Government 'must' ensure that new schemes are bottom up, locally led and support sustainable food production and local food chains (*Ibid*.). By contrast, in 2009 the NFUS memorandum to the UK Parliament stated that payment based on income foregone 'is widely recognised as an effective means to ensure positive contributions to the sustainability, attractiveness and vitality of rural areas' (NFUS, 2009).

In sum, the Scottish Government has continued to support extensive agriculture in Scotland through the LFASS scheme, but the future for further support after 2020 is uncertain. The

[90] While crofting areas had drainage during and following the improvement era, and some drainage infrastructure is still in place as discussed in Chapters 4 and 5, drainage is not actively practiced in crofting areas at present.

NFUS and the SCF both advocate the continuation of income support to producers in less favoured areas but with significant differences in the types of and conditions of such support.

Section 5: Public procurement – alter-hegemony with twin tracks

The Soil Association, a UK organic certification body, has been running a programme to improve catering in public institutions such as schools and hospitals, in events and in visitor attractions such as zoos and National Trust cafes. This 'Food for Life' programme is funded and endorsed by the Scottish Government (Scottish Government, ND). The four principles of the project are, (i) to increase the proportion of food which is prepared on site from 'predominantly unprocessed ingredients…free from controversial additives and artificial trans fats;' (ii) enabling healthy eating to be easier, through 'compliance with national standards and guidelines on food and nutrition;' (iii) 'sourcing environmentally sustainable and ethical food;' and, (iv) 'championing local producers.' Any changes to standards involve a public consultation meeting (Soil Association, 2016).

Similar to organic certifications in the UK, the Food for Life programme requires participants to undergo a certification process and also pay an annual fee for awards and membership (Soil Association, 2019). There is also a membership scheme for suppliers, with members receiving training for award compliance and the opportunity to win new contracts with caterers as a feature of their membership (Soil Association, ND). Businesses and public institutions are certified through a three-tier points-based system of bronze, silver and gold (Soil Association, 2016).

Bronze standards require all meat to comply with UK animal welfare standards; all eggs to be sourced from free range hens; no fish to be sourced from the Marine Stewardship Council 'fish to avoid' list; drinking water to be freely available; menus to provide for dietary and cultural needs and to be seasonal, with in-season produce highlighted. It also requires 75 percent of dishes to be freshly prepared on site from unprocessed ingredients. Silver standards require, in addition to these 'bronze' criteria, caterers to devote a minimum of five percent of their ingredient expenditure on organic food. Gold standards require organic outlay to be 15 percent, and also require that five percent of expenditure must be on free range pork or poultry meat. Points are awarded for sourcing food produced in the caterer's

region, surpassing average UK sourcing levels. Points are also awarded for optional 'healthy eating' actions (Soil Association, 2016).

In sum, the Food for Life programme encourages caterers to provide food which is less processed and to ensure that some of their meat is free range and complies with existing UK welfare standards. It also encourages a modest proportion of food to be sourced from local and/or organic sources in the higher tiers of certification. However, there are no requirements for participating caterers to avoid sourcing local food which is industrially produced, beyond the requirement for free range.[91] Given the small percentage required for organic food, and acknowledging that organic production can also be industrial in nature, as described in Chapter 3, food which is unsustainably produced could make up the bulk (or all for the Bronze category) of the food sourced. Further, there are also no standards governing the prices paid for food to producers. Producers are thus still required to compete with prevailing market prices. As discussed in Chapter 3, this subjects producers to downward pressures which result in divergences from agroecological production practices.

Like organic certification, the programme is voluntary, requiring participating institutions to join of their own volition based on perceived benefits. The marketing of the programme emphasizes improved business and good social return on investment (SA 2019). Given its voluntary nature, even if the standards were higher, it would be likely to generate a 'twin track' of ecological and local food alongside industrially produced commodities. This has been seen in Brazil, where public procurement of agroecological food from family and small-scale farms has supported this farming sector (Swensson, 2015), but where unsustainable commodity crop production also continues (Petersen et al., 2012, Mier and Giménez Cacho, 2016). Altogether, the Food for Life programme conforms to the 'progressive' or 'alter-hegemonic' approach to food sovereignty (Holt Giménez and Shattuck, 2011, Tilzey, 2018: 146, 152), given that it is based on voluntary ethical, local and/or sustainable consumption decisions (Tilzey, 2018: 4).

[91] Free range standards require a certain amount of space and outdoor time per animal and do not relate to the sourcing of feed, antibiotic use or other practices which are associated with industrial production

Section 6: A Good Food Nation – agroecology, Right to Food and democratic oversight

The most significant challenge to the existing food system in Scotland is from the Scottish Food Coalition, which is co-led by Nourish and the RSPB Scotland and includes amongst its 38 members the SCF, the Soil Association and the Land Workers Alliance (LWA). Nourish is a non-profit organisation founded by a pair of new entrant farmers, which is campaigning for food justice in Scotland. RSPB Scotland is the Scottish branch of the Royal Society for the Protection of Birds, a conservation organisation dedicated to the wellbeing of birds and other wildlife, which manages 200 nature reserves across Britain. Other members of the Scottish Food Coalition include Compassion in World Farming, Unison and Unite (food workers unions), Cyrenians (an organisation supporting people who are homeless or on low incomes), Eating Better (an organisation advocating quality, nutritious food from ethical farming), Global Justice Now (an international organisation which has been involved in the food sovereignty movement) and organisations supporting gardening. While the NFUS initially joined the Coalition at its inception, it subsequently withdrew (Interview E, 2018).

In the manifesto-type publication entitled 'Plenty', the Scottish Food Coalition outlines its approach to food:

> 'Food is so much more than just a product or commodity to be traded for profit. Food is fundamental to our survival, health and well-being and is part of our culture and social dynamics. Everyone should have enough nutritious food to eat and our food system should benefit, and be fair, to all of us.' (SFC, 2016: 7)

The Coalition recommends diverting subsidies away from area-based payments and towards the provision of 'public benefits.' Yet the benefits listed here explicitly include *healthy* food and biodiversity (SFC, 2016: 7), not just any type of agricultural production, and is thus a departure from the 'public goods' framing. It explicitly aims to 'establish agroecology as the underlying principle of farming in Scotland' (SFC, 2016: 2). It also stresses the need to 'look beyond exports' to address challenges of food poverty and poor nutrition and critiques the Scottish government and others for 'prioritising exports over providing nutrition for people' (SFC, 2016: 9). It suggests that 'Scotland could…decide that food insecurity has no place in a modern nation with plentiful food production.' Indicating the resources available within Scotland, the report states, 'there's no reason why we shouldn't have plenty of good food for

everyone' (SFC, 2016: 1). Thus, the campaign has a strong ambition to rebuild the links between food production and consumption within Scotland.

The campaign calls for the 'Right to Food' to be realised, through a co-production model, which it describes as active engagement of those who use services with those who provide them (SFC, 2016: 11), which is similar to a participatory approach. Where 'right to food' appears in the document, it is combined with a call for agroecology and structures to achieve more democratic accountability over the food system. Specifically, the Good Food Nation Bill would establish an independent citizen's food commission with statutory duties to oversee the implementation of the Good Food Nation vision, drawing on the Scottish Land Commission as an example and precedent. In combination with these aspects, the call for a 'Right to Food' as described here overcomes the typical limitations of the concept, namely those of neglecting issues of sustainability, control and access to resources (Edelman et al., 2014, Millner, 2016).

