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## Food for Naught

The politics of food in agricultural modernization for African smallholder food security

Sjöström, Cheryl

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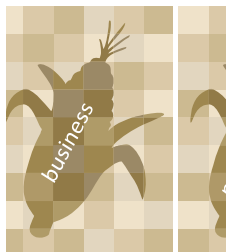
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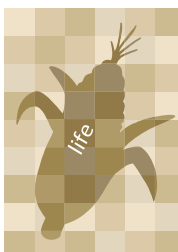
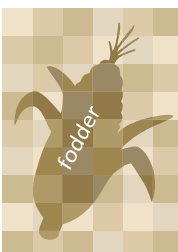
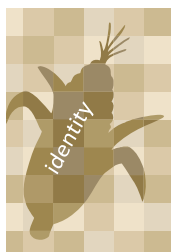
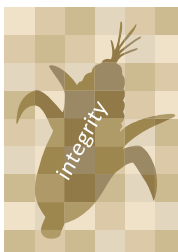
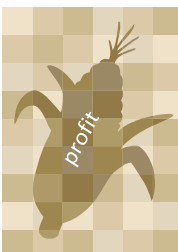
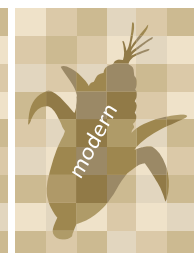
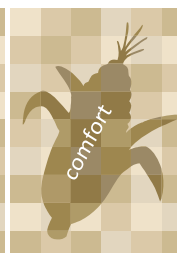
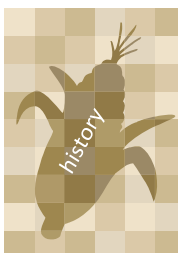
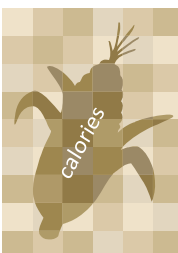
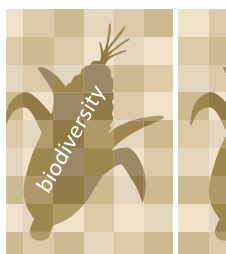


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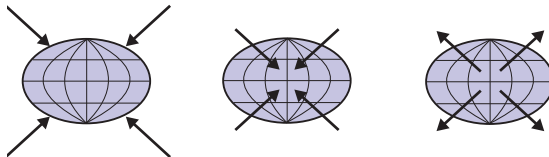
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# Food for Naught

The politics of food in agricultural modernization for  
African smallholder food security

Cheryl Sjöström



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DOCTORAL DISSERTATION

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# Food for Naught

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African smallholder food security

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*To Michael and Susan*





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# Abstract

Why is there hunger in sub-Saharan Africa? What forces drive the global food system? What *is* the global food system? To approach these questions, this study investigates power and politics in food, in its production and in its organization. Proceeding from a critical realist approach, focus of this study is on the challenge of African smallholder food insecurity and how it is presented as part of a dominant discourse of agricultural modernization.

This study identifies a framing of agricultural modernization being used and promoted by influential actors of international development that respectively represent the *inspiration*, the *science* and the *mobilization* of resources for contemporary African agricultural development efforts. A text from each of the actors has been identified and analyzed to draw out common principles of how African smallholder food insecurity is framed and what solutions are subsequently promoted. Based on a food regimes framework of analysis, the tenets of agricultural modernization adhere to a reigning corporate-environmental food regime where the logic of the wider capitalist system guides development objectives and means to achieve those objectives. Several contradictions of this framing are identified in this study regarding how it serves to depoliticize food insecurity. This includes the way it presents specific images of and oversimplified relationships between the environment, the people, the livelihoods, the institutions and the ideologies that are involved in smallholder food production.

This framing of agricultural modernization has since 2005 been applied in the form of an on-the-ground development intervention in sub-Saharan Africa through the Millennium Villages Project (MVP). As part of this critical discourse analysis, fieldwork was conducted at the MVP project site in southern Malawi. Findings from fieldwork indicate ways in which the MVP, either advertently or inadvertently, contributes to the marginalization of smallholders through impacts on power at different levels. This includes the reinforcement of debilitating structures and ideologies in the recipient community whereby certain resources such as technical know-how and

political positioning in society become privileged at the cost of other resources such as local knowledges and autonomy becoming devalued.

In conclusion, this study builds the argument that the inclusion of power when addressing smallholder food insecurity is not only helpful but necessary in order to address this persistent and urgent challenge, due to the multiple and various functions food plays in society.

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I gratefully acknowledge the financial support of the Nordic Africa Institute Travel Grant for conducting fieldwork in Malawi. To Wapulumuka Mulwafu at Chancellor College, University of Malawi, your enduring and facilitative support made all parts of field research possible. Thank you Swabie Mdala for working with me and for being so accommodating during the dog days of fieldwork in November. Thank you Loveness and Chrissy Peaches for inviting me into your home in Mwandama. I am deeply grateful to all of the people I have interviewed in Blantyre, Zomba and Mwandama. Thank you Jason Price and Arnold Wendroff for generously sharing your networks in Zomba with me.

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Although given to the world, this book is dedicated to my eternally loving and supportive parents, Susan and Michael Prindiville.



# Abbreviations

|                 |  |
|-----------------|--|
| ADM             | Archer Daniels Midland Company   |
| AGRA            | Alliance for a Green Revolution in Africa  |
| AIDS            | Acquired Immunodeficiency Syndrome   |
| CAADP           | Comprehensive Africa Agriculture Development Programme                                     |
| CDA             | Critical Discourse Analysis  |
| CO <sub>2</sub> | carbon dioxide   |
| EI              | Earth Institute  |
| FAO             | Food and Agriculture Organization of the United Nations                                    |
| GDP             | gross domestic product   |
| GMO             | genetically modified organism  |
| GRAIN           | Genetic Resources Action International   |
| HIV             | Human Immunodeficiency Virus   |
| IAASTD          | International Assessment of Agricultural Knowledge, Science and Technology for Development |
| IFAD            | International Fund for Agricultural Development  |
| IPCC            | Intergovernmental Panel on Climate Change  |
| IsDB            | Islamic Development Bank   |
| MDG             | Millennium Development Goal  |
| MVP             | Millennium Villages Project  |
| NEPAD           | New Partnership for Africa's Development   |
| NGO             | non-governmental organization  |
| NIC             | newly industrializing country  |
| ODA             | official development assistance  |
| OPV             | open-pollinated variety  |
| PNAS            | Proceedings of the National Academy of Sciences  |
| SFHC            | Soils, Food and Healthy Communities  |
| TA              | traditional authority  |
| TNC             | transnational corporation  |
| WDR08           | World Development Report 2008  |
| WHO             | World Health Organization  |
| WFP             | World Food Programme   |



# Prologue

“[O]ne who sets out to study food only as consumption, production, globalization, embodiment, nutrition, family life or economics is likely to be trapped by the same boundaries that structure the very field that she or he tries to illuminate. Fresh insight into contemporary dilemmas requires research that challenges such sectorial boundaries” (Lien & Nerlich, 2004, p. 8).

Hunger is a real problem in the world today for many people, and its existence can be considered one of the greatest tragedies of humanity. Indeed, it was from my sense of indignation about the existence of widespread hunger that drew me into doing this research in the first place. Yet in the end, hunger is not the problem investigated in this study. The bigger problem, as I argue, is when hunger is presented as existing in many ways separate from the rest of the world. As if hunger were like an island of misery to which one would just need to build a bridge in order to relieve the misery of those people living there. And from this bridge ‘we’ (i.e. the wealthy, developed and modern) could impart resources upon ‘them’ (i.e. the poor, underdeveloped, backwards).

Hunger, often referred to in terms of food insecurity, is a problem for around 11 percent of humanity, mostly small-scale farmers in developing countries, and is most prevalent in sub-Saharan Africa (FAO, 2014b). Globally, hunger is not randomized but is a distant concern for most while being a constant concern for some, highlighting the discrepancies and inequalities that are part and parcel of the global food system as it functions today. Why do these problems exist? What *is* the global food system and what forces within it allow for perpetual hunger, especially in Africa, to be so persistent? These are the kinds of questions informing and motivating this research.

Without denying or reifying the situation of smallholder food insecurity, *the aim of this research is to identify, analyze and problematize a dominant conceptualization of the problems of and solutions to smallholder food insecurity through the lens of power.* It takes its theoretical grounding in the

political nature of food and the subjective nature of framing to highlight the complexity of smallholder livelihoods and the challenges of food security. The substance in focus is a dominant framing of agricultural modernization as it exists in the form of texts, social interactions and on-the-ground interventions.

As a project within the interdisciplinary field of sustainability science, the *framings* and *relations* of contemporary dilemmas of smallholder food insecurity and associated environmental stress have become key points of analysis, more so than the dilemmas themselves, in an effort to bring about new insights. Additionally, this study offers a methodological contribution by adopting and applying methods that have only to a limited degree been used within food studies, shifting focus more towards the analysis of discourses about food than to material flows of food as part of the global food system.

To invite the reader to ‘see the forest through the trees’ of how I approach this research, the following section outlines the remainder of the book with each part contributing to an overall objective of increasing awareness about the political dimensions of food and the power dimensions of discourse that are at play in the manifestations of problems in the global food system, particularly that of African smallholder food insecurity. It is a contribution to an ongoing debate about the role of agriculture in development, offering an understanding of how seemingly value-free solutions are also political in the ways they serve to recreate or transform power structures in society. It also speaks to an ongoing debate (cf. Le Billon et al., 2014) concerning the implications of speaking in terms of a ‘global food crisis’ on the legitimization of political agendas.

The following seven chapters take us stepwise through this critical research, critical in the sense of questioning taken-for-granted notions about the world and recognizing the role of power in social inequalities with an eye on the desire for change. Using techniques for designing qualitative research as proposed by Yin (2014) and in line with Sayer’s (2000) suggestions from critical-realist methodology, this thesis moves between *abstract* concepts and *concrete* social phenomena, as well as between *specific* and *general* applications of those concepts and phenomena.

Chapter 1 lays out some of the main concepts I evoke and how they are used in the context of this study. It argues for maintaining a political understanding of food beyond its basic service for survival as well as provides a context from which the research develops. It is in this first chapter that I introduce the features and multiple interpretations of food, of the global

food system, of food insecurity and finally of those people considered to be food insecure.

Chapter 2 begins with what might seem the most distant and complex element of this research due to its high level of abstraction. It is here that I account for concepts that are integral to what unfolds throughout the rest of the text, both in terms of the research process and the research content. As a sustainability science research endeavor I adopt a critical realist philosophy of science and research approach influenced by political ecology. In chapter 2 I also elaborate on the specific tools used in conducting analysis, namely Critical Discourse Analysis, frame analysis, and Extended Case Method.

The unifying concept given salience to throughout the thesis is power, examining the key and often tacit role power plays in society and particularly food. By tying these building blocks from chapters 1 and 2 together and applying them to a study of food insecurity, this work brings discussions of power to the forefront of how smallholder food insecurity is framed. However, as power itself is a highly contested concept, chapter 2 also elaborates on some of its main interpretations, including on power in the context of smallholder farming.

Chapter 3 identifies, describes and locates tenets of a dominant framing of agricultural modernization employed in the context of African smallholder food insecurity, by way of text analysis. My corpus of texts includes the 2008 World Development Report of the World Bank, a peer-reviewed article outlining the framework of the Millennium Villages Project led by scholars from the Earth Institute, and a speech given at the World Economic Forum in 2007 at the launch of the Alliance for a Green Revolution in Africa (AGRA) by its then chairman Kofi Annan. In chapter 3 I present the logic that was used in choosing these three particular actors and texts, how they interact, and how they influence knowledge production about the challenges being faced by African smallholders. Together they represent integral pieces of a dominant discourse on smallholder agricultural modernization.

Chapter 4 then historicizes this framing of agricultural modernization, looking at the relations and structures from which it has developed. The chapter continues by highlighting contradictions that emerge from this currently dominant framing of agricultural modernization based on how it presents relationships between people, places and the environment, using political ecology as a lens.

Having a framing of agricultural modernization from chapter 3, plus an analysis of its contradictions in chapter 4, chapters 5 and 6 delve into an



application of agricultural modernization through a development aid project by one of the three actors investigated, namely, the Earth Institute in their Millennium Villages Project (MVP). For this ethnographic-inspired research, chapter 5 sets the scene for fieldwork in Malawi where special attention has been paid to processes by which the project influences relations of power either actively as part of setting the agenda or passively through indifference towards ongoing processes in the recipient community. Chapter 6 presents main findings from fieldwork whereby the application of a dominant framing of agricultural modernization serves to obscure and strengthen asymmetrical power relations in rural development, despite the material improvements that could be found in the recipient village from the ten years of interventionist investments.

Chapter 7 sums it all up and offers the potentially disenchanted reader a glimpse of alternative framings that appear to bode well for the future of food. Today we can witness the development and growth of alternative discourses around food, food security and valuation systems of agriculture, whereby the role of power is recognized and embraced as part of social movements seeking the liberation and autonomy of smallholders and the valuation of the biophysical basis of food production as a means to repair and rebuild the food system.

A key finding of this research is that smallholder food insecurity is simultaneously an actual, material problem and a manifestation of the politics and power that flow throughout the global food system. Another key finding is that matters of asymmetrical power relations are important to take into account when dealing with smallholder food insecurity. Not only for intrinsic reasons – that is, equality for the sake of equality – but out of necessity in order to identify root causes and drivers of, and potential solutions to, the challenge of food insecurity.

# Chapter 1: Framing food

## 1.1 Introduction

This research project is about relations of power in the global food system. And although it does concern food, rather than being about food in its familiar, palatable sense, this is a study of human relations in connection to food where some of those relations will be unpacked and analyzed. My aim is to highlight and problematize the role that power plays in the structure and dynamics of the food system today, especially in instances where problems in the system emerge that have negative consequences for people and for the environment. In order to do this, I analyze a dominant framing of agricultural modernization that is mobilized to address food insecurity of smallholder farmers in rural sub-Saharan Africa.

Motivation for embarking on a project like this comes from the large and growing discrepancies within the global food system whereby many people living today are unable to meet their basic food needs, as well as from a desire to intellectually confront the structures and forces that allow for such discrepancies to exist in the first place. As overarching research questions, I ask ‘What forces drive the global food system?’ and ‘Why is there persistent hunger in sub-Saharan Africa?’, which in turn demand the question ‘What *is* the global food system?’. In this study I make two parallel propositions to investigate these questions by, namely that (1) power is an integral dimension of what food *is* and equally integral to understanding and ultimately addressing the challenge of smallholder food insecurity, and that (2) agricultural modernization, as a currently privileged discourse, frames problems and solutions to smallholder food insecurity in ways that serve to strengthen and reproduce current power structures in the global food system that support the phenomena of discrepancies and food insecurity.