The report further notes that food consumption patterns in Scotland are largely based on imports and discusses the environmental and social inequalities stemming from this overreliance on imports. It states that Scotland's high dependency on imports 'make(s) it harder for the world to feed itself' and that 'we are increasingly exporting the environmental impact of what we eat' (SFC, 2016: 27). The Coalition calls for greater policy coherence to address the impacts of food imports, indicating that policies should respect Scotland's status as a 'fair trade nation' (SFC, 2016: 26).

The principles outlined in 'Plenty' signal a significant departure from the existing food system in Scotland, towards an arguably 'radical' or counter-capitalist interpretation of food sovereignty and agroecology. The Scottish Food Coalition proposes that the problems of the food system – food poverty, environmental degradation, exploitation of food workers and over processing of food – are intrinsically interconnected and that it is not possible to address one in isolation. It thus aligns well with a radical food sovereignty narrative, which indicates that food system problems must be addressed in an integrated way. It entails diverting food production away from commodities and towards 'use value', a consideration of the environmental and social impacts of food imports and exports on other localities outside of Scotland, a re-democratisation of food and an integration of ecology in production through the explicit attention to agroecology, including its political aspects (SFC, 2016: 13).

The report does reference some less-than-radical approaches, such as France's legislation on agroecology which has been shown to have introduced a 'skimmed' or limited version of agroecology (Lamine and Dawson, 2018, Ajates Gonzalez et al., 2018) and Brazil's Zero Hunger programme, which, while supporting agroecological producers, has also enabled the continuation of agri-industrial farming as noted above. This could reflect the diversity of membership of the Coalition, which might mirror the 'big tent' politics of the food sovereignty movement more generally (Patel, 2009, see Chapter 3). Indeed, one member of the Food Coalition indicated that the direction of the coalition was more radical than their organisation would have otherwise advocated (Interview B, 2018). Yet even with these more progressive (as opposed to radical) inclusions, the Coalition's manifesto is largely aligned with a radical food sovereignty vision.

One of the main aims of the Scottish Food Coalition has been to change Scottish legislation by introducing a 'Good Food Nation Bill.' After many months of delay, a motion for the introduction of a Good Food Nation Bill was debated in Scottish Parliament in September 2018 (Scottish Parliament, 2018). It places significant emphasis on the economic contributions of Scottish 'food and drink', with a reference to the monetary value of exports, and a claim about the importance of 'geographical indicators' (i.e. provenance). Additions by the SNP recognised the 'reputation and quality of Scottish farmed salmon' yet cited the concerns from the Environment, Climate Change and Land Reform Committee about the environmental impact of salmon farming and indicated that industry regulation must change. The Labour Party specifically introduced text related to the Right to Food and addressing food poverty. Amendments by the Green party advocated that the legislation should commit to measurable targets for 'health and wellbeing, environmental sustainability, local economic prosperity, resilient communities and fairness in the food chain.' It is specifically these Green Party amendments which offer an opportunity for the Good Food Nation Bill to include the elements necessary to prevent Scotland's land from being devoted primarily to commodities, or the Right to Food from being realised primarily through imports and/or through environmentally unsound production.

In December 2018, the Scottish Government released consultation on Good Food Nation proposed legislation (Scottish Government, 2018e). The legislation proposed was that of a 'framework legislation' of general principles and statutory duties which would inform further

legislation related to Scotland's food and agriculture *(Ibid*.: 3). It is based largely on the Right to Food, and mentions that the SG could draw on the 'Voluntary Guidelines to support the Progressive Realisation of the Right to Adequate Food in the Context of National Food Security'[92] (*Ibid*.: 4). Apart from a discussion of the Right to Food, the proposed legislation is minimal in other respects, simply noting five areas for focus: Health, Social Justice, Knowledge, Environmental Sustainability and Prosperity, each of which could be interpreted in a variety of ways. Examples included those related to public procurement, food waste, and access to affordable food, none of which represent a radical approach to transforming the food system. Further, the proposal indicates that the Scottish Government did not 'see value in establishing an independent statutory body for the purpose of overseeing the Good Food Nation policy' (*Ibid.*: 4). Thus, provision for democratic and ongoing accountability for the Good Food Nation Bill may not be achieved.

As with the land reform legislation, it remains to be seen whether legislation will result in an integrated, agroecological agrarian system in Scotland, or whether the ecological and right to food aspects run alongside an export-oriented conventional production approach, as in Brazil and other localities. At the time of writing, therefore, the extent to which enacting the Good Food Nation legislation might facilitate the realisation of more agroecological food systems in Scotland is unclear. The Green Party's engagement with the Good Food Nation Bill appears to be most closely aligned with the principles of food sovereignty and agroecology. As the Green Party does not currently have a majority in the Scottish Parliament, the support of members of the SNP and/or Labour Party would be needed for the Good Food Nation legislation to make significant headway towards food sovereignty and agroecology. However, just as with land reform, it is important also to recognise that substantial change to food and agricultural policies are unlikely to be sweeping and instead, more likely to require several iterations over long periods of time.

Apart from campaigning within the Scottish Food Coalition, member organisations Nourish and the Land Workers Alliance are engaged in their own advocacy work to influence the Scottish agricultural and food systems. This advocacy includes a strong counter-hegemonic component, though also has included alter-hegemonic (progressive) and sub-hegemonic

[92] FAO 2004

(neoproductivist) aspects. Counter-hegemonic advocacy by Nourish, for example, has included arguing for more citizen involvement and transparency in agriculture and food policy making. In the 2014 Good Food Nation consultation, it criticised that food was emphasized as an economic driver rather than as 'a way of developing our communities' (Nourish Scotland, 2014). Nourish has advocated a complete phasing out of Pillar 1 support and proposed that the maximum amount of subsidy received by one producer be reduced to £25k by 2024 (Nourish Scotland, 2018b), thus countering a neomercantile direction of travel. It also noted the tensions between the Scottish Government's goals of export growth, tackling food poverty and improving the Scottish diet as well as lack of explicit prioritisation vis-a-vis these goals. Yet while Nourish has criticised that the products exported by Scotland are not focused on good public health outcomes (particularly in the case of biscuits and whisky), its recommendation to 'diversify our production and capitalise on healthier products' (Nourish Scotland, 2014) does not necessarily undermine capitalism but instead could simply result in a 'healthier' capitalism, just as sub-hegemonic advocacy discussed above might result in a 'greener' capitalism. Nourish has also actively supported public procurement though has done so not as a main objective but as part of a suite of interventions (Nourish Scotland, 2018a). It has explicitly criticised the disconnect between debates about environmental issues and those related to food, food poverty and community health, and has advocated that they need to be brought together (Nourish Scotland, 2014: 5).

The Land Workers Alliance has primarily concentrated its advocacy on the government in Westminster, since its membership base is largely comprised of producers in England and Wales. Yet from 2018 it has begun to increase its membership base in Scotland. As the only UK member of La Via Campesina and as a member of the Scottish Food Coalition it is also worth considering as a potential influencer in Scottish policy. The Land Workers' Alliance has argued against the removal of financial support for active farmers who depend on payments to survive (akin to social income support as above), but also advocates the capping and tapering of payments. Its advocacy of social welfare support is based not on the challenges faced by farmers in remote areas (possibly due to its large membership base in England and Wales) but instead on agroecological and animal welfare practices. It advocates an 'Agroecological Transition' scheme to support all farmers, 'regardless of acreages,' to convert to agroecological farming methods (LWA, 2018: 2). While the LWA supports the idea of public

goods, it only recognises public goods as being delivered through agroecological farming systems. It directly opposes the false dichotomy of productive land and land for environmental conservation and explicitly indicates that public goods should be delivered through agroecological farming systems. It explicitly indicates that without a requirement for any public goods to be delivered through farming *per se*, the public goods model would probably result in some farms intensifying and expanding whilst less commercial farms would likely transition to environmental land management. It recognises that smaller farms which currently do not receive subsidies would probably survive but 'as a marginal niche' (LWA, 2018*:* 1). The LWA also argues that domestic food supply should be prioritised 'over and above' export markets. It advocates low tariff quotas and seasonal tariffs to protect domestic producers from needing to compete with cheaper and/or lower quality imports (LWA, 2018: 11). The LWA's advocacy is thus largely counter-hegemonic, with an element of social welfarism and protectionism.

It is worth noting that the organisations most strongly advocating changes which align with agroecology and food sovereignty principles, Nourish and the LWA, are relatively small organisations. This contrasts with the large memberships of peasant and farmer organisations advocating food sovereignty in countries of e.g. Latin America and even in nearby France. It is therefore unlikely that direct civil action in the form of protests and civil disobedience would lead to changes in Scottish food and farming policy and discourse as they have elsewhere. However, this does not mean that these actors are without power. While the counter-hegemonic organisations in Scotland do not have the level of influence of the sub-hegemonic NFUS, they are not without influence on the state, both directly through their advocacy (as evidenced by their ability to table the Good Food Nation Bill) and indirectly through influencing other environmental and farming related organisations, including the through Scottish Food Coalition, which as mentioned has 38 member organisations, and the Scottish Environment LINK, a similarly sized coalition of organisations working in the environmental sector. However, the extent to which these counter-hegemonic organisations can shift both discourse and policy remains to be seen.

Conclusion

The majority of agriculture and food discourse—including that which is enacted in legislation—could be considered to be a combination of hegemonic and sub-hegemonic,

reflecting the significant influence of both neoliberal actors (e.g. ASDA, LANTRA) and producer organisations (i.e. NFUS, NSA, SCF). Policy and discourse have included a mix of measures which both benefit producers (i.e. social welfarism, including through support for the 'delivery' of public goods) and pressure them to either become more entrepreneurial or abandon farming altogether. It appears the Scottish Government as a capitalist state is attempting to balance 'accumulation' (i.e. GDP growth) and 'legitimacy' (public demands for environmental and social protection) (Jessop, 2014). In this way, the support for producers through payment for public goods (particularly in its reframing to include food), a focus on quality and provenance and social income support for HNV and LFA farming (including more targeted support for ANCs as advocated by SCF) could be considered to be a 'regulation' of the overall drive for productivity and growth (Jessop, 2016). These sub-hegemonic policies or 'concessions' have been supported by organisations advocating more ecological outcomes and the survival of less commercial farms such as SCF and Nourish. However, at the same time they enable a continuation of the capitalist drivers which have eroded both environmental outcomes and the viability of farms, particularly outside those areas designated as 'high nature value.' Neoliberalism in Scottish agriculture and food is thus 'embedded' (Bieler and Morton, 2004, Ruggie, 1982, see Tilzey, 2006 for specific application of 'embedded' neoliberalism to agri-rural policy): policies are able to continue in a liberalising direction so long as government intervention ensures a degree of stability via social income support and environmental measures.

Although HIE and its predecessor the Highlands and Islands Development Board have historically adopted a variety of policy positions (see Alexander, 1985, Hunter, 1991, McEwan-Fujita, 2005), the current promotion of an 'embedded' neoliberal discourse by the HIE is significant given that HIE is one of two organisations responsible for allocating funding for community land trusts. HIE is therefore presumably more likely to provide funding to communities with a dedication to profitable enterprise than those more inclined towards an agroecological but non-competitive food system. The tendency of nearly all community trusts is towards high income generating activities as discussed in Chapter 7.

Producer organisations tend to equate farming with economic and environmental benefits and at times food security. Yet as discussed throughout this chapter and in Chapter 1,

agricultural production remains focused on commodities for export while the majority of agricultural practices are either harmful or questionable in their environmental impacts.

As discussed above, public goods policies have the potential to create a dichotomy of conservation (including through HNV farming) and highly productive intensified farming, but do not support agriculture in which ecology and food are integrated and thus do not further the prospects for agroecology or food sovereignty in Scotland. The notion that support for 'public goods' provision should be restricted to those goods which are a direct outcome of farming systems could help to encourage the integration of ecology and food. However, this does not necessarily address the issue of commercial, or 'exchange value' focus of ecological production which to date has resulted in the production of niche and/or export products for commodity markets.

The Soil Association's public procurement programme could help support nascent ecological producers and/or existing producers which might otherwise struggle to be competitive. Yet the strategy at the moment requires only a very small amount of procured food to be sourced from 'sustainable' producers and uses organic and free range designations as a proxy for 'sustainable,' which as discussed in Chapter 3 are not necessarily equivalent to agroecological. Further, 'local' food could be produced via unsustainable practices. Even with higher standards, this strategy runs a risk of fostering a dual system of agriculture, with ecological, smaller-scale practices running alongside export-oriented and unsustainable agriculture, as is the case in Brazil. This, combined with its voluntary nature, indicates that the programme represents an alter-hegemonic approach which does not present a trajectory towards wider scale transformation of the food system.

The advocacy of the Scottish Food Coalition incorporates a radical shift of discourse away from the primacy of economics and 'exchange values' and towards an integration of food production, ecology, the food needs of people as well as livelihoods. The Coalition has had some influence within the Scottish Government as evidenced by the introduction of the Good Food Nation Bill in parliament. Yet the radical nature of these efforts hinges on the *integration* of agroecology, right to food, democratisation and land reform. Without all three of these aspects, policies will fail to adequately redirect farming away from exchange value and towards use value in a way that is environmentally sound and socially just within and beyond Scottish borders. While the Good Food Nation Bill is still under consideration at the

time of writing, early signs indicate that the more radical aspects such as a consideration of imports and welfare standards at home and abroad may not make it into legislation. This would result in the 'Right to Food' being the main enforceable legislation, with possible limitations in terms of sustainability and social justice. If so, the aims of the counter-hegemonic Scottish Food Coalition may be incorporated into the hegemony as another 'concession' to legitimate capitalist social relations (Jessop, 2016). It remains to be seen whether food reform, like land reform, may become more radical over time. Arguably, for the changes in social property relations necessary to realise the principles of agroecology and food sovereignty, the farming and land reform movements would need to be much more closely linked, and a counter-hegemonic project would need to become more prominent in both.

Chapter 8: Discussion and Conclusion

Introduction

In this dissertation, I have applied a political ecology analysis to agrarian and food system changes in the Scottish Highlands from the pre-capitalist clanship society to the present. This has shown how the advent and continuation of capitalist social property relations has prevented the continuation and (re)emergence of agroecological food systems. The application of Regulation Theory to both the historical and current discourse analysis has indicated how government policies which have appeared to be a departure from capitalist hegemony have arguably led to the continuation of capitalism through 'embedding' and legitimating functions. I have also analysed the positionality of the uplands within Scotland, of Scotland within the UK and the EU, and the EU within a wider context. This has helped to explain the factors which have led to the predominance of livestock farming in the uplands, and the continued governmental support for farming, despite its decoupling from society's food needs and more recently its relatively low economic viability. An analysis of the recent land reform movement in Scotland, coupled with discourse analysis of actors seeking to influence agricultural and food policy has indicated the potentials and limitations of the land reform movement to lead to more agroecological food systems. This has led to insights which could refine and strengthen the counter-hegemonic aims of both the agroecology and food sovereignty movements both within and beyond Scotland.