In this chapter, reasons for having these two propositions will be presented, starting with identifying the multiple dimensions of what food is, and how food is intimately interlinked with nature and society. Following

that, we go through a few attempts at identifying what the global food system is, what food security is and how food insecurity is identified. The chapter ends with a brief self-reflective presentation my journey as a researcher in creating this final project.

## 1.2 What is food?

What will be presented in this chapter serves to define the way I conceptualize the global food system and the processes occurring within it in the process of carrying out this study. In this context, the global food system is an arena where asymmetries and inequalities are exposed and experienced today by billions of people in such a variety of ways. Food as a commodity has obviously strong attributes of materiality – humans need to eat it to survive; it is harnessed from earth, sun and water through an intentional act of labor; it grows, matures, breaks down and decomposes; and it becomes part of our physical bodies. However, as important as its material functions are food's non-material attributes – functioning as an access point to social spheres; contributing to the building of identities and to distinguishing people according to socially-constructed hierarchies, moral discipline, political engagement and the like; being at once a source of personal comfort and struggle; and functioning as a mechanism of control, both day-to-day and in a world-historical sense of the rising and falling of centers of power. Each of these dimensions of food will be addressed accordingly in the following sections.

### 1.2.1 Food as surviving, living, dying

Food is such a basic, physiological need for survival, making regular access to it a fundamental part of life regardless of a person's age, gender, race, religion, class or any other social distinction. It is estimated that hunger kills more people each year than HIV, malaria and tuberculosis combined and women and children are the most susceptible to lacking basic nutritional requirements the human body needs (FAO, 2014b; WFP, 2015a). This to me is a tragedy of humankind when the systematic loss of lives due to malnutrition, starvation and famine occurs when in the aggregate there is more than enough food to 'feed the world'.

Yet part of what keeps this seemingly simple problem from being black and white and offering a simple solution has to do with the human need for food being relatively elastic, where we see the subtle yet important difference between living and surviving. The consumption of food on a daily basis is not a matter of life or death as it is with, say, oxygen or water. Even when food consumption is erratic or deficient, the human body can survive for years and even decades without getting enough food (quantity) or enough of the right kinds of foods (quality) in order to sustain a healthy life. Below we can consider some current challenges whereby food quantity and/or quality have a direct negative impact on human health and wellbeing.

### *Micronutrient deficiency*

More than two billion people today experience what some call ‘hidden hunger’, or deficiencies in essential micronutrients such as vitamin-A, zinc, iron and iodine that the body needs in small amounts (Biesalski & O’Mealy, 2013; FAO, 2013b). Micronutrient deficiency is a problem with complex causal factors but it is correlated largely in part to the lack of a varied diet (B. Thompson & Amoroso, 2011). With occasionally long lag times before health impacts are observed – or perhaps never showing visible symptoms at all – detecting deficiencies is tricky (Biesalski & O’Mealy, 2013). Hidden hunger is most commonly experienced by women and children in poorer countries (Fan & Pandya-Lorch, 2012), where iron deficiency anemia causes one out of five maternal deaths and vitamin-A deficiency puts the survival of one out of three children at risk (Micronutrient Initiative, 2009); this, even where hunger in the usual sense is virtually invisible.

### *Erratic consumption patterns*

Erratic food consumption arises from periodic shortages of food whether cyclical, seasonal or transitory (FAO, 2008c). Here, minimum food requirements cannot be met as a result of inadequate *availability* of sufficient food, lack of *access* to resources, *instability* from short-term shocks and fluctuations or a lacking capacity to *utilize* what food is there (Schmidhuber & Tubiello, 2007). Most food products are grown on a seasonal basis but our need for it is constant. So as long as human’s digestive system and nutrient uptake processes function the way they do, we are dependent on a regular inflow of food into the body, and any break in that flow will affect a person’s nutritional status. For example, as consequence of the surge in global food prices in 2005-2008 more than 100 million people who had previously been

making ends meet abruptly found themselves in a state of poverty and food insecurity (Ivanic & Martin, 2008), demonstrating our vulnerability to the constant need to feed.

### *Low quality calories*

Both the quantity and quality of healthy food are at risk in areas referred to as 'food deserts', a term used to describe poor urban areas where affordable, healthy food is not available (Cummins & Macintyre, 2002). Some rather refer to food deserts as *income* deserts, as low-income has been seen to be the driving factor for food suppliers to locate or dislocate in certain areas (cf. Powell et al., 2007). This type of development promotes the creation of obesogenic environments that have been shown to strongly influence food consumption and mobility patterns (D. M. Smith & Cummins, 2009) and affect the health of residents of these areas, although current literature on the degree of influence is still limited and has produced rather mixed results (Cummins & Macintyre, 2006).

Regardless of the degree of influence by the built environment, such as with food deserts, lower- and middle-income countries of Asia, Africa, the Middle East and Latin America have indeed experienced a nutrition transition at a speed unlike ever experienced before in any part of the world (Cawley, 2011; Popkin, 2004). The pattern of change is primarily from that of a diet with low variety including some starchy staples and some fruits, vegetables and proteins (referred to as the 'receding famine' pattern) to that of a diet including more fats, sugars, processed foods, and less fiber (referred to as the 'degenerative diseases' pattern) (Popkin, 2006). Evidence of this transition has been found even in pre-industrial agrarian societies, such as in rural Tanzania (Keding et al., 2011), which demonstrates that the modern phenomena of changing diets is not just a process occurring in urban areas but in societies throughout the world.

Low quality food is an important factor when considering recent rises in overweight and obesity. Today there are more than 1.5 billion adults aged 20 and over that are considered overweight to the risk of their own health (FAO, 2012a). Overweight and obesity have grown in tact with trends such as growing sedentariness and dietary patterns that are increasingly high in fat, salt and sugars but low in vitamins, minerals and other micronutrients (WHO, 2015) and trends such as increasing exposure to industrial pollutants that have obesogenic effects (Grün & Blumberg, 2009). It has been calculated that the majority of the world's population live in countries where overweight

and obesity cause more deaths than underweight (WHO, 2015) – adding to the so-called ‘double burden of malnutrition’ where under- and over-nutrition exist side by side (FAO, 2012a), even within the same household, even within the same body.

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Bringing all of these different emergent challenges related to food together, we can see that they are different manifestations of a rather similar problem – that being an imbalance between what is consumed and what the body needs to be healthy. And rather than framing these weight-related health changes as a problem solely at the level of the individual person, we might also consider environmental and societal changes happening simultaneously. For example, in areas where overweight is prevalent we see concurrent trends of limited provisions in the health and transportation sectors, in urban planning and in education (WHO, 2015).

These linkages found between overweight and lacking societal services mirror quite closely the linkages found between undernourishment and a general deprivation in public service provisions such as those of health care, infrastructure and education (FAO, 2012a; SIWI, 2012). Children who are overweight *or* undernourished share similar fates of increased risk of premature death and disability, degenerative and chronic diseases, certain cancers, psychological effects and an increased risk of adult obesity (Delisle, 2002in ; FAO, 2006; WHO, 2015).

What this rather grim overview of current challenges existing in the global food system offers is a way of understanding food not only from its existential purpose – survive or die – but also how food serves as a source of nutrition, health and wellbeing that can support or inhibit the kind of life a person can lead – survive or *live*.

### **1.2.2 Food as converted energy**

Survive, live, die – this has to do with the primitive properties of food as sustenance. Today and for the past ten thousand years, food is by and large not a service provided freely in the wild but instead is wrought through human activity, harnessed from the earth and converted into an energy form palatable to humans. If we consider basic inputs necessary for food production – soil, water, seeds, nutrients – we see that the production of food

has globally profound implications on all of these. Researchers from the University of Wisconsin, Madison have calculated that an area the size of South America (ca 15 million km<sup>2</sup>) is being used to grow crops and an area the size of Africa (ca 32 million km<sup>2</sup>) is being used for pasture and rangeland (Leff et al., 2004; Ramankutty & Foley, 1998), resulting in the usage of in total around 38 percent of the Earth's terrestrial land surface for agriculture (Foley et al., 2011). Fish and fishery products for consumption are continuously on the rise with a world per capita food fish supply at an estimated 18.6 kg in 2011 (as compared to 9.9 kg in the 1960s), with aquaculture becoming more and more significant during a time of declining global marine catch (FAO, 2012b).

There's nothing particularly 'natural' about agriculture. For crop plants to grow and mature, soil fertility and plant nutrition must be managed and seeds developed through a variety of plant breeding techniques. These processes have historically been managed in a wide variety of ways, from slash-and-burn and hybridization to more modern management schemes including the use of fertilizers and genetic modification.

With all of the effort and energy placed on the craft of producing food, it is remarkable that roughly one-third of food produced for human consumption is lost or wasted at various stages of the food supply chain, equal to about 1.3 billion tons per year, including rough estimates of discards of marine bycatch (Gustavson et al., 2011). With the agricultural sector accounting for 70 percent of global water usage (FAO, 2011a) and 10-12 percent total annual non-CO<sub>2</sub> emissions (P. Smith et al., 2014) the energy, land and water used – and wasted – in the global food system is significant beyond just that of food production, but has implications for society and how we live in the inherently limited space and with the resources available to us.

### **1.2.3 Food as livelihood**

I would like to expand the context of food at this point from 'food for life' to 'farming for a living'. Another property of food thus is the utilization of human actions to convert energy from the earth through an intentional act of labor, in other words, food cultivation or farming.

Although lack of standard definitions makes estimations difficult (Lipton, 2005), farming is important for the lives and livelihoods of billions of people today and is particularly necessary in regions where the agricultural sector remains substantial, employs much of the labor force and accounts for

a high percentage of GDP (Mahmoud, 2007). To conceptualize this role of food as a livelihood in another way, if smallholder farmers had a single employer it would be by far the largest in the world, with an estimated 2.5 *billion* people living and working full- or part-time with smallholder agriculture (IFAD, 2013). Not even Wal-Mart as the largest non-governmental employer in the world comes close, employing 2.1 *million* people globally (Alexander, 2012).

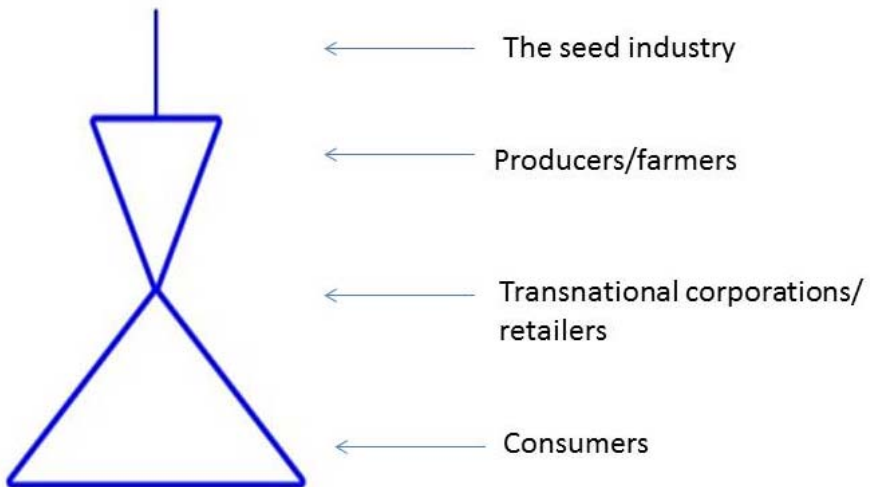
Various stress factors that particularly impact those with livelihoods in smallholder farming have been identified by a number of scholars and compiled in the work of John Morton (cf. Table 1 in Morton, 2007). These stressors include both non-climate-related stressors and those associated directly with climate change, the latter which will have impacts on smallholders that will continue to be “locally specific and hard to predict” (ibid., p. 19684) meaning that the level and kinds of vulnerability faced by smallholders is anticipated to increase and add complexity to an already complex livelihood. Particularly heat stress and heat waves are very likely to be more frequent with negative yield impacts (Olsson, Chadee, et al., 2014). Other stressors common to smallholder livelihoods include sickness and ill health such as malaria, tuberculosis and HIV/AIDS that put added pressure on rural livelihoods that are dependent on labor power. Besides its direct impact on health, HIV has also multiple social, economic and political implications on agrarian livelihoods and farming communities by impacting supplies of labor, assets and patterns of farming (Edström et al., 2007; J. Thompson & Scoones, 2009).

The intricate role of women in food production is explored further in chapter 2, but the gendered role of women in agriculture and household nutrition adds an important component to agrarian livelihoods through women’s paid and non-paid labor of different farming activities. It is well established that women are marginalized in many agrarian societies when it comes to access to and control of land, labor and decision-making processes, and that gender divisions have so far been marginalized in discussions of agrarian reforms despite all of the potential benefits of its inclusion (Jacobs, 2013).



### 1.2.4 Food as business

While the majority of the population is busy producing food, a small group of corporations is making a business of the food system. Transnational corporations (TNCs), rather than peripheral actors, are central to both the current structure of the global food system and the dynamics of how it functions. And there are not that many of them. In 2004 ten TNCs within the agro-input industry, all based in Northern countries, controlled 84 percent of the global agro-chemical market (Weis, 2007). Concerning trade, four TNCs, the so-called ABCD traders of ADM, Bunge, Cargill and (Louis) Dreyfus, currently control between 75 and 90 percent of the global trade of grain (F. Lawrence, 2011). The significance of this corporate concentration is subject of analysis for political scientists, sociologists, political ecologists and others in regards to norms, rules and the impacts of configurations of power and market domination on society and the environment (Clapp & Fuchs, 2009).



**Figure 1.1 Hourglass shape of the global food system**

With these trends of concentration, the food system over the past decades has taken on the shape of an hourglass (see figure 1.1), where at one end one finds billions of producers and at the other, billions of consumers. At the narrow point in the middle there are a handful of TNC food processors, manufacturers and retailers controlling the flow of food products and taking

huge winning margins in the process (Carolan, 2012; J. Thompson & Scoones, 2009; van der Ploeg, 2010). Considering processes of ‘supermarketization’, the rapid diffusion of supermarkets occurring around the world since the 1990s influences not only consumers through the consolidation of retailers but it also has impacts vertically along the food system for large-scale food processors, traders, rural processors and smallholder farmers (Reardon, 2007). Carolan further identifies the consolidation of the seed industry at the top of the hourglass, leading to a food system which appears to be “hanging by a thread” (2012).