This concluding chapter is organised around my research questions. First it discusses how existing land use patterns of Scotland came about and the scope for the uplands to better contribute to agroecological food systems, including the potentials and the limitations of current land reform and food advocacy. Second it discusses the potentials and limitations of land reform and food movements in Scotland to contribute to the integration of social and ecological aims in the Scottish uplands through considering its counter-hegemonic prospects. Finally, it discusses the relevance of the insights about divergences from agroecological food systems in the Scottish uplands to debates about the concepts of agroecology and food sovereignty more generally.

Section 1: The political ecology of Scotland's agro-food systems

This thesis has inquired into the potentials for agroecological food systems in the Scottish uplands. In so doing, it has challenged the predominant framing of livestock farming as the ecologically 'predetermined' agricultural activity in the Scottish uplands.

I have shown that in the past, under Gaelic clanship, the Highlands were capable of sustaining a population with a diverse diet, in what could be considered an agroecological food system. Fertility of the soil was sustained and possibly enhanced through rotations, recycling of nutrients (e.g. through manure, thatch, and crop residues) and the addition of organic matter (e.g. through seaweed). A wide diversity of plant and animal foods (including what later came to be considered 'weeds') was maintained and consumed. Plant and animal species were integrated to optimise the productivity of both, and external inputs such as inorganic fertilisers were not used. Agricultural production fulfilled the function of ensuring that everyone in the area had access to a sufficient diet. While this thesis has not espoused clanship as a social property system which current society should necessarily aspire to, it has argued that the agroecological nature of the Highland agrarian system was due in large part to dedication of land use to the food needs of society, rather than to commodity exchange values. The agrarian potential of the Highlands demonstrated in this study of Gaelic clanship tends to indicate that the agrarian potential of other upland land areas in Scotland, and possibly in some areas of Europe, goes beyond their current focus on livestock production.

Through a political ecology analysis of the pre-capitalist society in the Highlands, this thesis has argued that the agroecological nature of the agrarian system in the Highlands became eroded with the shift towards individualised private property or capitalist social property relations. This change in social property relations resulted in the market dependence of landlords, tenants and labourers, and in production becoming focused on commodities, based on market exchange values, rather than food for the societal use values of the resident population. The specific context at the time, including high prices for wool, alkali and herring, combined with rapid industrialisation in the Scottish lowlands and in England, led to the majority of land being tenanted for sheep grazing. The economic viability of sheep grazing was also due in large part to the low labour requirements per area of land, a consideration which is particularly relevant in capitalist social property relations. While there was little incentive to maximise labour productivity in the clanship social property regime, when

resources later became privatised, labour became a 'cost' to be minimised. I have argued that this capitalist system was incongruent with the principles of agroecology. Production and collection of foods declined dramatically in diversity and the population did not have an adequate diet, quantitatively or qualitatively. This was due to the majority of land (and the most productive land) being dedicated to the production of one commodity: sheep. Food production at the margins of the Highlands consisted primarily of potatoes and crops for feeding livestock. The ability of the population to sustain or enhance soil fertility was limited, both in sheep grazing areas, which were overstocked, and on crofts, which were cropped continuously due to their small size. The addition of nutrients and organic matter to the soil in the form of seaweed was also limited by the commercialisation of the kelping industry. The dedication of labour resources to the earning of wages (again, due to the intentionally small sizes of crofts) rather than the cultivation and collection of a diversity of foods, created a food system with very low resilience. When the potato blights of the 1830s and 1846 hit the Highlands, the resulting food scarcity and starvation was attributed to overpopulation, laziness of the Highlanders and a perceived lack of agricultural potential in the vast area of the Highlands, without recognition of the political dynamics which had created such a precarious and unsustainable food system. Such pejorative narratives about the characteristics of the Highlanders have of course been easily exposed and refuted, as Hunter (1976) and other literature have demonstrated. However, narratives about the agricultural limitations of the vast areas of the Highlands appear to have persisted.

When sheep farming declined in profitability from the late 19th century, and in the wake of the romantic movement, many estates shifted their focus to recreation in the form of sport or hunting. While sporting estates represented a land use which was not market dependent when it first began,[93] the establishment and maintenance of such estates was only viable based on the accumulation of wealth from other sources, including the previous profits from sheep farming and the profits from lowland industrial and financial sectors in the case of 'newer' proprietors. These enormous estates were later sustained through land-based 'agricultural' subsidies and through the commercial letting of shooting rights, which facilitated a maintenance of inequality in land ownership and the continued disjuncture

[93] Sporting estates were previously used by their owners and guests, but have since become more commercially oriented

between land use and societal food needs on a significant proportion of Scotland's agricultural land.

The analysis in this dissertation suggests that the establishment of crofting was a 'regulation' of the capitalist mode of accumulation. The Crofters Holdings Act of 1886 and the Land Settlement Act of 1919 (which was primarily applied in crofting areas) quelled the rebellions and resistances occurring in the Highlands relatively successfully, without fully countering the individualisation of private property and the associated market dependence of residents. While grazings continued to be held in 'common' by crofting townships, because they had been perceived as more 'efficient' by the improvers, crofts themselves were allocated and controlled primarily on an individual basis. While the Crofting Commission provides oversight over ensuring that crofts are maintained in 'good' condition, there is no requirement for land to be devoted to agricultural production, much less an agroecological food system. This is understandable in the wider context of the Scottish food system which is primarily based on the purchase of commodity foods from outside Scotland. While crofters' security of tenure limited the 'rights' of landowners to follow market imperatives (i.e. to 'clear' their tenants in order to make way for a new business as had been done in the Clearances), crofters still needed to pay rent and thus still needed to engage in markets for their social reproduction, on and/or off their crofting land. Crofts, which had originally been designed by the improvers to be small in size so as to require people to sell their labour, continue to be defined as small in size, and crofters today continue to be defined as people with pluriactive livelihoods. The latter is sometimes seen as a positive driver of ecological food production, as crofters are not entirely reliant on the production of food for their incomes. It also fits within van der Ploeg's characterisation of peasantness (van der Ploeg, 2018), which he equates with agroecology and food sovereignty (van der Ploeg, 2014). However, the other side is that there remain significant limitations in labour and land resources for food production, as had existed immediately prior to the potato famines. Today, cheap food from outside the area is available for purchase. This eliminates the risk of famine when blight hits the Highlands today, but also reduces incentives to produce food. While less severe than in non-crofting areas, depopulation, agricultural attrition and conversions to holiday homes have occurred in the crofting areas.

The establishment of crofting was also limited in its challenge to the unequal or concentrated control over land. While some landless people were offered land in the establishment of crofting in the 19th century and some crofts were enlarged in the early 20th century, overall the establishment of crofting did little to reverse the inequality of land access and control which had resulted from the previous clearances and removals. Further, the establishment of crofting only included a small area of the Highlands and left a significant area of large estates intact. Again, only nine percent of agricultural holdings comprise 76 percent of agricultural land (SG 2016).

It is arguable that agricultural policies in the 20th century concretised the division between the uplands as livestock grazing areas and the lowlands as dedicated to arable production. The productivism of the war and post-war era relied on a high degree of specialisation and economies of scale. The industrial nature of arable production in the lowlands, while lacking ecological viability in the long term, generated high yields with low labour requirements. The ability to absorb labour into the war effort and later into industrial expansion legitimated the shedding of labour from agriculture. However, this type of industrial arable farming was less feasible in the Highlands: the topography presented a limit to the ability to apply fertilisers and pesticides and harvest crops using the large machinery available at the time. They could, however, feasibly support livestock, particularly with the addition of fertilisers, the establishment of monoculture pastures and the use of winter feeds. These factors expanded the stocking levels possible in the uplands but came with environmental costs.