### **1.2.5 Food as identity, culture, history**

We can of course consider many more distinctions of what food is besides its growing and eating practices. Where beliefs are involved with what is eaten we can find other relations – whether cultural, spiritual, political or otherwise – manifesting themselves through the medium of food. For example, holidays that are partially defined by their relation to food that is consumed, shared, abstained from, revered, offered, sown, harvested, etc. exemplifies another value of food as part of the human experience, as part of a collective identity.

What one does or does not eat contributes also to the building of personal identity and has even functioned as a crude proxy for other personal attributes as varied as education level, community engagement, societal status, political resistance, parenting competences, ‘goodness’, self-esteem, self-control, or moral devotion (Coveney, 2006; Guthman, 2008; Lien & Nerlich, 2004; Lupton, 1998). Our multiple relationships to food include the construction of national and local identities (i.e., through what is grown or eaten ‘here’ vs ‘there’), engagement in international relations (i.e., through trade and marketing systems) and the platform through which corporate interests can be realized (i.e., through the commodification of foodstuffs). In other words, food’s influence on collective and individual identity building highlights the more socio-cultural dimensions of what food is, well beyond its role in sustenance.

Food is also historical. As Lien and Nerlich put it, what “appears to be a carrot or a piece of meat is indeed a product with a history and implications more complex and profound than most of us even want to think about” (2004, p. 5). One could interpret the word history in this statement in a number of different ways, and I offer three. Firstly, history may be in reference to conditions under which a particular food item has come to be produced,

transported and ended up at someone's dinner table. This history is in most cases no meager venture, with the distance travelled by food having on average been on the rise, and by 2001 the tonnage of food shipped between countries quadrupled in a time when population doubled (Halweil, 2002). This increase in 'food-miles' (Lang, 1999) has many implications, including the imposition of wider distances between producers and consumers geographically as well as culturally (Iles, 2005).

Secondly, the history of food can be understood in a longer duration than that of a specific food item as an intricate part of the political economy of human history, supporting the positioning of world powers. The transfer of energy in various forms such as food, labor power or fuel into centers of civilization has been considered a major underlying driver for capital accumulation throughout history (Friedmann, 1987; Hornborg, 1998; McMichael, 2005; Moore, 2011) and has led to a situation today of an unequal ecological exchange in terms of energy and materials flowing 'inward' and environmental impacts being displaced 'outward' (Hornborg et al., 2006). We will look closer at this historical pattern of shifting food regimes in chapter 3.

Finally, food becomes historical also in a biophysical sense with the breaking down of carbohydrates, proteins and fats that become the substance making up our human bodies, shaping us into who we are in a very material way (Lien & Nerlich, 2004; Lupton, 1998). Food choices therefore tie the processes of building a physical body to subjective interpretations of the self, constructing identities and individual subjectivities (Lupton, 1998). There is an immense power to be found, and therefore space for exploitation, in a person's intimate relation to food and how this relationship influences identity and well-being. For example, media images of ideal body types has been shown to bring about concerns in women about body images and eating behaviors (Grabe et al., 2008). Later in chapter 5 we will see how one food product has become part of the identity of an entire country where the phrase 'maize is life' has a particularly important meaning.

Body images, eating disorders, food addictions, sources of comfort or belonging and memories of our past – these and other contemporary debates such as those revolving around GMOs and the power held by a small number of food companies require that "our notion of the politics of food is expanded to fields and arenas not traditionally thought of as 'political'" (Lien & Nerlich, 2004, p. 2), and perhaps not traditionally thought of as having at all

to do with food, but where food can function as a lens for understanding wider social forces (Watson & Caldwell, 2005).

To conclude, rather than limiting our conception of food to that of sustenance, a more nuanced picture of food appears when we bring onboard the complexity of food as an intricate part of social relations, cultures and identities. This extended conceptualization of food opens up for an exploration of new areas where we can find the ‘politicization of food’ (Lien & Nerlich, 2004) as we will now visit in the following section and how these relational elements of food become arenas for contestation and debate when looking at challenge that emerge in the global food system.

### **1.2.6 Food as political**

“...to define some groups’ knowledge as the most legitimate, as official knowledge, while other groups’ knowledge hardly sees the light of day, says something extremely important about who has power in society” (Apple, 1993, p. 222).

The way food is talked about, the issues we see emerging about food and survival that are focused on, and the forums for offering solutions are all selective, created processes, as objective or obvious as these processes may appear to be. Therefore, taking ourselves even another step further away from food’s material dimensions we can focus on the *political* and relational nature of food.

But what do I mean by political? Political in the context of this research refers not primarily to politics or policies of state bureaucracy, but more generally to spaces where humans interact and thereby where power, explicitly or implicitly, is involved. I therefore evoke the concept political to imply “the practices and processes through which power, in its multiple forms, is wielded and negotiated”, including “not only formal politics but all kinds of everyday interactions as well” where the political is manifested “in the strategic use of position, knowledge, or representations to gain differential access to resources” (Paulson & Gezon, 2005, p. 28). This broad approach to politics is often adopted within political ecology (Robbins, 2012) where power and politics are seen to exist in all social processes. We shall get more in depth with both power and political ecology and how I make use of them in this research in chapter 2.

Relations of power can manifest in a multitude of ways. For the purpose of this research I focus on manifestations of power through communication and more specifically, through discourse. For example, terms associated with food such as productivity potential, food pyramid, modern agriculture, food insecurity and obesity are more than just 'natural' concepts, devoid of value or influence in how they are defined. Rather, these categories are contextual, formed by judgments made in certain times and certain places by certain actors. They are products of human constructions, even when grounded in conditions independent of our understanding, and are ideas that vary over time and space and are in constant flux (Cloeke & Johnston, 2005). The construction of categories and their meanings, in other words *framing*, provides the opportunity to decide how things are calculated or valued, what is to be included or excluded, and whose knowledge counts.

Within food studies, this framing of knowledge makes the politics of food also a politics of 'silence and exposure' where some concepts and ideologies are highlighted while others become sidelined (Lien & Nerlich, 2004; Nestle, 2002). "The politics of food is also a 'politics of discourse' in which the power to set the public agenda, to frame the debate, and to silence opponents become a key resource" (Lien & Nerlich, 2004, p. 10). Within the global food system, the way problems are framed has the potential to support existing social structures of domination and oppression, particularly when problems are presented as apolitical, natural facts. As a generic example of problem-framing outside of food, if vehicle congestion on a road is framed as being a problem of too small of a road rather than a problem of too many single-occupancy vehicles on the road, the solutions (e. g. to build bigger roads) will be of a different character than if the latter problem framing had been used (e.g. to promote collective transportation), as will who has the power to influence that debate and endorse solutions.

Turning back to an example within the global food system, where obesity is framed primarily as a problem of the individual's capacity (or lack thereof) to control what they eat rather than a problem of inhibiting social structures by way of class, income-level or built environment, the problem shifts from the structures to individuals as does the agenda for how to respond to the problem and who has a say in the matter. Or when food insecurity is framed as a problem of the technical capacity of farmers to produce more food, the legitimacy of solutions and actors will follow that problem-framing accordingly.

## 1.3 What is the global food system?

Using terms of systems theory, the global food system can be defined as a complex system, meaning that it lacks a succinct definition but is purposive (i.e. with a definable objection or function) and contains a large number of mutually interacting parts (Bar-Yam, 1997).

Several scholars have attempted to pin down and examine the global food system in order to identify how it functions, which we shall briefly review here. One prominent example of a food system model can be found in Sobal et al (1998) in their integrated conceptual model of what they call the ‘food and nutrition system’ using a systems theory perspective. The resulting model is a helpful concretization of a global food system but not exhaustive due to its lack of explicit recognition of dimensions of power within the boundaries of the system. Polly Ericksen (2008) takes this framing task a step further in providing a more extensive comprehension of a food system that includes socio-political contexts both as drivers and outcomes of food security in her elaborate framework of a food system.

Another framing that embraces the non-linear, complex, dynamic nature of the global food system is made by Thompson and Scoones (1994, 2009) who highlight cross scalar and temporal influences on and our inherently fragmentary knowledge of agri-food systems. Drivers in the food system that they identify include (i) the complex and increasingly integrated global economy of food production (from seed technology to food processing), (ii) a trading system designed to protect health or profits through regulations, quotas and tariffs, (iii) explorative energy markets encouraging investment in biofuels, (iv) debilitating epidemics such as HIV/AIDS, (v) deficient policy commitment to agriculture both nationally and internationally, and finally (vi) global environmental change such as climate change “increasing pressure on an already fragile natural resource base” (Scoones & Thompson, 2009, p. 389). Including dynamic interactions *between* drivers (e.g. climate change and the promotion of biofuels) demonstrates the complex non-linear and multi-scalar features of the global food system.

Presenting these various systemic perspectives of the global food system serves to highlight both the complexity of the system and that these perspectives are all examples of *framing*, a topic of chapter 2, whereby even the most inclusive framing will be inherently partial, biased, and incomplete, eluding a singular, ‘true’ definition. Yet regardless of our inherently

incomplete understanding of the global food system, I argue that this should not deter one from taking a system-level vantage point when analyzing challenges that arise within it.

Until this point I have attempted to situate the research project in a wide context of the global food system in order to encourage moving beyond a strict materiality definition of food and instead embrace its relational, political and dynamic dimensions. Now we will turn to one particular challenge within the system that preoccupies the bulk of this research investigation, that is, the existence and persistence of food insecurity amongst those most vulnerable to being food insecure – rural-dwelling small-scale food producers, or smallholders. Just as the global food system can be conceptualized through framings, so too can food insecurity be understood in multiple, dynamic and even contested ways.



## 1.4 What is food (in)security?

I, as most of you reading this, have by good fortune rarely, if ever, had to go to bed with the ache of an empty stomach. Although this empty belly image is one stark way of portraying food insecurity, being food secure is about much more than feeling satisfied after a good meal. Food security, as defined by the Food and Agriculture Organization (FAO, 1996) and most commonly referred to, exists

“when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (p. 1).

How can something like food security be measured given this definition? Using absolute indicators, one could measure food security for example in terms of tons of food produced being greater than tons of food used, for example in terms of kilocalories consumed per person. There are also more relative indicators of food security that are difficult to measure and are individually-based conditions such as the stable access to food both now and over time and the availability of food in accordance with preferences which, according to the FAO definition, are equally definitive of food security despite their difficulty in measuring.

Using this FAO definition and as can be seen in figure 1.2, food insecurity can range from being *chronic*, that is, by persisting constantly over a long period of time to being *transitory*, where short-term shocks or fluctuations in food availability and access exist but then subside. An example of the latter is food price spikes in 2008 and subsequent decreases (although stabilizing at 17 percent higher prices than two years earlier (FAO 2009, 15)) that made millions of people temporarily food insecure. *Seasonal* food insecurity has both a chronic and transitory nature, being both persistent in a cyclical manner but temporary as it exists for only part of the year (FAO, 2008c).

|                                | CHRONIC FOOD INSECURITY  | TRANSITORY FOOD INSECURITY   |
|--------------------------------|--|--|
|                                |   |   |
| <i>is...</i>                   | long-term or persistent.   | short-term and temporary.  |
| <i>occurs when...</i>          | people are unable to meet their minimum food requirements over a sustained period of time.   | there is a sudden drop in the ability to produce or access enough food to maintain a good nutritional status.  |
| <i>results from...</i>         | extended periods of poverty, lack of assets and inadequate access to productive or financial resources.  | short-term shocks and fluctuations in food availability and food access, including year-to-year variations in domestic food production, food prices and household incomes.   |
| <i>can be overcome with...</i> | typical long term development measures also used to address poverty, such as education or access to productive resources, such as credit. They may also need more direct access to food to enable them to raise their productive capacity. | transitory food insecurity is relatively unpredictable and can emerge suddenly. This makes planning and programming more difficult and requires different capacities and types of intervention, including early warning capacity and safety net programmes ( see Box 1). |

**Figure 1.2: Two general categories of food insecurity. Source: adapted from FAO (2008)**

The term food security, like many concepts, has developed to mean different things over time (Havnevik, 2011; Pinstrup-Andersen, 2009) and is still a subject of debate. The term first appeared in the late 1960s and early 1970s (FAO, 2003) initially in response to a growing threat and appearance of famines and food-energy deficient populations in sub-Saharan Africa, Asia, South America and Central America (Ericksen, 2008; von Braun, 1992). Focus of the concept food security through the 1970s was mainly on the storage of food, or on efforts to increase ones capacity to store food and thus ensure regular supply (Carr, 2006; Havnevik, 2011). Yet, as has been argued by Carr (2006), shortcomings of this conceptualization became evident as



“the food security focus on food supply failed to identify causal links between the social/material circumstances of particular groups and their experience of food insecurity” (p. 16). As a result, following a general redefinition of mainstream development as well as influences from Amartya Sen’s emergent work on capabilities (Sen, 1982), the focus of food security shifted in the 1980s to include not only sufficient production and storage but also *access* to food. What was central in Sen’s proposition, and what influenced the redefinition of food security in 1996 at the World Summit on Food Security, was the need to “ask questions about the social, cultural and economic frameworks that bestowed rights to ownership within populations” (Pritchard, 2012, p. 52) in order to understand hunger in terms of entitlements.

As the concept continued to develop, food security began to include concerns from nutritionists, shifting the focus to a more individual level rather than household level and including concerns about not only what was being consumed but also the personal conditions of the person in order to be able to take up nutrients into the body (Havnevik, 2011). This in connection to food safety concerns in developed countries in the 1990s about health risks such as ‘mad cow disease’ in British cows and salmonella and dioxins in chickens, again shifted the focus of food security to include concerns for the quality of food, water use in food production processes, gene technology and toxins that foods may exposed us to (Havnevik, 2011; Lien & Nerlich, 2004). As food became more of a global commodity, aspects of risk and vulnerability became more pivotal factors for what it meant to be food secure.

Rather than a benign, ‘natural’ definition, the meaning of food security has been a site of struggle and contestation where not everyone agrees and the term food security is itself not without its share of ideological critique. Particularly concerning the role of *vulnerability* within the food security context, it is often defined in relation to an outcome (i.e. vulnerability of being food insecure, vulnerability due to famine) rather than being defined in relation to events or shocks that can lead to such outcomes. This framing of vulnerability has borne criticism since the outcome-oriented focus tends to decontextualize and isolate problems related to food, such as famine or micronutrient deficiency, from other parts of society and thus runs the risk of replacing some vulnerabilities with others (Dilley & Boudreau, 2001). The term has also been criticized, not least by historical sociologist Philip McMichael (2005), as being a manifestation of a paradigm supporting global,

corporate actors through the commodification of food and the disempowerment of producers around the world. Particularly, he contends that the term food security became redefined during the Uruguay Round process starting in the late 1980s as a way to support a struggling neo-classical process of development, employing free market logic to make a case for ‘global’ food security above that of the individual or nation-state (ibid.).

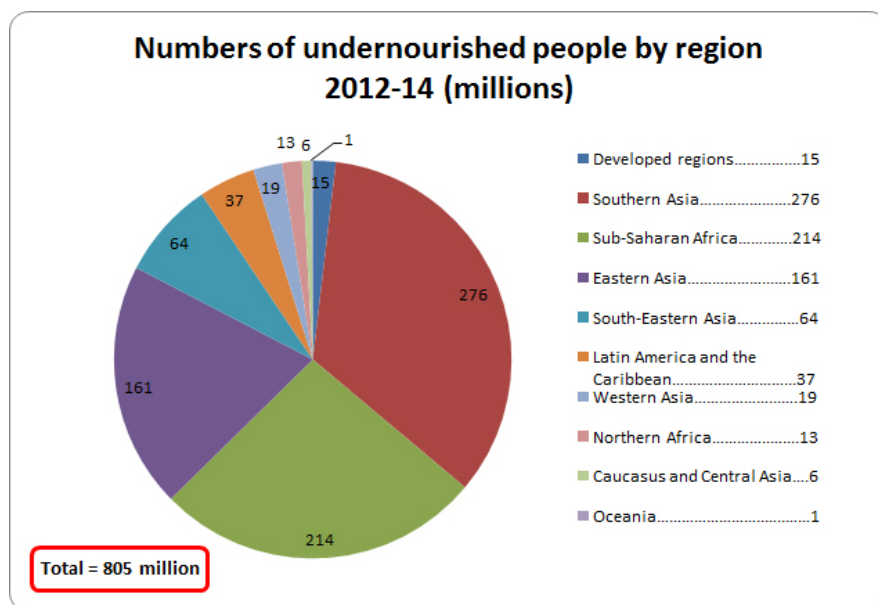
The contemporary definition of food security, being guided by a different logic and calculus than the original 1960s definition, does indeed encompass more than the simple production and distribution of food. Yet it is argued that the definition continues to avoid questions of power and control of the food system (Patel, 2009) and thus fails to address the role of society and social relations as a factor in food outcomes (Carr, 2006). As we have seen and will continue to explore throughout the text, the inclusion or exclusion of power in defining a problem guides understanding in a particular direction and serves to legitimate certain solutions to the problem. In chapter 3 we will consider some alternative framings to food security such as food justice and food sovereignty that emulate from different ideological convictions and more explicitly include the role of power and politics in challenges manifesting themselves in the global food system. Now, we can take a moment to focus on rural smallholders who are, as global figures would indicate, those who are systematically vulnerable to being food insecure whether chronically or transitorily.

## 1.5 Where is food insecurity?

Today, more than 70 percent of the world’s food-insecure people live in rural areas in developing countries (FAO, 2014a). Around 50 percent of these ‘hungry people’ are smallholder farmers, 20 percent are landless farm laborers, another 10 percent depend on herding, fishing or forest resources and the remaining 20 percent live in the periphery of towns and cities in shantytowns (WFP, 2015b). The exact definition of smallholder agriculture is elusive with few attempts at defining it to be found in the literature (Morton, 2007), yet it can be understood generally “to describe rural producers, predominantly in developing countries, who farm using mainly family labor and for whom the farm provides the principal source of income” with different degrees of market integration (ibid., p. 19680).

In 2014 there were approximately 805 million undernourished people in the world, measured by the FAO as consumption below minimum level of dietary energy requirements (FAO, 2014b) and geographically they live in accordance with the chart in figure 1.3. As can be seen in the pie chart, the largest *number* of food insecure people lives in southern Asia, and that regionally southern Asia and eastern Asia are home to over half of the undernourished people in the world. What cannot be seen from this chart, though, is the *prevalence* of food insecurity within a national or regional population. In sub-Saharan Africa around one in four people are undernourished (FAO, 2014b) with some countries having as high as 39 percent (Lesotho) or 45 percent (Yemen) of the population food insecure (FAO, 2013a).

Looking at food security in relation to national populations shows how the problem of food insecurity is not isolated to developing countries alone. By way of example, the prevalence of food insecurity in the United States was as high as 14.5 percent of the population in 2010 (Coleman-Jensen et al., 2011), higher than the 11 percent prevalence globally, indicating how the problem of food insecurity should rather not be defined as a problem belonging to developed contra developing countries, but as existing in a relationship within one and the same society. However, given the high prevalence of food insecurity in rural agrarian societies, common images portrayed through media and research are often focused in these poorer areas of the world, and not unduly so.



**Figure 1.3: Undernourishment in the world 2012-2014. Adapted from (FAO, 2014b)**

The focus in this research is no exception in that regard, as it turns to highlight the situation of food insecure African smallholders and will include a case study from Malawi in the course of analysis. However, rather than reifying or strengthening a normative image of the poor and hungry smallholder, this research places smallholders and food insecurity in relation to social forces such as ideologies, actors and institutions that even at a distance play important roles in the local manifestations of problems in the global food system.

## 1.6 A researchers journey

“All the world’s a stage, And all the men and women merely players”  
(Shakespeare, 1623, Act II, Scene VII).

As in all areas of life, there is an element of performing in postgraduate research. And as Shakespeare’s character Jaques turned to his audience to expose his thoughts in a soliloquy about stages of human life, this section is a

reflective space for one part of my own journey as a researcher. My intention is to openly reflect on the evolutionary research process I experienced firsthand as part and parcel of the art of doing research.

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Perhaps the most notable of journeys was not the *physical journey* I took to Malawi but rather the *methodological journey* I took where my own presence, perceptions and research methods as an early-career researcher were brought to the surface and scrutinized. Thus the resulting methodological approach that I came to use in the course of my study became itself an output of my research project.

The methodological journey I discuss is not a problem inherent to a particular qualitative method; rather it is based on my own experientially-driven interactions within qualitative, interdisciplinary research. While my experience may potentially be viewed as more anecdotal than theoretically contributive, there is still value in reflecting upon my own experience during this study explicitly considering implicit associations between various epistemological groundings and research methods. I came to realize midway through the study that my initial methodological approach was inadequate to the task of confronting the research questions I wanted to ask. The resulting adjustment of my methodological approach was also accompanied by a realization that I would need to change my overall theoretical approach. I wish to share some reflections on this process as a way of providing readers of the content herein with insight into how this study evolved over time and so that my text can be situated within the context of my own, personal methodological journey into qualitative, transdisciplinary research.

Howard Becker (2006) talks about how researchers have an “underlying imagery with which [to] approach the phenomena they study” (p. 10), and that “our imagery ... determines the direction of our research – the ideas we start with, the questions we ask to check them out, [and] the answers we find plausible” (p. 13). This image or idea of reality is a direct yet implicit result of the epistemological groundings a researcher carries with them about how the world can be interpreted. As understood in discursive psychology, for example, starting from the time we are small children and continuing throughout our lives we are listening to accounts of the world and constructing our own ideas accordingly (Jørgensen & Phillips, 2002, p. 109). Natural and social sciences have as well gone through phases where different

epistemological ideas have reigned, ranging from Enlightenment-based positivist convictions of objective understandings of the world based on laws and as something discernable, to a responsive wave to this when skepticism of knowledge production about the world infiltrated social science. The former belief still has a strong holding in some forms of science where the scientific method is stringently adhered to and it can be referred to as post-positivism (Creswell, 2009). The latter exists as a challenge to mainstream social science research in that it radically rejects epistemological assumptions of modern social science and aims to “re-conceptualize how we experience and explain the world around us” (Rosenau, 1992, p. 4).

Looking more closely at research methodology, when studying particular social phenomena certain methods can be a good solution for exploring some problems, but not for exploring all problems (Becker, 2006). Even within the same subject area, there are countless ways of going about doing research, all of which have implicit or explicit association with our imageries of the world. From the start, I have maintained interest in the same social phenomenon but my approach in how to investigate this has changed quite substantially.

Initially, I intended to make use of a quantitative<sup>1</sup> approach based on an existing, extensive and well-organized database and tools of statistical analysis for two reasons. The first reason was that I was already familiar with both the database and the data collection methods. Thus, the original project design and data focused on analyzing data quantitatively extracted using primarily standardized questionnaires. In the existing database, regional and country biases had already been reduced as much as possible and personal biases of the data collectors were minimized by asking standardized and mostly close-ended questions. This data collection approach relates to particular assumptions “about human subjects and interview data” (Roulston, 2009, p. 6), interviews being one of a number of interviewing approaches.

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<sup>1</sup> It is worth noting that one would be misled to equate quantitative research methods with positivist philosophical notions as much literature on positivism might be interpreted (for example in Creswell, 2009; Denzin, 2001; Roulston, 2009). Non-reflexive empirical research, as positivism is occasionally incorrectly defined, can exist in both qualitative and quantitative research (Djurfeldt et al., 2003) and this non-reflexivity is something to be avoided in research but can occur in any type of research without attention of the researcher to avoid such pitfalls.

Allowing for the incorporation of large quantities of material can theoretically lead to valid and reliable data (Roulston, 2009), but this approach includes inherent assumptions about the world, as described by Denzin (2001, p. 44) as the existence of an 'objective reality', a distancing of the observer from the observed, the generalizability of observations and that inquiry can be value-free. This is in contrast to a more constructionist conception of the interview which considers the whole 'conversational action', that is, *how* things are said in the interview, not only *what* is said (Roulston, 2009).

The second reason I had for taking this original theoretical approach was that this, I rationalized, would not only save time collecting primary data, but would eliminate over utilization of the same set of smallholders who may already be suffering from being over-exploited by repetitive surveying from academic researchers flown in from the Global North. I wanted to avoid what Burman (2015) refers to as exploitative ethnographic approaches whereby researchers harvest information from local inhabitants of an area, only for the researcher to use the knowledge collected about someone else's hardships to enrich their own academic career. Scientific knowledge production from Africa has been recognized to include different degrees of exploitation over the years since African colonization (Hountondji, 1995), and was a practice of exploitation that I wanted to avoid inadvertently contributing to.

However, when I began to work with the data and ask certain questions of it through doing regression analysis, what became apparent is that the research questions that I wanted to ask were arguably not most advantageously asked through standardized surveys such as the one I was reliant on. So although this methodological technique can produce informative, novel and rigorous research, I realized at some point that the mismatch between the method and my imageries were too deviant, and it was time for me to let go of my original approach. Instead, I began to venture into material and methods, although more foreign to me in my training as an academic comfortable in the use of quantitative analysis methods, that were more qualitative in nature.

This has led me to a research project that places me in the realms of discourse analysis and more particularly, the role of power in discourse as a central concept, all of which will be addressed in the following chapter on theory and methods. It includes doing fieldwork amongst smallholders, yet is

reflective of the power structures embedded in doing fieldwork and explicitly attempts to avoid the worst scenarios of exploitation.

This methodological journey enabled me to appreciate the value of a more problem-centric approach to my research design. This allows for a context-relevant approach to be taken to the selection of methodological approaches that are more suited towards exploring the problem itself as defined in the research question. Research methods, in my experience, are best not chosen out of pragmatism, but rather as an expression of a deeper understanding of the context and conditions of the subjectivities within the study at hand. Researchers would do well to allow ourselves to take a step back from the ‘we have to do something now!’ impulses and incentives in academia that may have motivated the research in the first place. The usage of different theories and methods can radically reframe ones research questions.

To re-iterate William Trochim’s (2001) appeal to researchers, think about your assumptions, get informed but then, get on with it!

## 1.7 Concluding summary

The global food system is an arena for the material flow of food as well a system where power and politics dictate its very structure and function. Food supports all of us, ranging from basic survival needs, to livelihoods and profits, to matters of identity, culture and history; serving as a unifying link between what is nature and what is social. Of the multiple emergent problems manifesting from the global food system, smallholder food insecurity is a persistent problem that is paradoxical both because food producers are food insecure and because we live in an era of plenty where there is enough food to ‘feed the world’.

This research explores claims, contradictions, and applications of a dominant framing of agricultural modernization as a means to address African smallholder food insecurity. It takes a critical approach to knowledge production and contributes to a broader understanding of the intricacies of power, food and people.





# Chapter 2: Engaging theory and methods

## 2.1 Introduction

As with most people engaged in research, I have been drawn by a phenomenon I see happening in the world that troubles me and that I want to better understand. My own motivation for engaging in this research project, as introduced in chapter 1, comes from the large *discrepancies* that are found in the global food system, including the unjust situation where some have access to unlimited resources while simultaneously others suffer due to the lack of the very same resources. Secondly I am motivated by one particular *outcome* of those discrepancies, including in the systematic food insecurity experienced by millions of people, particularly smallholder farmers. The material, physiological needs that are satisfied by food notwithstanding, I argue that food security is equally bound up with the relational, strategic needs of people such as the assurance of political equality and non-violence, and that the latter needs are often underserved in actions to address food insecurity.

How I've engaged in this research has been greatly influenced by my own interpretation of the problems, which in turn stems from my own diverse experiences and the social theory I subscribe to. "Theory is the necessary lens that we bring to our relationship to the world and thereby to make sense of its infinite manifold" (Burawoy, 2009, p. 13), which arguably holds true not only for academic projects but for living in and making sense of the world in general. By simply alluding to a belief that 1) it is impossible to see the world as some objective truth but always as a construction of our subjective 'lens', and that 2) the abstractions we create to understand the world are dynamic and need unpacking, offers the reader a clue as to the ontological and epistemological in which I ground this research. As part of a critical realist

project, this chapter offers the reader a review of the basic claims, interpretations, and assumptions that form the lens by which this work has been undertaken.

One of the most basic claims I make throughout this work is that the two highlighted challenges in the global food system – i.e. mass discrepancies and food insecurity – are symptoms of systemic processes *more so* than symptoms of localized problems specific to, for example, China and India where over 40 percent of food insecure people in the world live or specific to rural smallholder livelihoods, which appears to be vulnerable to food insecurity (FAO, 2014b; World Bank, 2007). In addition, I argue that the global food system itself, rather than being isolated from the rest of society must be placed in relation to broader social forces that shape and influence it; to systems and ideas that may on the surface have little recognizable relation to food.