From a Regulation Theory perspective, the 'post-productivist' and 'multifunctional' framings of agriculture which emerged in the 1980s and were strengthened in the Agenda 2000 reforms of the CAP primarily encouraged a decrease in productivism in areas which were less economically viable, including the 'marginal' uplands. This arguably legitimated and enabled the continuation of productivist policy in the lowlands, and continued support for livestock production in the uplands, such as through livestock headage payments, though with some provisions to allegedly prevent overstocking. The reframing of agriculture as playing a 'multifunctional' role in society also enabled, at the level of the EU, the continuation of neomercantile and social income support to producers in the face of neoliberalising pressures from the WTO and other countries. However, the structure of income support for so-called 'agri-environment' schemes has been 'broad but shallow.' Agricultural payments are at least

an order of magnitude higher per land area for more productive areas. In the 'less favoured' areas, payments have been shown to be insufficient for many farmers and crofters as indicated by a trend of attrition on one hand, and farm and croft amalgamation on the other.

At present, analysis of food and agricultural discourse and its incorporation into policies indicates that neomercantilist, neoproductivist and social income support discourse has been predominant in agricultural policy. These discourses and associated policies have ameliorated and thus legitimated, but not fundamentally altered, a broader neoliberalising trend in food and agriculture. This has included discourse related to the payment for the delivery of public goods, payments for farmers operating in 'less favoured' or 'constrained' areas, and the support for the provision of 'quality' products for markets at home or abroad. Policies based on the concept of 'public goods' have resulted in a further dissociation of agricultural production from societal consumption needs and may be leading to a dichotomy between intensive agricultural production and extensive or 'conservation' land use. The framing of extensive livestock production on upland agricultural land as conserving semi-natural habitats has contributed to a continuation of government support for sheep and cattle production. This support has encouraged the continuation of livestock farming in the uplands despite its lack of economic viability in the capitalist system.

Thus, policies which are ostensibly intended to support better environmental outcomes from farming have failed to support agroecological food systems. Instead, they have enabled the continuation of resource degrading, intensive farming operations in lowland areas and in other parts of the world which feed into the Scottish food supply. While agricultural subsidies have been insufficient to support many farmers, as evidenced by attrition over the past 20 years, overall Scottish agricultural policies have facilitated the continuation of farming practices in the uplands which are largely incongruent with agroecological principles. They have significant shortcomings vis-a-vis meeting societal food needs, recycling nutrients and energy at farm, landscape or regional levels, and integrating crops and livestock to 'optimise interactions and productivity of the total farming system, rather than the yields of individual species' (Gliessman, 1998, Altieri and Toledo, 2010: 588). Instead, sheep and cattle farming operations utilise imported animal feed, entail a transfer of nutrients and energy out of the upland ecosystem and result in limited agri-biodiversity, including through preventing the (re)emergence of ecological mosaics such as woodlands. These environmental limitations

combined with the dissociation of upland farming from societal food needs has arguably contributed in part to the increasing pressure to convert agricultural land in the uplands to forestry and non-agricultural conservation initiatives such as rewilding.

This thesis has recognised the potential for more diverse agricultural production in the uplands. Habitats such as heather moorlands which comprise the Scottish upland 'cultural landscape' represent moments in time of an ecological succession, and as this thesis has shown, were also born of political moments in time. Recognising that the uplands are not ecologically 'predetermined' for livestock grazing as the only viable agricultural practice could potentially lead to better informed choices about the types of habitats and farming systems supported in the uplands by governments, communities and advocates of better food systems.

However, this does not imply the need to convert the entirety of the uplands to food production at the expense of all of the areas of heather, peatland or species-rich grassland ecologies which exist there. Nor does it indicate that creating agroecological food systems would require an expulsion of all livestock from the uplands. Areas of valued biodiversity are not incompatible with food production per se: heather moorlands can sustainably support grazing, particularly by cattle, or by a mix of livestock in the right proportion to ensure sustainable grazings. However, not all land in the uplands comprises cultural or biodiverse habitats: there are, for example, significant areas of degraded and overgrazed pasture in addition to areas of cultivated and chemically treated (i.e. monoculture rye grass) pastures. Both the ecologies of these areas and the wider food system would benefit from agroecological farming, including, for example agroforestry (which can support livestock), the cultivation of fruits, vegetables and even pulses and grains (the latter possible on what was once in-bye land) and the keeping of other animals for food such as ducks and chickens. The integration of trees into agrarian production systems in particular, as in agroforestry, could control bracken, reduce soil erosion, reduce flood risks, sequester carbon, and reduce windspeeds, while also producing livestock, fruits, nuts and timber (Beckert et al., Buck et al., 1998, Teklehaimanot et al., 2002). Further, through producing both livestock feed and shelter,[94] agroforestry might also reduce the uplands' dependence on imported animal feed

[94] Protection from wind in the colder months and provision of shade in the heat reduces the caloric requirement of sheep.

(Tacio, 1993, Buck et al., 1998, Teklehaimanot et al., 2002, Nath et al., 2005). Many of the 'outlier' farms which are practicing farm-level agroecology have integrated trees into their landscapes in addition to producing a wide variety of foods. In sum, there is significant potential for the development of more agroecological food systems in the uplands of Scotland.

Section 2: The potentials of counter-hegemonic movements for agroecology in Scotland

This dissertation analysed the potentials and limitations of the land reform and food movements to give rise to better integration of social and ecological aims in the Scottish uplands in line with concepts of agroecological food systems and food sovereignty. This entailed a detailed analysis of the land reform movement in relation to changing social property relations and facilitating agroecological farming. It also entailed an analysis of counter-hegemonic food systems discourse, in the context of more mainstream or dominant narratives about the roles of and support needed for agriculture in Scotland.

To date, the land reform movement in Scotland has made impressive headway in challenging the underpinnings of capitalism, in both discourse and in practice. In discourse, it has reframed land as a 'common good' which should be used in the 'public interest.' While the Scottish Government has needed to conform with the European Convention of Human Rights which protects the 'peaceful enjoyment of [one's] possessions' (UKSC 2012:15), the Scottish Government has also deemed that this right is not absolute but can be qualified in the 'public interest.' The 'community right to buy' introduced through the Land Reform (Scotland) Act of 2013 and strengthened and expanded through the Community Empowerment (Scotland) Act of 2014 and the Land Reform (Scotland) Act of 2016 has enabled the principle of dedicating land to the 'public interest' to be put into practice. The compulsory purchase of land by communities has represented a significant departure from the hegemony of private individualised ownership and control over land. While it has not been enacted, the 2019 tabling by the SLC of increasing democratic oversight over land use has strong resonance with the aim of the food sovereignty movement of democratising control over resources, and departs significantly from a simple redistribution of land ownership, as advocated in the post-war era by Lipton (1977) and more recently by Griffin et al. (2002). Despite its vastly inequitable pattern of land ownership, discourse in Scotland is beginning to move beyond

issues of scale which tend to drive much of the redistributive land reform agenda (Bernstein, 2004: 197). Land use which is in the public interest with grassroots democratic oversight could possibly shift or begin to shift social relations of production. Yet despite the counter-hegemonic aspects of the Scottish land reform movement, agroecological food systems have yet to be supported through the Scottish land reform efforts.

While one of the aims of the SLC is to increase access to land for those who want to farm, this aim appears to be more driven by an effort to retain populations in rural areas, than to contribute to the ecological and social needs of the Scottish food system. While a higher people-to-land ratio is arguably more congruent with agroecological production, the discourse and policies related to achieving this aim have not necessarily countered individualised ownership of land. Many of the reforms have related to changes in tenancy arrangements without having challenged the individualisation of property rights. While provisions for tenants to purchase their land may be perceived as beneficial for the tenants themselves, they support the creation of more individualised private property.