Several of the concepts used in this research have already been introduced in chapter 1, but in chapter 2 I offer an elaboration of the theoretical underpinnings that have guided my usage of different tools in the form of methods, theory, methodology and interdisciplinary approaches in this study.

A theme that unites my tools with my worldview is the key role played by *power* and *politics* in integrated social and natural problems. Highlighting power in a global food system is a contribution of this study, but power itself is a tricky concept and what it actually means is far from agreed upon. Thus power and particularly power in the context smallholder farming earns special attention at the conclusion of this chapter as it functions as a unifying concept both in the research process and the research findings.

### **2.1.1 Disciplinary boundary(-crossing) – sustainability science**

More often than not, the places where problems emerge and where we witness social injustices or environmental degradation only provide a glimpse of the whole story, like seeing the tip of an iceberg. Learning from the news about far off disasters such as famine, food shortages, wars, soil erosion, floods/droughts, and the ensuing struggles of people can, among other emotions, provoke a desire to help, to mobilize whatever resources one has to aid in making a change for the better. And although contributing to local level change is powerful – going ‘there’, helping ‘them’, fixing ‘it’, a common feature of societal and environmental problems is that their drivers

are usually much more complex than what we see manifested as a problem. Thus, describing a problem and understanding its causes are two very different things (Kates & Dasgupta, 2007), a separation whereby the ‘it’ that needs fixing many times turns out to be entirely more abstract and distant than what we’ve come to understand based on news headlines.

Further inquiry and understanding of the substance and relations behind the ‘it’ happening to ‘them’ over ‘there’ may ultimately lead to revelations that the ‘naturalness’ of natural disasters and the ‘ruralness’ of smallholder poverty becomes put into question. “There is more to the world...” as Sayer argues, “than patterns of events. It has ontological depth: events arise from the workings of mechanisms which derive from the structures of objects, and they take place within geo-historical contexts” (2000, p. 15). This ontological depth of the world makes problem-solving a tricky business. Not only because the social world is an ‘open system’ where it is difficult to claim that ‘mechanism A’ will lead to ‘results X’, but also because various subjectivities and perceptions that we carry with us are themselves the products of values, rather than neutral observations. Or borrowing from the philosopher Paul Thompson, “[t]he way that we conceptualize a system is deeply value laden, and reflects judgments about what is thought to be problematic, as well as likely guesses about where solutions might lie” (2010, p. 239). So it’s not only the complexity of problems that can make them drudgingly persistent, but when attempting to unify bodies of knowledge and transform them into coherent policy decisions, it is a challenge of communication that itself can become an obstacle of change (Norton, 2003, 2005).

Addressing tricky, normative challenges with eyes open to the complexity entailed is one task of sustainability science, an interdisciplinary field that crosses disciplinary boundaries across social and biophysical sciences. In sustainability science there is a recognition of a kind of ‘wickedness’ of problems, defined by Brown et al. (2010) as “a complex issue that defies complete definition, for which there can be no final solution, since any resolution generates further issues, and where solutions are not true or false or good or bad, but the best that can be done at the time” (p. 4), thus requiring new approaches to the process of researching that look beyond disciplinary boundaries to address global sustainability issues.

As a research project within sustainability science, I investigate the social and environmental challenge of smallholder food insecurity as it plays out within the global food system. The research starts with the assumption

that there is more to the world than the events we experience, and is grounded in the belief that problem formulations and solutions of smallholder food insecurity need unpacking to see what values, ideas and norms are included in them, and how these concepts interact with ‘reality’. It is also assumed that food insecurity is a tricky, complex issue that evades simple, complete solutions. I carry out this research as an investigation of a discourse that is prominent in the global food system, one whereby agricultural modernization is framed as the solution to smallholder food insecurity, particularly in sub-Saharan Africa. I explore various drivers of the discourse and how it serves to address the challenge of food insecurity when put into practice as a development project. In approaching discourse in its full spectrum as existing from texts to social practice, my investigation includes text analysis as well as analysis of a particular interventionist aid project in Malawi, each as fruitful angles of vision with which to see global processes in a local context.

### **2.1.2 Philosophy of science - critical realism**

This thesis is grounded in critical realism. To say that the world exists independently from our knowledge of it, and that social scientists take strides to understand the world in a particular way even if their engagement with the world is not the basis for its existence in a particular way (Sayer, 2000), is perhaps the most defining principle of what a critical realist perspective entails. In other words, scientists *construe* the world without *constructing* it. This framing distinguishes critical realism from other assumptions about what the world *is*, that is, our ontology, and how we can go about *learning about* the world, that is, our epistemology.

There are a number of ontological and epistemological points of reference that can guide research. These ideas about the world and how we can possibly understand it range from more positivist conceptions of science where the world is seen to exist as a singular reality and that our knowledge of the world can represent truth, to post-modernist conceptions that instead question the validity of modern science and truth claims altogether. Critical realism “offers a third way” as Andrew Sayer (2000) writes, to theoretically align between, while giving respect to, both positivist accounts of the social world and to post-modernist emphasis on “the diversity of the world and the plurality of perspectives on it” (p. 31). Roy Bhaskar (1975) laid the foundations of critical realism in the 1970s, at a time when otherwise

positivist conceptions of science reigned. As part of this worldview of critical realism, Bhaskar advocated for differentiating between the ‘transitive’ changing knowledge of things through knowledge production and the ‘intransitive’ “things that exist and act independently of its production” (p. 113) in order to be able to systematically distinguish between real structures and the ways in which we understand them.

Post-modernism and critical realism align in the belief that truth claims are indeed problematic since knowledge necessarily is positional, transient, and interpretive (Sayer, 1992, 2000) thus agreeing on the “epistemic relativism” (Bhaskar, 2009, p. 48) of how the world can be understood. Where these two worldviews diverge has primarily to do with ideas of “judgmental relativism”, a tenet adhering more tightly to post-modernism than critical realism. Judgmental relativism “maintains that all beliefs are equally valid in the sense that there are no rational grounds for preferring one to another” (ibid., p. 49), and that the idea of truth is a social construction which should rather “[give] way to tentativeness” of knowledge (Rosenau, 1992, p. 8). This feature becomes rather distinctive particularly when studying society through the lens of discourse. In other words, can a discourse ever represent ‘the truth’? (A critical realist would say no.) Can one discourse be more valid than another? (A critical realist would say yes.) In this ensuing discourse analysis, I therefore place values on knowledge claims and offer critique of them based on ideas that we can be closer or farther away from reality, and as a means of promoting social change.

From a philosophical foundation of critical realism, one can conclude that reality in a materialistic sense exists independent of human senses, but human interpretation of reality is always subjective and only partially experienced. In this way ‘nature’ (or ‘the environment’) can arguably be seen as knowledge and representation *as well as* biophysical material (Forsyth, 2003; Walker, 2005). Thus, how nature is understood inevitably has implications for how problems related to that nature can be framed. For problems related to nature, such as with smallholder food insecurity, boundaries of ‘what is natural’ and ‘what is social’ necessarily become transcended as the two spheres, rather than being dualistic, mutually define each other. Having both a relational and biophysical understanding of nature allows for approaching problems related to nature as comprised of both meaning-making and some kind of ‘reality’ that is beyond impact of how that reality is understood.

Yet having that understanding that nature is partially existent based on the meanings we give it can lead us to consider the study of meaning-making, or semiosis. Semiosis has been argued as being a necessary element of critical realism (Fairclough et al., 2004), since it is in the processes by which people give meaning to things and communicate those meanings that conflicts can arise. More specifically, it has been argued by some of the most well-known scholars of critical realism, discourse analysis and critical political economy that historically “[c]ritical realists have paid little attention to the nature and significance of semiosis” (Fairclough et al., 2004, p. 23). To deal with this lacking element of critical realism, they offer that discourse analysis is one tool that can support the pursuit of both critical and discursive analytical research. We may now consider discourse analysis and how I apply it in a way that is compatible with and complimentary to critical realism and the study of power relations in the global food system.

### **2.1.3 Theory and methodology – discourse analysis**

“Theory is a meeting place of ideology, politics and explanation. Framing, defining the field, the rank order of questions, are the business of theory” (Nederveen Pieterse, 2010, p. 2).

This research has been conducted using a discourse analytical approach. There are different ways of doing discourse analysis, yet all discourse analyses have as a common starting conviction that the way we as human beings know and understand social phenomena helps to shape our worlds – and that this knowledge and understanding is neither neutral nor complete. Discourse analysis is cross-disciplinary, where established disciplines such as linguistics, sociology, anthropology, cognitive psychology and others play an important part in building its foundations (Fairclough, 2001). As knowledge of the world is understood in critical realism as partial and complementary, so will my current engagement with discourse follow the idea of the existence of a non-discursive element to the world in dialectic relation with the discursive.

As a theory, discourse analysis contends that communication or language-in-use “gains its meaning from the ‘game’ or practice it is a part of and enacts” (Gee, 2011, p. 11). As people in society we communicate with each other, sharing knowledge and ideas and carving out spaces for ourselves and exchanging social goods, including that of knowledge. The processes by

which we interact – the ways we think and talk about our realities – are both impacted by and create what is ‘real’ in our worlds. In research we can identify power relations through knowledge and communication if we consider *which* agendas and interpretations of reality prevail and which fail to take hold. Discourses, being products of distinct times, places and social structures are by nature strongly embedded in the political and power relations of the period within which they exist (Mels, 2009), making the connection to broader social forces important in analysis.

Discourse analysis is an approach that can be used within critical research, i.e. a type of research intended to “investigate and analyze power relations in society and to formulate normative perspectives from which a critique of such relations can be made with an eye on the possibilities for social change” (Jørgensen & Phillips, 2002, p. 2). Distinguishing between descriptive and critical approaches to discourse analysis, Gee (2011) reminds us that critical approaches include and also *move beyond* descriptive explanations of language in a quest to impact social or political issues that are the basis of analysis, where the research(er) takes a critical stance towards some social relation that cultivates injustice or abuses of power. Critical approaches to discourse analysis should ultimately have practical application by contributing evidence, understanding or even intervention into problems identified in the world. With these ideas that power relations can be ‘bad’ or ‘good’, and that discourse analysis can and should contribute to sustainability, we can now consider how I operationalize this discourse analysis through Critical Discourse Analysis.

#### **2.1.4 Critical Discourse Analysis**

If we think of critical realism as my tool shed, and discourse analysis as my tool box, the different tools I use in constructing my arguments in this thesis are ones that fit within those broad containment units that give shape to my research. In order to make sense of the data that we obtain in research it is important that our methods of choice have at least an affinity towards the ontological and epistemological worldviews mobilized in the research. That is, the tools should fit in the toolbox. Critical realism is compatible with a rather wide range of research methods, so the choice of methods “should depend on the nature of the object of study and what one wants to learn about it” (Sayer, 2000, p. 19). Some methods and worldviews are more flexible and can be migrated, combined and modified to complement each other in novel



ways. I find this strategy of interpreting and mixing methods as perhaps both a blessing and a burden of interdisciplinary research in sustainability science. Without needing to adhere to one or a handful of specific theoretical or methodological traditions that serve to define a discipline, the ardent sustainability scientist is given the freedom to explore and bring insight from a variety of different research traditions that can serve to offer novel understandings of a social phenomenon than what a monodisciplinary study may allow. However, a haphazard approach to methods could as well lead to a similar disaster as if a chemist would combine chemicals at random without understanding how the elements react to each other. Therefore a thoughtful understanding of the ingredients of transdisciplinary research would be a necessary condition for maintaining rigor and reliability. Some reference to my experience of this challenge of combining methods and worldviews was presented at the close of chapter 1.

As a theoretical and methodological whole, I have employed Critical Discourse Analysis (CDA). CDA is not a single discipline nor does it promote the use of a single set of methods or a single theoretical basis, thus it lends itself nicely to interdisciplinary, sustainability science research. CDA has been defined as “fundamentally interested in analyzing opaque as well as transparent structural relationships of dominance, discrimination, power and control as manifested in language” (Weiss & Wodak, 2003, p. 15). Therefore we can see the significant power in knowledge, and by unpacking and uncovering power relations through language can lead to alternative understandings of phenomena whereby some find unjust advantage over others.

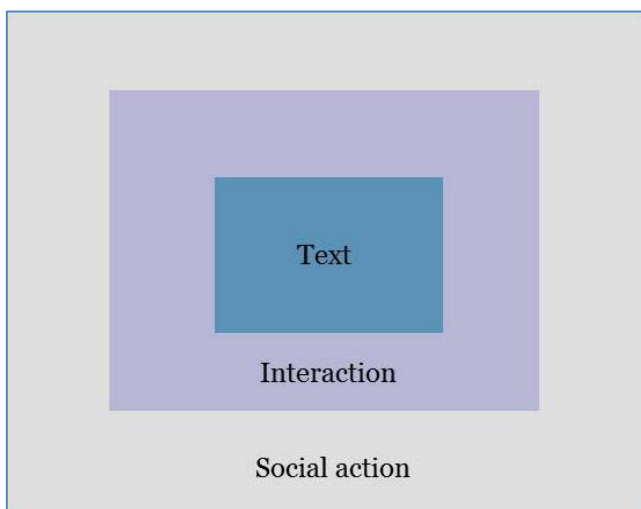
The word critical in *critical* discourse analysis comes from CDAs normative consideration of research, recognizing that many challenges we see in society have their roots in asymmetrical relations of power in society. A critical discourse analysis recognizes the role of power in making and maintaining dominant discourses, focusing primarily on “the effect of power relations and inequalities producing social wrongs, and in particular on discursive aspects of power relations and inequality” (Fairclough, 2010, p. 8).

One aim of CDA is “to explore the links between language use and social practice” (Jørgensen & Phillips, 2002, p. 69), in other words, to identify relationships between texts, discursive practices and non-discursive elements of social life. These three layers of communication can be depicted as in figure 2.1. In identifying these layers or dimensions of language, we can first distinguish a linguistic or semiotic element to language – the innermost

box – where words or images are used to convey a message. Generically this is referred to as text but is not limited to written text. Rather, text includes speeches, works of art, and other such forms of communication alongside the written word.

Analyzing text alone “does not shed light on the links between texts and societal and cultural processes and structures” (Jørgensen & Phillips, 2002, p. 66). The production and consumption of text, referring now to the middle box of figure 2.1, includes the processes by which language is articulated by someone and received by someone else. Both acts of articulating and receiving are formed through ideologies that influence us.

Referring to the outermost square of figure 2.1, certain ideas and values, whether explicitly or implicitly, become part of social practice by interacting with, feeding into and feeding off of non-discursive dimensions of society. The three ‘layers’ as they are presented here permeate each other and drawing boundaries between them is not an exact practice, yet is done so in research in order to approach each element differently analytically.



**Figure 2.1: Layers of discourse analysis. Adapted from Fig 1.1 of (Fairclough, 2014)**

A question here might be why one would investigate power expressed through the medium of *language* rather than focusing on power in actions such as acts of war and violence. Consider the quote:

“It is perhaps helpful to make a broad distinction between the exercise of power through coercion of various sorts including physical violence, and the exercise of power through the manufacture of consent to or at least acquiescence towards it. Power relations depend on both, though in varying proportions. Ideology is the prime means of manufacturing consent” (Fairclough 2001, 3).

Humans are social creatures, and communicating through language is our commonest form of social behavior. It is also through language – writing, reading, speaking in all its forms – where we rely heavily on ‘common sense’ assumptions (Fairclough, 2001; Gramsci, 2001; Wood & Kroger, 2000), and it is these same notions and ideological assumptions that serve to support and legitimize certain social constellations in society. Our ideas and our actions are formed by the ideas around us that are given space and that we have access to, so by critically studying the use of language as a part of society we can see instances where ideas are created and recreated in society. And by using Norman Fairclough’s conception of CDA, we may consider how every communicative event has the capacity to either support and thus strengthen existing relations of power, or to question and thus challenge those same relations.

By critically studying the use of language as a part of society, in this case in efforts to address smallholder food insecurity, we can scrutinize ideological assumptions upon which knowledge and social acts are based. CDA is “analysis of dialectical *relations between* discourse and other objects, elements or moments, as well as analysis of the ‘internal relations’ of discourse” (Fairclough, 2010, pp. 4, emphasis in original), which in this study is achieved by identifying and ‘unpacking’ notions of agricultural modernization, critically analyzing them, as well as engaging with discourse in action in societies where agricultural modernization is being implemented.

In my interpretation of CDA, I use frame analysis for analyzing texts positioned within a dominant framing of smallholder food insecurity. When engaging in empirical material of this very same discourse I employ the Extended Case Method, each of these being elaborated on in the following sub-sections.

### *Frame Analysis*

As a method of text analysis, frame analysis, originally theorized by Goffman (1974) and later modified by Iyengar (1994) and Entman (1993), is used widely for the study of discourse and one which I have adopted for the textual analysis, i.e. the innermost box of figure 2.1, in chapter 3. Framing is the structuring we as humans do to enable us to comprehend, order and thus come to an understanding of the complexities of the world so that we can function in it. Framing was originally defined within the field of communication as a rather natural, unconscious process of seeing and identifying representations of reality (Goffman, 1974). More developed definitions of framing have since tended rather to view framing as an active process by which aspects of a perceived reality are *selected* rather than solely implied (Entman, 1993, p. 52), thus not as a natural, neutral process as in the original definition. “Frames highlight some bits of information about an item that is the subject of a communication, thereby elevating them in salience”, making those bits of information “more noticeable, meaningful or memorable to audiences” (Entman, 1993, p. 53). Thus according to Entman’s understanding of framing, the person that communicates an idea by using texts consciously and actively positions the way problems and their causations can be understood by receivers of those texts; receivers who themselves have their own cognitive processes and cultural influences that lead to a certain way of thinking and understanding. As a method, frame analysis has allowed me to systematically explore patterns that emerge from influential texts in the smallholder food insecurity debate.

### *Extended Case Method*

To engage with the ‘outermost box’ of a critical discourse analysis, I sought an example of discourse in the form of social action as it interacts with non-discursive mechanisms of society. This took me to a site of a development project where the written discourse of one of the actors investigated in chapter 3 was translated into actionable inputs in a poor, food insecure, smallholder-dominated community, namely, the Millennium Villages Project (MVP). At this MVP in Malawi in sub-Saharan Africa, I situated myself as a researcher using lessons from the Extended Case Method as has been coined by the sociologist Michael Burawoy (2009). The principles of this method, as a boundary pushing and cross-disciplinary approach, are based on the ideas of reflexivity of research and the critical realist conception of knowledge. That is, research should maintain an awareness of and respect for the shifting

and imperfect knowledge of whatever it is we are trying to understand, while at the same time embracing that instability rather than trying to minimize or avoid it.

A starting presumption for the Extended Case Method is that macrostructures of interventionist development both reflect and shape microprocesses of local production - processes that are themselves products of previous macrofoundations (Burawoy, 2009; Gupta & Ferguson, 1997). And in the reciprocal, village-level organizations of production are themselves seen to be highly influential towards the construction of policies and ideologies, although impacts on the 'local' are usually far more perceptible than impacts on the 'global' even though the direction of influence is not predetermined (Gupta & Ferguson, 1997).

Using Extended Case Method, my fieldwork in the Millennium Village was comprised mostly of participant observations (i.e. "the study of others in their space and time"), non-participant observations, and interviews (i.e. "the study of others in the interviewee's space and time") (Burawoy, 2009, pp. 62-64). It was designed to be an extension of and combination of different scales into one and the same dialogue, an extension in Burawoy's words of the "observer into the lives of participants under study, the extension of observations over time and space; the extension from microprocess to macroforces; and [...] the extension of theory" (2009, p. xv).

### **2.1.5 Research approach – political ecology**

Considering the 'middle box' of figure 2.1, when attempting to bridge scholarship and practice, as is a central contribution of sustainability science (Kates et al., 2001), employing political ecology has offered a forum for approaching problems in the global food system that are globally and locally manifested, urgent due to social and or environmental impacts they have, and oftentimes 'wicked' in nature where solutions are difficult to identify because of complex interdependencies (Jerneck et al., 2011; Rittel & Webber, 1973). Political ecology is a particularly relevant research approach within interdisciplinary sustainability science as it seeks to identify the complexities of human-environment interactions and explicitly ties local challenges to global systems, seeing coupled human-environment systems as an analytical starting point, where neither system (i.e. the environmental or the social) could be understood independent of the other (Turner & Robbins, 2008).

Just as with most conceptual schools of thought, political ecology can be understood and applied in many different ways. My interpretation is primarily in line with the seminal definition of Piers Blaikie and Harold Brookfield (1987), as an approach where a dialectical relationship exists between nature and society and between groups within a society. Understanding the dialectic, co-creating relationship between science, society and politics, political ecology offers “a politicized understanding of environmental explanation” (Forsyth, 2003, p. 7) that more often than not materializes in poorer parts and amongst poorer people of the world where injustices to people and environments more commonly exist. Political ecology compliments the worldview and array of methods already used in this study in its appeal to the ‘middle box’ of figure 2.1, that is, in the explicit way political ecology exposes ideologies of development that are otherwise framed to appear nonpolitical (Li, 2007) or even anti-political (Ferguson, 1994), and which are part of the discursive act of producing and consuming ideas in society.

As a research approach, political ecology calls for a broad understanding of politics, referring to both “intentional and unintentional dynamics of power that occur in the context of everyday interactions, not just in the realm of formal decision making” (Paulson & Gezon, 2005, p. 137). In the context of smallholder farming as we will consider further in section 2.2.5, there is a particularly important aspect of the everyday interactions that defines relations and features of power.

We could perhaps be aware of a distinction that can be made between kinds of needs when engaging political ecology theory and concepts. When dealing with *practical needs* (such as food, health care, water, etc.) as well as *strategic needs* (such as the removal of institutionalized forms of discrimination, obtaining political equality, etc.) political ecology is particularly enriched when engaging with feminist perspectives of development. Carol Moser (1989), Maxine Molyneux (1985) and Bina Agarwal (1994) have all used the delineations of strategic and practical needs in the context of gender studies, which I would like to extend to this study due to their relevance for any group of people in a subordinate position in society. For in regards to subsistence food production, the relational disempowerment of a farmer or community in decision-making processes is a different challenge than the same person or community having an adequate amount of food to eat. Political ecology as a framework gives space for differentiating between different types of needs as well as recognition of the

inherent tensions and overlaps between them. And rather than trying to overcome or categorize tensions, the best one can do as researchers according to principles of political ecology is to give space to their emergence, to the “friction” of meeting across difference (Tsing, 2005), without reverting to sacrificing one for the sake of the other.

## 2.2 Power matters

Asking ourselves, ‘What do we mean by  $x$  ( $x$  being any object under investigation) and what is included in its definition?’ is, according to Andrew Sayer (2000), a fundamental question when doing research as it “forces us to sharpen our conceptualizations” (p. 17) and avoid taking any one particular representation for granted. *Power* can be used to capture different ideas in different contexts. And as the following section will illustrate, the concept power is theoretically rife with diversity making the task of obtaining it, using it or in the case of development aid delivering it elusive.

### 2.2.1 Power as a contested concept

Thinking about power theoretically helps us to understand how power can be studied empirically (Lukes, 2005). This theoretical beginning could even be argued as being a necessary starting point for any practical investigation of power since the concept itself, far from having a uniform definition, means different things to different actors and in different contexts. Not only do understandings of power differ, but these different understandings may appear unclear, imprecise and even incoherent when put in relation to one another, making the concept of power arguably one of the most controversial concepts when describing social phenomena (Göhler, 2009). One might instead approach power rather as a ‘family resemblance’ concept (Haugaard, 2002, 2010), that is, where certain characteristics can be found in its different usages but no one characteristic defines all applications of it.

Social theorists and political philosophers have over time developed a number of ideas with various degrees of sophistication of how one can go about understanding power in society. At times these scholars are in close conversation, building from and developing each other’s ideas while still others, stemming from different epistemological points of departure, end up

with very diverging conceptualizations where one doesn't find much more than the word 'power' in common.

In the following sections, I engage with a corpus of power literature that offers some of the more common general distinctions used when defining power. Directly following that, I consider what it means when talking about power in the context of smallholder farming. My intention with this theoretical exercise is not to engage at any high level of abstraction, as can otherwise be found in much of the literature on power, making such an engagement a rather daunting and exclusionary process. My approach to the subject of smallholder food insecurity is from the vantage point of the interdisciplinary field sustainability science, and as Avelino and Rotmans (2009) aptly indicate, "in interdisciplinary fields...that deal with many other issues besides politics, in which power is merely one of many dimensions, these theoretical challenges cause power to remain underconceptualized or ignored" (pp. 548-549). So in attempting to find a happy medium between two undesired routes for engaging with power – overly-abstract or utterly-ignored – the following section aims to first offer my translation of some central theories of power and then apply those to features of smallholder farming.

### **2.2.2 Power as behavioral or structural**

Is power only something that we as individuals can wield, possess or succumb to through our actions or the actions of others? Or does power rather exist in the structures of the world around us as something we cannot perform or act upon yet which forms the very basis upon which we exist? Perhaps the first interpretation of power is more tangible, and several distinctions of power based on it being understood this way as something *behavioral* can be found in literature on power. Behavioral power can be expressed through the actions or non-actions of individuals. Whether or not behavioral power can exist as a resource in a latent, unused form or if it only exists when resources have been mobilized is a question found in power literature. We can thus find distinctions between power as being *potential* or *actual* and as power *over* or power *to* (Clegg & Haugaard, 2009; Göhler, 2009; Haugaard, 2002).

But what about the existence of power in a way other than that of what an individual does or does not do? Some scholars such as Steven Lukes and Michel Foucault would, albeit to different degrees, argue that one should see



power as being existent in a systemic capacity. In other words, power is seen as permeating society and thus can be exerted through systemic structures of society. Structural power could include regulations that are visible and overt such as laws and institutional procedures. Yet it also includes more covert and invisible forces such as ideas of common-sense, ideology and discourses.

Mark Haugaard (2002) explains how the respective roles of behaviors and structures coincide closely with ontological and epistemological worldviews. The belief that agents are molded into what they are due to the parameters set out by a pre-existing reality around them follows a more positivist or objectivist conception of reality. In this sense, the agency of the individual is bounded by structures with actors having little or no room for influencing those structures. From a more post-modernist or subjectivist position, the forces of structures more or less disappear and it is the individual who forms his or her own reality. Here we find a reduction of “the whole of social life to the actions of individual agents or groups, their actions, interactions, their goals, desires, interpretations and practices” (Stones, 2009, p. 91). In this sense, actors are no longer bound by structures but instead become the creators of those structures through interpretation. To understand these distinctions and characterize them in relation to each other, we can draw from the terminology of the social theorist Steven Lukes and consider power as existing in the form of ‘dimensions’.

### **2.2.3 Dimensions of power**

I find a helpful categorization of power by considering its existence in terms of dimensions, where the argument over where power lies includes a scale from an actor-oriented focus to a structure-oriented focus and even beyond the binaries of those categories. According to Steven Lukes (2005), whose argument builds directly from the work of first Robert Dahl (1957) followed by Peter Bachrach and Morton Baratz (1962), power exists in no less than three dimensions. To demonstrate, when agent A, representing an independent agent, successfully gets agent B to do something B would not have otherwise done, this is argued to be the first dimension of power as first developed by Robert Dahl in the 1950s and 1960s in the context of American democratic institutions (Dahl, 1957; Haugaard, 2002). In this first dimension, power is something that is achieved in its moment of being exercised so is therefore highly actor-centered. Urging for a more encompassing definition of power, Peter Bachrach and Morton Baratz (1962) some years later argued

for an inclusion of institutional biases, outlining a second dimension (or what they call 'face') of power found in the process of agenda setting, where A may exercise power over B by deliberately keeping issues important to B off of the agenda. 'Nondecision-making' is thus an exercise of power through removing, filtering or otherwise altering what gets recognized and what gets ignored in political processes (Bachrach & Baratz, 1962; Haugaard, 2002). This second dimension is still an actor-oriented conception of power, yet includes the use of structures by actors in order to exert power. The first two dimensions assume that power is mobilized only through decision-making processes and thus it is open for scrutiny and conflict.

While Lukes (2005) recognizes these two dimensions of power, he takes point with them as being too behavioralist- or actor-oriented and thus missing what he terms a third dimension of power. In this third dimension, A's power over B is of a character that the priorities of A are systematically internalized in such a way that any potential conflict between B and A becomes obsolete or disassembled before it even begins. Power in this third dimension thus becomes more diffuse and omnipresent in character, less overtly practiced by A and B as individual actors but rather mobilized in order to avert interaction or conflict between actors from ever arising. Here power is legitimized through normative assumptions about what is 'right', 'wrong', 'obvious', 'necessary' or 'acceptable' according to some kind of social norm, that is, through ideology. We can find similarities between the third dimension of power and both 'false consciousness' as articulated from a Marxist perspective, and 'practical consciousness' as articulated by Anthony Giddens, the latter of which we shall soon take a closer look at.