Another limitation is that community buyouts are limited to residents of the area. With a largely urban population in Scotland, this study has indicated that there is not a straightforward route for new entrants or existing food producers in urban or peri-urban areas to become involved in or benefit from community land acquisition in rural areas, where the majority of agricultural land exists. Further, the land acquisitions themselves entail the transfer of government funds to private landowners based on market prices, which present a possibility of landowners using the funds to purchase land elsewhere. At present, there are also inadequate measures to combat the problems related to prices for agricultural land in Scotland: while land prices are too high for the majority of aspiring new entrants, prices are also comparatively low within the region and allow foreign and/or concentrated ownership, including for commercial and financial investment purposes. This might be countered in the future, with a proposal to limit the purchase of land at least to those investors which are based in the EU, though it is uncertain whether this will be legislated. Even if it were realised, it would not address the overall commodification of land which persists despite the option for communities to hold it collectively. Overall, there is an inability for aspiring food producers to access land and for them to farm without being subject to market dependency and there has yet to be a counter-hegemonic solution to this problem in Scotland.

The community land buyouts have been justified in order to contribute to the realisation of human rights in relation to land and to 'support sustainable economic development, protect and enhance the environment, help achieve social justice and build a fairer society' (SG 2017 p3). While agroecological food systems could fit within this framing, support for agroecology (in its food system definition) had not been a focus of the land reform movement. An analysis of food related discourse has highlighted some of the reasons for this.

First, the predominant policies and discourse in Scotland related to agriculture could be considered to be sub-hegemonic or hegemonic. That is, Scotland's agricultural policy and the majority of actors effective at influencing policies fit within a predominantly neoliberal capitalist model, which has been 'regulated' by social and environmental supports in concessions to neomercantile (i.e. sub-hegemonic) and neoproductivist (i.e. sub and alter-hegemonic) actors. Continued support for farming is framed in terms of agriculture's economic benefits (particularly in the case of the NFUS and the Agriculture Champions commissioned and endorsed by the Scottish Government), employment and population retention benefits (advocated by the NFUS, NSA and SCF), environmental benefits (advocated by SCF and environmental groups), and/or the potential to provide 'quality' food to discerning consumers (advocated by SCF and the NFUS). In Chapter 5 I argue that the reframing of upland agriculture towards environmental and social aims and associated policies has only been possible due to the lack of profitability (i.e. accumulation potential) of upland farming in light of low livestock prices, combined with the ability for Scotland to source its food supplies from elsewhere. While there has been some reframing of food production to be in the 'public benefit,' particularly following the global food crisis of 2008/2009, this reframing has not translated into changes to food or agricultural policy to reorient farming towards society's food and ecological needs. Only recently, with the advocacy of the Scottish Food Coalition has discourse begun to suggest that policies related to the fulfilment of farming, environmental and food-related public health goals be better integrated. However, members of the SFC have also supported policies which conform to neoliberalism, such as farm payments tied to the provision of public goods, and support for high quality or niche production. While the SFC has noted concern about sustainability and social impacts of its imports, this has not yet translated into policy. However, at the time of writing, trade policy is determined at the levels of the UK and the EU, rather than Scotland.

The lack of support for food production which is linked to social dietary needs has resulted in little to no support for agricultural activities which are considered less 'traditional' but which can also be integrated into beneficial ecologies while also contributing to human dietary needs as in agroecology. More diverse farming systems in the uplands might reduce the pressure for other land to produce food intensively at great ecological costs elsewhere. Policies which explicitly consider the linkages between land use and dietary requirements within and outside of Scotland might address this but would not fit within the predominantly neoliberal capitalist regime which governs Scotland, the UK and Europe.

The Good Food Nation Bill, and advocacy undertaken by the SFC, has included the application of the Right to Food in Scotland along with support for more agroecological farming domestically. However, so long as livestock farming is considered the only viable ecological farming activity in the 85 percent of farmland represented by the uplands, people in Scotland will continue to rely heavily on food produced outside of Scotland. This highlights the need for advocates who seek to improve the ecological sustainability of food production to consider practices at an international level, rather than focusing only on farming within their national borders. This must go beyond voluntary consumer decisions and must instead consider wider trade arrangements. Without provisions for ensuring that imported food (including that produced in other parts of the UK) is also produced agroecologically, it is likely that land use in Scotland will continue to represent more of a 'land sparing' approach than a 'land sharing' one at both national and international levels. However, as nascent movements, both the counter-hegemonic food and land movements are continuing to grow and to evolve. They continue to represent significant potential for radical change to food systems in Scotland and beyond in the future.

Section 3: Implications for Agroecology and Food Sovereignty movements

As a final set of concluding remarks, this section discusses the implications of the findings of this study for agroecology and food sovereignty movements more generally. The thesis has argued that capitalist society—defined as a dependence on markets for social reproduction—inherently prevents the realisation of agroecological food systems, particularly in the context

of limited land available for agriculture. It has also illustrated that a partial reduction or amelioration of capitalist social property relations can serve as a legitimation or 'regulation' function and allow for intensive, capitalist farming to continue elsewhere. These findings have two main implications for the food sovereignty and agroecology movements. First, it suggests that food movements need to be more explicit and specific in their counter capitalist orientations. While much of the agroecology literature does challenge capitalism, as discussed in Chapter 3, there is scope for increasing the specificity of capitalist dynamics to go beyond counter industrialist (Altieri and Toledo, 2010: 588, Rosset and Altieri, 1997, Lampkin et al., 2015, Altieri and Rosset, 2017, Giraldo and Rosset, 2018, LVC, 2015), counter 'big capital' (Giraldo and Rosset, 2018) or counter corporate (McMichael, 2014: 934) discourse and strategies. A second implication of this research is that the counter-capitalist aims of food sovereignty (i.e. democratising control over resources, de-commodifying and localising food and democratising trade, as discussed in Chapter 3) are unlikely to transform food systems if implemented in a piecemeal, rather than integrated way. Achievement of one but not all these aims might serve as a 'regulation' of capitalist hegemony. These implications are discussed in turn.

A. Agroecological food systems as incongruent with capitalism

Much of the agroecology discourse frames agroecology as counter to high-input and high tech industrial agriculture, particularly the use of chemical pesticides, inorganic fertilisers, high tech seed varieties, and mechanisation (Altieri and Toledo, 2010: 588, Rosset and Altieri, 1997, Lampkin et al., 2015, Altieri and Rosset, 2017, Giraldo and Rosset, 2018, LVC, 2015). This is understandable given that the current agroecological social movement emerged partly in reaction to the Green Revolution and mounting environmental damage of post-war productivism (Mendez et al., 2013, Wezel, 2009). While I agree that high input agriculture is indeed problematic on both environmental and social (i.e. market dependency) grounds, this dissertation has demonstrated that even relatively low input and low technology farming systems such as livestock grazing can have detrimental environmental impacts when practised within capitalist social property relations. The focus of agroecological farming must therefore go beyond a minimisation of chemical inputs to consider whether ecosystem limits are overridden, which may manifest, for example, in the depletion of soils and biodiversity.

Maintaining biodiversity has been linked in other research to the creation and/or maintenance of landscapes of ecosystem mosaics (Vandermeer and Perfecto, 2010). While an ecological analysis was not conducted in depth on mosaics in Scotland, this dissertation did point to the way in which the diversity of ecological habitats or the diversity of the landscape mosaic was reduced in the uplands in the transition to commercial sheep farming. More research about the role of mosaics in upland ecologies could help to strengthen the case for an integration of diverse farming approaches in upland areas (in Scotland and in Europe) along the lines of a 'land sharing' rather than 'land sparing' approach.