Cynthia Hardy and Sharon Leiba-O'Sullivan (1998) have used Lukes' terminology of dimensions in order to categorize a further distinction of power that is not defined based on being actor-oriented or structure-oriented. Rather, power in this fourth dimension, most notably attributed to Michel Foucault (1984), is not a negotiable resource but is the substrate of interaction from which there is no emancipation. Where power can be used to manipulate, hide or otherwise distort knowledge or 'truth' in the first three dimensions, from the fourth dimension an increase of social resources (whether wealth, knowledge or leverage of other sorts) would simply lead to an evolution into different forms of power of which no actor can escape. Although this view of power is mostly associated with a non-realist, post-structuralist worldview, distinctive from that of critical realism, it can also be interpreted within a critical realist approach (Sayer, 2004).

## 2.2.4 Structuration theory and power

How one places power in society, just as how one places discourse in society, both stems from and guides the kind of research questions a researcher can ask. Just as critical realism has been called a ‘third way’ of seeing the world, structuration theory in its own alternative way offers an understanding of power that attempts to do away with an actor-centered versus structure-centered dualism and instead argues for a complementary view of agency and structure. In structuration, “[s]ocial structures are not reified entities denuded of human beings, just as the views and experiences that prompt the thoughts and actions of social agents are not those of beings who are islands unto themselves, separated from social currents” (Stones, 2009, p. 90).

In other words, structuration claims that there is a moment whereby structures are reproduced by agents, agents who themselves are constituted by existing in time and space according to the structures around them. “The world is as it is because we interpret [it] that way in our ‘being-in-the-world’” says Haugaard (2002, p. 146). He continues,

“As the carrier of meaning, structure is central to the constitution of power resources. When a social agent acts, he or she draws upon certain resources to bring about certain situations which would otherwise not have occurred. When action takes place, an agent uses structures which, in the moment of being drawn upon, are recreated and, simultaneously with this act of structuration, the individual is facilitated in producing effects. In short, power is generated by structural reproduction which takes place in the moment of agency” (p. 149).

From this statement we can begin to see how this conception of the interdependencies of actors and structures can assist in the analysis of power. According to the sociologist Anthony Giddens (1993), to whom structuration theory is attributed,

“[t]he notion of action...is *logically tied to that of power*” inasmuch as “[a]ction intrinsically involves the application of ‘means’ to achieve outcomes, brought about through the direct intervention of an actor in a course of events...; power represents the capacity of the agent to mobilize resources to constitute those ‘means’. In this most general sense, ‘power’ refers to the *transformative capacity* of human action...” (pp. 116-117).

So by having the capacity to take action, to mobilize resources, is to Giddens the definitive moment whereby actors exhibit power. And in critical realism,

knowledge is a resource that is taken seriously insofar as it is through the transitive dimension of knowledge, that is, our theories and ideas about the world that the emergence of new patterns and phenomena occur as we interact and continuously influence one another (Sayer, 2000).

Giddens distinguishes between two types of knowledge – practical and discursive – the former having been mentioned in relation to Lukes’ third dimension of power above. Giddens (1984) would contend that due to the complexity of social life there is a tendency, or rather a necessity, to take certain things for granted in our world without questioning or evaluating those things beyond face value. This is in reference to *practical consciousness*, or the kind of knowledge used to engage in normal every-day social activities. Practical consciousness would include the ‘knowing’ of the value of money, or how to speak in a certain manner depending on who you speak to, or how many hours are in a normal working week, or practicing the ‘correct’ way to enter and exit a train arriving to the platform – the type of knowledge we “consent to in everyday structural practice” (Haugaard, 1997, p. 144) in order to function in the societies we are a part of without having to deliberate over how that knowledge is understood.

Conversely, where ideas are recognized, scrutinized and thus, able to be disputed, this knowledge can rather be considered as *discursive consciousness* and is the basis from which conflicts over meaning and goals can arise (Giddens, 1984). Discursive consciousness is the consciously reflective knowledge through which people as agents create their understandings and perceptions, which invariably differ over time and in different context. For example, discursive conscious knowledge includes current debates over the origin of the Amazon River, or political debates about the role of government in society, or as done in this ensuing research project, questioning interpretations of the problems and solutions of smallholder food insecurity. Through actively engaging in *discursive consciousness* Haugaard (2002) reminds us that we are quite often unintentionally reproducing sets of *practical consciousness* at the same time. To again take this research as example, while doing an analysis of power relations within the global food system, I am writing an academic book, in English and communicating that knowledge in a very specific way, thus reproducing certain structures of higher education.

What this interpretation of power, as being both visible and tacit, allows for is what within critical discourse analysis is referred to as opaque relationships within a discourse and between discursive and non-discursive

moments of society. It is argued that tacit relationships are significant factors in securing and maintaining power and hegemony through processes that people are often not even aware of (Fairclough, 1993; Jørgensen & Phillips, 2002).

By contending that one can ‘see’ power even when not visible, that one can identify power relations even when actors are far removed from each other, it is possible to understand the potency of this form of power. That is, not the muscle-flexing visible acts of violence or coercion, but the potency of power that is obtained with willing compliance through ideology and ‘common sense’ that influences us so profoundly yet is something that those who subscribe to rarely if ever give a passing thought.

Giddens speaks of power as being the capacity to mobilize resources. We can thus perhaps see parallels between having power and having rights. In doing that, we can see power when actors have the right to employ their human agency (to be ‘qualified to know’ in Foucault’s (1971) terms) and the right to reproduce or transform themselves in the dynamic interplay where meaning is made (Scoones & Thompson, 1994) rather than being a passive recipient of meanings. Within the global food system, scholars have begun looking at the problem of smallholder food insecurity through the lens of having rights. Raj Patel speaks of the right to have rights (Patel, 2009) when advocating for solutions to food insecurity, while others indirectly address power by advocating for the right to participate in the food system in a way that promotes resiliency of local food systems (Escobar, 2012; Holt-Giménez & Patel, 2009) and local communities (Gottlieb & Fisher, 1996; Levkoe, 2006). Let us now look at spaces where power as the capacity to act, to have rights can come into play by considering some particular power features of smallholder farming.

### **2.2.5 Power features of smallholder farming**

Consulting existing literature on smallholder agriculture development, there is no lack of the recognition that power is indeed important. Perhaps this was not always the case, with the role of agriculture in development fading in and out of focus over the past three decades, as has the role of farmers themselves in agricultural development (for a summary of changes in agricultural research and development approaches since the 1960s see table 1.1 in (Scoones & Thompson, 2009)). However, today’s proponents of mechanized, commercial agriculture as well as proponents of alternative forms of food

production tend to see the empowerment of small-scale farmers as a way to foster positive change, even when ideas of what that change actually should be diverge radically from each other.

Despite its acknowledgement, I generally find a lack of articulation of what is meant by power and empowerment of the smallholder, concepts that are instead accepted as obvious ‘good’ things without further elaboration of what that power may constitute, in what form, for whom, and for what reasons. What we know however from the preceding sections in this chapter is that power is a contested concept and assuming a definition of it can essentially lead to its ambiguity. Perhaps the most explicit reference to engaging actively with power can be found in the so-called Farmer First discourse, where the potential development pathways in agriculture “will depend not least on getting to grips with power, politics, relationships and reflexivity” (Scoones & Thompson, 2009, p. xxiv). Yet even here, I fail to find consistent placement of what is meant by this elusive concept of power.

Considering power as the capacity or right to act, we could ask the question, what features of agricultural production, and smallholder farming specifically, should be considered (or, at least, not ignored) when contending with the problem of smallholder food insecurity? If we draw from the power discussion of the previous section, it is possible to identify power in food production that is structural, behavioral and in a more sophisticated way, as existing as the leverage point between the two or as the substrate within which human interaction takes place. We can identify spaces and processes where power is more or less visible (thus more or less contested) within the confines of what it means to produce food. I would therefore like to consider some instances where power exists or can be maneuvered in agricultural production in order to more closely identify potential sources of challenges for smallholders as well as to set the stage for how one could approach smallholder empowerment as a solution to smallholder food insecurity. These instances, as spaces and processes of interaction, are neither innately positive nor innately negative for the transformative capacity of any particular actor. Situations can just as well create risks for marginalization as provide spaces for the exercising of rights, depending on a variety of factors such as contextual power balances and how they foster the advantage or disadvantage of some over others, as we will explore in this section.

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Smallholder farming is a unique occupation to any other in the world. Particular to this occupation is a constant need to be adaptive to the environment within which one works. Agricultural production by design requires a wielding of nature on nature's terms (Rosin et al., 2013), of which our capacity as humans to do so is inherently limited. Even in the most sophisticated production scheme, variability on the farm is inevitable and farmers are, albeit to varying degrees, at the mercy of factors lying outside of their control; factors such as rain, dry spells, wind, natural erosion of topsoil, landscape gradients, nutrient cycles, soil salinity and acidity, pests, disease, foragers and so on. Even measures to minimize or control these factors (i.e. building ridges or fences, irrigation, fertilizers, soil stabilization schemes, pesticides etc.) put requirements on farmers to be receptive and flexible, making decisions in their everyday practices based on these inherent boundaries to growing food. Maneuverability, as representative of the capacity to act would therefore be a particularly central notion of power in the context of farming.

Drawing from the varied interpretations of what food is in chapter 1 (i.e. survival, converted energy, livelihood, business, identity, culture, history), food and food production have important dimensions beyond the material end products they provide. Agricultural production has a distinctive place-based multi-functionality, including the provision of vital ecological services, the creation of employment opportunities, the support of cultural landscapes and the fostering of community life and identity (McIntyre et al., 2009a). To nurture this supportive, multi-functional basis would arguably require some kind of intrinsic valuing of the services themselves and the mechanisms which maintain them. This would include supporting the resilience and reproductive capacity of the ecosystems as well as the knowledge, labor and cultural landscapes that make up agricultural production systems.

Structurally, agricultural production almost exclusively takes place in rural settings, disbursed throughout the landscape, distanced both physically and instrumentally from decision-making institutions and the public eye. Even labor is 'distanced' from formal institutions in that smallholder farming relies heavily on non-wage labor and the self-exploitation of labor in family farming (Bernstein, 2010). Despite this peripheral nature of food production both geographically and in terms of labor, and as presented in chapter 1, agriculture has historically played and continues to play a central role in the continuity of development in society well beyond that of the agricultural sector. World historically, food production has arguably played a

fundamental role in the rise and fall of hegemonic powers (McMichael, 2009), and until recently the accessibility of cheap food has been the motor of capitalism where lesser and lesser amounts of a household income being spent on food has allowed for spending to expand into other areas of consumption (Moore, 2010). Smallholder farming is also recognized as the backbone of many agriculture-based countries (FAO, 2014a). So as agents, smallholder farmers have both contributed to the foundations of the global food system as it exists today and are constrained to maneuvering within that same system. Agriculture and those who work in it are in a unique situation therefore when it comes to having the capacity to mobilize resources, being both integral and peripheral at the same time. Contending for agriculture *for* development could imply an instrumental role of the farmer, however when decision-making about agendas for development takes place in centers of power from which many farmers are isolated and scattered, the capacity to influence these forums can become tricky at best, ignored at worst.

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With agricultural production being fixed in space, getting food from the farm to its end destination requires extensive facilitative channels, often organized through markets. Food markets are arenas that can be both facilitative yet, as discussed already in chapter 1, also come with a certain amount of uncertainty and risk. Global markets for both farm inputs and food commodities are currently in the hands of relatively few transnational corporations. In these markets smallholders are either excluded completely or, due to vertical coordination of corporations, can suffer from a cost-price squeeze of input costs being higher than productivity or output costs (Vorley, 2003).

As another feature of food production, and despite continuous efforts to overcome it, the production of food is bound to ‘natural’ rhythms of growing cycles and seasons and to the relative perishability of the commodity being produced. This is a unique condition of food production compared to more obvious types of factory production that have the capacity to ‘churn the wheel faster’ or keep machinery running 24 hours a day, seven days a week, rain or shine, producing products with potentially long expiry dates. Nature in this sense becomes the factory itself, setting boundaries upon which inputs such as labor and machinery must adhere to (Goodman et al., 1987; Mann, 1990) rather than the other way around. Therefore the capacity to adapt to,



learn from or in any way tweak these growing cycles when producing food and supporting a livelihood has implications for power of the farmer.

Also, where other production processes can establish a certain amount of homogeneity of process and product (imagine any factory line from soda bottles to car parts), food production is context specific, heterogeneous and thus requires a ‘pluralism of knowledges’ (Scoones & Thompson, 1994; 2009, p. 26) in order to function at its best. This includes the existence of knowledge that is a product of the continual farmer-driven innovation of practices that occurs due to changes in farming conditions and circumstances over time (Röling, 2009). These processes of innovation are rarely documented and might not receive attention due to the ordinary, everyday characteristics they display (Ruane, 2012). The type of knowledge often associated with smallholder food production has sometimes been termed rural people’s knowledge (Scoones & Thompson, 1994), a knowledge system that does not readily fit into mainstream science and which is constantly being redefined.

A foundational feature of agricultural production today is that an estimated 43 percent of the agricultural labor force of developing countries is comprised of women (FAO, 2011b) (although that calculation has been questioned and problematized (cf Deere, 2009; Doss, 2014)). The importance of women in all stages of food chains as well as the gender-based biases that currently prevail in agriculture are widely recognized (FAO, 2011b; World Bank, 2011). Ideological and intrinsic arguments aside, the need for gender sensitivity to the differential impacts of development policies and programs on women and men is understood to have direct effects on agricultural productivity and poverty reduction where women often face greater constraints than men (Meinzen-Dick et al., 2011). Despite the depth and breadth of *recognition* of negative impacts of gender biases, studies show clear gender differences in *practice* are widespread where men have higher input measures of agricultural inputs of technological, natural and human resources (Peterman et al., 2014) with observable impacts on productivity. The empowerment of women is “a complex and multidimensional concept” (Alkire et al., 2013, p. 89) according to a study that found that the few empowerment measures that do exist today fail to address issues most relevant for women in agriculture such as greater decision-making and autonomy in domains of religious faith, family planning, and protection from violence.