This study also indicated that in order to transition towards agroecological food systems, the question of *how* agriculture is undertaken needs to be coupled with the question of *what* is produced on agricultural land. Fischer et al. (2014) suggest that many of the land sparing and land sharing debates are hindered from the conflation of the production of commodities with the fulfilment of food security. In Scotland, recent discourse has also conflated agricultural production with food security, despite the fact that currently, the majority of agricultural land in Scotland is not dedicated to producing food to feed the human population in Scotland, but is rather focussed on the production of commodities for consumption outside of Scotland, which do not align with the dietary needs of the human population. The famine in the Highlands also demonstrated, along with other famines in the world (Sen, 1986), that food scarcity is not necessarily linked to insufficient agricultural production. I argued that the famine in Highland Scotland resulted in large part from the orientation of production towards commodities. While social welfare and neoliberal trade have eliminated the risk of famine in Scotland in current times, at a global level, I argue that there are significant problems with the orientation of agricultural land towards commodity production. Whether these commodities are produced in ecologically sound ways (e.g. High Nature Value lamb in Scotland or agroecological coffee in Central America) or in industrial or high-input ways (e.g. high input barley in Scotland or genetically modified soya in Brazil), the dedication of significant areas of land towards commodity production results in more land being used for agriculture than necessary. In a world with finite agricultural land, I argue that the inefficiencies of land use stemming from the production of commodity products legitimises efforts to intensify and increase area-based productivity in order to increase global food yields (see e.g. Foresight (2011)), which, when combined with the pressures within capitalism to

maximise labour productivity, leads to the productivist industrial practices which run counter to agroecology.

Thus, to be effective, it is not enough for the agroecology movement to position itself against industrial production processes per se, as these can be the symptoms or effects of capitalist social property relations. Instead, I argue that in order to move beyond pockets or niches of agroecological production, the agroecology and food sovereignty movements must explicitly challenge the capitalist social property relations which drive industrial production through the commodification of agriculture. This thesis has not endeavoured to identify exactly what a counter-capitalist food movement might entail in Scotland or elsewhere. However, it is my belief that improved understandings among food sovereignty and agroecology advocates about what is and is not congruent with capitalism would enable food movements to better develop counter-capitalist strategies themselves, in line with the grassroots nature of the movement.

B. Counter, not 'regulated' hegemony

Throughout this dissertation I have argued that some policies and discourses which might seem to be counter-capitalist or seem to support more ecological food production have been utilised to quell resistance without significantly undermining capitalism (e.g. in the creation of crofting tenure and in the post-war land resettlements) or have been utilised in order to facilitate a neoliberalisation of agriculture (i.e. in the reframing of agriculture as multifunctional at the EU level). These 'regulations' of capitalism might result in pockets of reprieve from market dependencies but do not result in the widespread transformation of food systems which is essential in the face of mounting ecological damage and persistent and growing dietary inadequacies which result from agriculture operating in a capitalist society. I also argued in Chapters 5 and 6 that some policies which might be perceived as beneficial for the environment are actually neoliberal in nature (e.g. in the case of public goods), and are therefore also ineffective in bringing about a change to the capitalist social property relations which undermine the realisation of agroecological food systems. Yet these policies have been supported by producer and environmental organisations alike. This implies that food and environmental advocates (including but not limited to those within the agroecology and food

sovereignty movements) need to be equipped with a greater understanding about the susceptibility of policy 'victories' being co-opted by non-counter hegemonic interests and transformed into 'regulations' which, by fulfilling environmental and social legitimacy functions, serve to perpetuate capitalist social property relations.

The distinction between sub, alter, and counter hegemonic approaches as used in this study could be applied to critically analyse and thus understand the potentials and limitations of advocacy related to food, agriculture, property rights and environmental issues in other contexts. The term, sub-hegemonic (as employed by Tilzey 2006, 2017, 2018) refers to a state interventionist form of capitalism, in which intervention by the state in markets is undertaken to enhance accumulation by nationally-based capital (e.g. in the case of neomercantilism) and/or to reduce social inequalities through a modicum of wealth redistribution (e.g. through social welfare measures). As shown in this study, sub-hegemonic approaches can appear to deviate from a neoliberal policy, but are in fact compatible with, and subordinate to, neoliberalism and do nothing to change the social property relations which are inherent to the capitalist system. Within the land reform movement in Scotland, this included support for small scale private ownership, as part of a 'diversity' of land ownership models. While small scale ownership definitely appears preferable to the highly concentrated land ownership at present, it does not change capitalist social property relations. Another example of sub-hegemonic policy is the aspiration of the land reform movement towards supporting 'sustainable economic development,' a framing which, in a neoliberal context, can lead and has led to the prioritisation of non-food related economic activities on agricultural land. In food and agriculture policy, sub-hegemonic policies notably include social income support payments, including the Less Favoured Area payments and neomercantilist support to producers advocated by the NFUS. The public goods approach to subsidies, however, while not incompatible with a sub-hegemonic approach, is arguably more of an 'embedded' neoliberal approach. A sub-hegemonic version would allocate income support as *entitlement* tied to the *compliance* with environmental management regulations, rather than as an optional (and competitive) way for land owners to earn additional income from the production of an environmental 'good.' As discussed, this facilitates the continuation of intensive farming and further separates the delivery of environmental benefits from the production of food.

Alter-hegemonic approaches, by contrast, appear to break with capitalist social property relations but only within a pocket of society. In other words, they create a system parallel to the hegemonic food regime, in which higher environmental and welfare standards are adhered to, but which are not required, enforced or substantially supported by the state to become the norm rather than the exception. In this study of Scotland, this includes the example of certifying products for provenance to be marketed to the 'discerning' consumer, and the voluntary public procurement scheme. While these initiatives appear to be compatible with the type of peasant agroecological production advocated by van der Ploeg (2008, 2014, 2018), they do not provide a route for all or most food to be produced according to such standards. Instead the voluntary nature of such initiatives leaves the majority of food production subject to the competitive pressures which result in compromises in both production practices and the types of foods (or non-foods, in the case of whisky and biofuels) produced. It also excludes many, if not the majority, of consumers from accessing such foods. Lastly, the ability to engage in alter-hegemonic production is often enabled through having accumulated surplus in other capitalist sectors and is thus not a route which is available to the majority.

Counter-hegemonic approaches are distinguished by their focus on changing social property relations in such a way as to allow for *all* foods to be produced in ecologically sound ways for *all* people, through addressing the competitive imperatives which cause deviations from agroecological principles. In contrast to the public goods approach, which explicitly omits support for food production as a public good, counter-hegemonic approaches bring in mechanisms to prioritise the use value of food production over its exchange value. The Scottish Food Coalition's advocacy that food not be treated simply as a commodity but that food policy needs to address food poverty, environmental degradation, worker welfare and over-processing of food in an integrated way, indicates a call for an orientation of food production towards use value. Its focus on universality, rather than exclusive markets or voluntary standards fits with the egalitarianism of a counter-hegemonic project and distinguishes it from an alter-hegemonic approach. The call for a more democratic accountability in food policy also aligns with a post-capitalist project (Chomsky, 2014) and the 'radical' food sovereignty project.

Another aspect of a counter-hegemonic movement, which was seen to some extent in the Scottish Food Coalition's advocacy, is an approach to trade which applies the principles of agroecology beyond a country's borders. This is necessary for two reasons. First, it is unlikely that Scotland would realise an agroecological food system so long as it is part of a neoliberal (albeit 'embedded') food system, which can rely on food from elsewhere. Second, while La Via Campesina supports the democratisation of trade, I would go further to argue that trade must be based on principles of universal ecological sustainability and social equity, rather than capitalist-driven economic growth (e.g. through 'comparative advantage').

In relation to the first reason, I demonstrated in Chapters 4 and 5 that liberalised trade, as the necessary counterpart of a liberal / neoliberal food system, has enabled Scotland to dedicate the vast majority of its farmland towards production which is disconnected from its population's consumption needs. This has led to the framing and development of political support for Scottish upland agriculture based on its economic (i.e. accumulation) and its environmental and/or social (i.e. legitimation) functions rather than supporting agriculture which contributes to human diets while simultaneously providing ecological benefits. The lack of orientation of Scottish agriculture both towards provisioning the population with accessible and nutritious food, and towards ecological regeneration, as in an agroecological food system, is unlikely to be addressed by a counter-hegemonic land reform movement so long as Scotland can import cheap food from elsewhere.

Regarding the second reason, trade policies must ensure that the adverse ecological and social effects of food production are not simply shifted to other parts of the globe. Otherwise, the principles of agroecology would be significantly limited in scope and would exist alongside unsustainable food production, and could, as this thesis has shown, legitimate and enable such production to continue. An approach to trade which seeks to ensure that the ecological and social resources embodied in food are more fairly, equitably and sustainably generated and distributed would be a dramatic departure from 'nationalistic' or 'populist' food sovereignty (Bernstein, 2014, Kappeler, 2013), which could be considered to be sub-hegemonic and alter-hegemonic, respectively. This approach is also distinct from 'progressive' or alter-hegemonic approaches which attempt to find 'alternative' or 'local' solutions (i.e. through localism or market independence at individual levels) rather than

attempt to change market dependencies at wider societal levels, most particularly through the fiscal and regulatory role of the state (Tilzey, 2019b). This indicates that while there is certainly a role for local action, meaningful change to food systems cannot occur without necessary changes to social property relations and trade policies instituted, by democratic mandate, through the state.

To summarise, this thesis has demonstrated that the realisation of agroecological food systems requires a departure from capitalist social property relations at multiple levels, from eliminating the market dependency of the producer to revising international trade policies to incorporate environmental and social sustainability at a global scale. In the context of finite agricultural land, societal use value must be prioritised over exchange value, a notion which is incongruent with capitalist social property relations. While globally the agroecology and food sovereignty movements have been incorporating some anti-capitalist elements, I suggest that a stronger departure from capitalist social property relations is needed in order to transition from today's unsustainable, inequitable and unjust food systems towards ecologically regenerative (or at least sustainable) food systems which provide healthy food for the human population on an equitable basis.

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Annex 1: Organisations Interviewed

Non-Governmental Organisations *(alphabetically ordered)*
Common Good Food
Community Land Scotland (CLS)
Game and Wildlife Trust
Highland and Island Enterprise (HIE)
James Hutton Institute
Land Workers' Alliance (LWA)
Linking Environment and Farming (LEAF)
National Farmers Union Scotland (NFUS)
National Sheep Association (NSA)
Nourish Scotland
Permaculture Scotland
Royal Society for the Protection of Birds (RSPB) Scotland
Scotland Food and Drink (SFD)
Scotland's Rural College (SRUC)
Scottish Crofting Federation (SCF)
Smallholder Scotland
Soil Association Scotland
Tenant Farmers Association (TFA)
Governmental Organisations
Crofting Commission
Scottish Government Agriculture and Rural Economy
Scottish Land Commission (SLC)
Scottish Natural Heritage (SNH)

Annex 2: Sample Interview Template for Policy Actors

The SCF is the only Scottish organisation which has been affiliated with LVC. How did SCF come to be involved with the food sovereignty / LVC movement? What were the drivers for that? How do you understand food sovereignty?

Would you consider most crofters to be practicing agroecology?

Which crofting practices, if any, deviate from agroecology?

What do you think about what crofters are producing and how that relates to the food needs of society?

Do crofters believe that there are other things that can be produced on the land? If so, why do they predominantly produce sheep? To what extent is crofting produce consumed locally (by households and in local markets)?

There's obviously controversy about rewilding, particularly in the uplands...what is your opinion about rewilding and how does it fit with crofting?

Could you point me towards some crofts that are engaging in 'alternative' food production in an ecological way?

What about crofting communities? What do you think is needed for these examples to become more widespread?

Do you feel like crofting is realising its full potential, or do you feel like things could be done better?

What is SCF's relationship with the government? Do you feel as though SCF is adequately included in policy decision making processes?

Lastly, I saw the Parliamentary motion last week for the Good Food Nation bill to be brought forward. What are your thoughts about the potential for the bill to better integrate food production with public health and ecology?

Is there anyone you would recommend that I speak to about the relationship between crofting and agroecology and food sovereignty?

Annex 3: Sample Interview Template for Producers

Tell me a bit about your farm. How much land do you have?

Do you rent or are you an owner? If renting, would you prefer to own?

How many people work here? If part time, how many hours? How does that change throughout the seasons?

Can you briefly describe the history of the farm? How long have you been here? Are you from here originally? If not, what drew you to this place?

What do you produce on the farm? In what quantities?

How did you decide what to produce?

Who do you sell to? How do you price your products? How do people perceive your produce? What types of people access your products? Do you think any of your products are exclusive (i.e. out of reach to some people)?

What have been your challenges in producing?

What other challenges have you faced as a producer?

To what extent do you consider your farm to be sustainable? Are there any practices you wish could be more ecological?

How does your farm compare to that of your neighbours? What do they produce? How do their production practices differ?

What has motivated you to do things differently? How did you learn about different ways of producing?

Do you receive or have you received any governmental support? If so, what support? Is it enough? What are the conditions attached to it?

Annex 4: Table of Interviews conducted with policy actors

All interviews were conducted with Elise Wach. Due to travel times required within Scotland, the majority of these discourse related interviews were conducted on the phone. Interviews were recorded and transcribed and have been anonymised for presentation in this thesis.

Interview Code	Date Conducted	Phone / In-Person
A	22-Oct-18	Phone
B	08-Nov-18	Phone
C	03-Oct-18	Phone
D	28-Sep-18	Phone
E	25-Oct-18	Phone
F	09-May-18	Phone
G	03-Jan-19	Phone
H	26-Nov-18	In-Person
I	15-Nov-18	Phone
J	19-Nov-18	Phone
K	27-Sep-18	Phone
L	04-Nov-18	Phone
M	22-Nov-18	In-Person
N	03-Oct-18	Phone
O	29/11/2018	Phone
P	25-Nov-19	Phone
Q	28-Nov-18	Phone
R	15-Nov-18	Phone
S	18-Jan-19	Phone
T	03-Dec-18	Phone
U	30-Jan-19	Phone
V	17-Jan-19	Phone
W	25-Apr-19	Phone
X	26-Jul-17	In-Person
Y	27/11/2018	In-Person
Z	18/05/2018	In-Person
ZZ	25/11/2019	Phone

Annex 5: Table of Interviews conducted with producers

All interviews were conducted with Elise Wach. Where possible, these interviews were conducted on farms and crofts and included a tour of the production area. However, where this was not possible, interviews were conducted via phone. Interviews were recorded and transcribed and have been anonymised for presentation in this thesis.

Interview Code	Date Conducted	Phone / In-Person
AA	01-Nov-18	In-Person
BB	02-Nov-18	In-Person
CC	23-Jul-16	In-Person
DD	22-Jan-19	Phone
EE	10-Jan-19	Phone
FF	25-Jul-17	In-Person
GG	03-Nov-18	In-Person
HH	27-Nov-18	Phone
II	23-Nov-18	Phone
JJ	03-Dec-18	Phone
KK	22-Jul-16	In-Person
LL	02-Nov-18	In-Person