To conclude, talking about power in smallholder agriculture is inescapably complex due in part to these multiple and variegated features as have been presented above. Despite this complexity, actions meant to alleviate smallholder food insecurity will inevitably need to recognize and be attentive to these power features in order to mobilize smallholders and support their individual and collective productive resources.

## 2.3 Concluding summary

Sustainability science is an interdisciplinary field where a variety of theories and methods can be used in order to gain new insights into complex problems. In the first section of the chapter I present how this study, from a critical realist foundation, uses discourse analysis in order to identify, describe, locate and assess a framing of agricultural modernization when used as the lodestar for addressing the problem of African smallholder food insecurity. Viewing discourse as existing in three dimensions, this study uses frame analysis, political ecology, and the Extended Case Method in analyzing these dimensions.

Power is a central concept running through the study, yet is itself a contested concept that needs unpacking. The second section of the chapter presents various interpretations of power, some of which lead to the creation of a dichotomy between actors and structures in society. Anthony Giddens' theory of structuration posits that actors and structures as mutually constitutive and, from this, suggest viewing power as the capacity of actors to mobilize resources and be a part of structural reproduction and thereby one's own agency.

Using structuration conceptualizations of power, we can see that in smallholder farming there are certain defining features that impact the mobilization of resources. These features are presented and argued as being important to consider when dealing with the challenge of smallholder food insecurity. Chapter 3 will now identify a dominant framing of smallholder food insecurity focusing particularly on sub-Saharan Africa.



# Chapter 3: Identifying agricultural modernization

## 3.1 Introduction

To those who experience food insecurity first hand or who are engaged with issues of food security in some way, I cannot imagine that a single individual finds the current situation of food insecurity in the world as ‘acceptable’ (although the Millennium Development Goals do not have a zero sum goal, just a reduction, so some acceptance does exist!). Neither would I dare assume that anyone engaging with the issue of smallholder food insecurity aims to induce more harm upon those who are already vulnerable. Rather, one positive thing about the moral underpinnings of the food security dilemma is that everyone is on the same boat and wants to see the suffering of food insecurity come to an end. And with the food security debate currently a rather hot topic on an international level, the proverbial boat that everyone is on has recently become a fleet of boats with sails at full mast.

What makes problem-solving complicated however is that the values, understandings and goals that people carry with them differ, so much so that the fleet, to stay with the boat metaphor, becomes disconnected into a number of individual boats again, each deciding its course that at times takes them sailing in completely different directions, knocking into one another. In other words, working together at the intersection of the manifestation of a problem, the African smallholder food security debate being an elucidating example, does not imply that everyone sees the problem in the same way, nor the solutions.

To continue with the metaphor above, in current African smallholder food security debates one boat’s course has such a gust of supporting wind that it currently stands as a dominant articulation of what the problem is and the direction to go in in order to find a solution. This chapter offers a textual

analysis of this dominant articulation of African smallholder food insecurity, with a particular focus on the role of agriculture as part of the problem and as part of the solution. The task at hand is thus to *identify* key tenets of what I argue to be a dominant framing of smallholder food insecurity. I do this by analyzing texts from three well-situated actors in current efforts to fight smallholder food insecurity in sub-Saharan Africa.

After identifying these key statements, I analytically separate them into seven generalizations that I argue are the basis of a dominant framing of agricultural modernization. I then *describe* each of the seven by drawing on other scholarship within relevant related fields, and finally *locate the voices* within a food regimes framework, placing the tenets of agricultural modernization in a wider political economic perspective. In chapter 4 this will be the basis from which to *assess* political impacts of the statements and ideas being advanced in this framing.

Reasons for engaging in this type of textual analysis are several. Firstly, nearly half a century of awareness of and engagement with rural development have led to rather ambiguous outcomes – where still very high numbers of people are struggling through various forms of marginalization. Although there has been an evolution of rural development ideas since the 1950s (Ellis & Biggs, 2001), the ideas that inspire arguments based on small-farm efficiency that were put into motion then remain the same. These ideas are in many forms being called into question (Havnevik et al., 2007). Alternative articulations of rural development such as those inspired by ‘food sovereignty’ and ‘food justice’, concepts based on contending worldviews have emerged and gained traction in light of the persistence of rural poverty. Identifying and categorizing the salient features of a dominant framing in this way helps to locate ideological influences and facilitate inquiry into how a phenomenon can be understood differently. I proceed to do this with full awareness that “[a]ny attempt to portray evolving ideas in rural development over the past half-century risks oversimplification” (Ellis & Biggs, 2001, p. 437), yet this process of identifying, naming and evaluating statements about the world helps to elucidate where and how such statements have come to be.

Secondly, identifying a common framing of agricultural development helps to highlight ideas that have a tendency to become invisible the more ‘natural’ they seem in a particular way of being in the world. This kind of practical consciousness (Giddens, 1984), or assumed truth, exists in all parts of daily life and is not problematic in and of itself, as has been discussed in-depth in chapter 2. However, what is problematic is when some ideas about

the world become presented and accepted as natural facts rather than as subjective understandings that themselves have impacts on the world and how we continue to exist in it. To take an example of how framing can influence a social phenomenon, the concept ‘climate migrant’ has become a rather mainstream concept in congruence with increased threats from climate-related catastrophes that forces people to migrate from their homes. Referring to people as *climate* migrants may seem like a benign categorization based on a process that is urgent and based on natural, uncontrollable external factors (i.e. sea-level rising, droughts, etc.). However, such a categorization has been seen to negatively affect the agency and mobility of those who migrate, creating the appearance of a threat of ‘barbarians at the gate’, “de-empowering the concerned populations and depoliticizing the issue” that is rather situated in a context of significant historical relations and political power and influence (Bettini, 2013, pp. 63-64). Therefore, where frames guide our perceptions and representations of reality, looking at knowledge production specifically offers the opportunity to analyze how and in what ways certain ideas influence our understandings of the world with the intention of leading to a more explicit and critical view of knowledge production.

By using frame analysis, recognizing both the active and the incomplete nature of framing things, I have identified three actors and their seminal texts that introduce and ‘pave the way’ for action-oriented work in the context of African smallholder development. The actors and texts, to be presented in the following section, each have particularly influential positions in how African smallholder food insecurity is framed regarding problem-definition and solution-formulation.

There are clear intertextual links between the three actors, yet each one can be seen to represent a different angle of vision. What we can see is the merging messages of (1) globally-recognized leaders for human betterment, (2) a globally-respected institution of science and authority, and (3) a multi-lateral institution formed for the purpose of reducing poverty. The alignment of respectively the *inspiration*, the *science* and the *mobilization* of resource capacities of these three entities, fostering a common message, might very well be considered the ‘perfect storm’ of advocacy for how a problem becomes defined, and what is to be done about that problem.

## 3.2 The texts and actors

In this section, I address the logic and process I used when choosing the corpus of texts to analyze. Together they represent different forms of communication and are each one of the flagship texts of the institutions included in the analysis. You may refer to table 3.1 to identify them throughout this chapter by way of institution, in-text reference, acronym or title of the text as they are used interchangeably.

**Table 3.1: The texts and the actors under analysis**

| <b>Institution</b>                            | <b>Name of reference</b> | <b>Acronym</b> | <b>Title of text</b>   |
|---|--------------------------|----------------|--|
| The Alliance for a Green Revolution in Africa | Annan 2007               | AGRA           | Opening remarks for session Investing in Growth: A Green Revolution for Africa |
| The Earth Institute                           | Sanchez et al. 2007      | EI             | Journal article ‘The African Millennium Villages’                              |
| The World Bank                                | World Bank 2007          | the Bank       | Overview of World Development Report 2008 (WDR08)                              |

The first text being considered was originally delivered not as a written document but as a speech at the World Economic Forum held in South Africa in 2007. The speech was addressed by Mr. Kofi Annan, former Secretary General of the United Nations but speaking from his newly appointed role as Chairman of the Alliance for a Green Revolution in Africa, referred to as AGRA or the Alliance. As the opening remark of a panel session entitled “Investing in Growth: A Green Revolution for Africa”, this 17-minute long speech introduced and encapsulated the framing used by AGRA about problems faced by African smallholders as well as the direction AGRA intended to follow in helping African farmers to develop and prosper. The speech was delivered within one year of the start of the Alliance, an organization founded as a philanthropic effort generously but not solely supported by the Bill and Melinda Gates Foundation and the Rockefeller Foundation, the latter having played a key role in financing the Asian Green Revolution of the mid-1900s. AGRA, through a Memorandum of Understanding with the New Partnership for Africa’s Development (NEPAD), officially supports the implementation of commitments made in 2003 by many sub-Saharan nations to obligate at least 10 percent of their

annual national budgets to agriculture, and to achieve at least six percent annual agricultural growth by 2015 (NEPAD, 2003). With over \$262 million committed, AGRA has been named as one of the main institutional vehicles for changing African agriculture (Mittal, 2009).

When analyzing texts, not only what is said in this speech but how it is presented is of interest. In the speech, where Annan goes off script on only a few occasions, he makes use of personification, simulating a conversational discourse (Jørgensen & Phillips, 2002, p. 82) and speaks in terms of *we* interchangeably throughout the talk, alluding on different occasions to ‘we Africans’, ‘we world leaders’, and ‘we the Alliance’, as well as referring to ‘our farmers’ and ‘our soils’ in an identification as an insider. This personification is an important part of the message being put forth by the Alliance, calling for an African-led, African-owned, uniquely African Green Revolution (Alliance for a Green Revolution in Africa, 2015a).

The second text to be included in this analysis is a special feature publication from the prestigious scientific journal Proceedings of the National Academy of Science (PNAS). There are 24 authors of the article, with the three lead authors Pedro Sanchez, Cheryl Palm and Jeffrey Sachs all originating from The Earth Institute (EI) at Columbia University in New York (Sanchez et al., 2007). The Earth Institute, under the direction of Professor Jeffrey Sachs is in its own right a prestigious research institute that in 2004 launched a flagship program called the Millennium Villages Project (MVP). As is presented elsewhere in this book, the MVP functions as a kind of manifestation of the United Nations Millennium Development Goals, which have come in many ways to define the meaning of development since their inception at the turn of the century, calling for structural reforms as the means for reaching the goals by the year 2015 (Nederveen Pieterse, 2010). The MVP is intended to be a model for hands-on development efforts – where practical ways of implementing the Millennium Development Goals in rural African communities are identified and carried out. With a budget of more than \$25 million annually (Millennium Promise, n.d.), model villages were established at 12 sites in 10 African countries, the first in 2004 in Sauri, Kenya. Although the mandated period of the Millennium Villages Project ends in 2015, in 2013 the project announced that “[a]cross Africa, more than 20 countries are now hosting or starting Millennium Village-related projects. In addition to the new scale up efforts announced on August 12 by eight countries and the Islamic Development Bank, there are 17 independent new mvp-related efforts under way in 13 countries” (Millennium Villages,



2013b). So the MVP approach to fighting African smallholder poverty and food insecurity, even if not the project itself, is arranged to continue. The MVP approach is based on a simultaneous, multi-sector investment where food production, infectious disease control and infrastructure development are invested in across sectors. This integrated approach to development is designed as a move towards “self-sustaining economic growth” through the mobilization of “science-based interventions” (Sanchez et al., 2007, p. 16775), which have been identified as the main constraints impeding African development and prosperity.

As of April 2015 the article has 130 citations on Google Scholar. PNAS is a multidisciplinary journal with one of the highest ISI journal impact factors in the world (9.809 in 2013/2014), so from a scientific community standpoint it gives the article a significant level of prestige and a wide reader audience.

A third text analyzed here that plays a key role in African rural development is the flagship report of the World Bank (the Bank) of 2008, the World Development Report (WDR08), published in the end of 2007. The Bank is a multilateral organization having the mandate to reduce poverty through capital investment, and claims the role as “the single largest donor for improving Sub-Saharan Africa’s agricultural sector” (World Bank, 2013a). As the largest international development agency (Escobar, 2012), the Bank has a rather powerful position not only in disseminating knowledge but to “synthesize and tailor such knowledge into products and ‘best practice’ that is then marketed and advocated” through their institutional channels (Stone, 2004, p. 555). It has further been argued that the Bank exerts substantial power over national and international policies, particularly those of poorer countries given its lending role and the support it has from other major financial actors (Gasper et al., 2013; McNeill & StClair, 2009).

After more than 20 years, the Bank has once again highlighted the role of agriculture in poverty reduction in their World Development Report, using the title *Agriculture for Development* for the WDR08 (World Bank, 2007). This has been a welcomed emphasis for many concerned with rural livelihood development. For this analysis, I make use of the overview section of the WDR08 to consider how the Bank frames the issue of smallholder food security and the role of agriculture. The WDR08 is a 365-page report plus 16 accompanying policy briefs, to which the 25-page overview functions as a paratext, that is, as a mediator attached to another text as an authoritative representation of the main body of text (Genette, 1997). According to Mosse

it is the overview section that receives the most attention when the Bank produces a World Development Report, the overview being “subject to strict approval at the highest level” (Mosse, 2011, p. 109). The overview is available in seven languages, increasing the accessibility of the message of the overview to a wide audience.

The World Development Report, similar to the Millennium Villages Project, explicitly seeks to actualize the Millennium Development Goals but dissimilar to the MVP article, the WDR08 maintains a global perspective and includes discussions on other forms of agriculture than just smallholding. Table 3.1 above lists these three actors and their related texts, including the different forms with which they are referred to throughout this study.

In regards to the institutions, there are of course many actors beyond the three concerned in this study that are working on food security and rural development in the African context which could have been analyzed in a similar way. For example, a collection could have been created based on texts by the Food and Agriculture Organization (FAO), the International Fund for Agricultural Development (IFAD, also a major investor in rural development), the New Alliance for Food Security and Nutrition (a multi-billion dollar G8 initiative partnering with African heads of state and international corporate leaders) or the Comprehensive Africa Agriculture Development Programme (CAADP) of the African Union. I could have as well chosen different texts from the same three institutions. However, given their wide, collective accessibility, their pronounced presence on the world scene, their substantial financial resources and the voices they are meant to represent, I find that the combination of these seminal texts by the World Bank, AGRA and the Earth Institute provides us with a substantial storyline that can be widely recognized beyond these institutions and these texts. I am also conscious that within any institution one can find an evolution and fluidity of ideas and concepts and even the coexistence of variable and multiple sets of discourses being used in different contexts (Phillips et al., 2004), so the analysis performed here does not intend to nor will it lead to any clearly defined, rigid description of the organizations that have produced these texts.

### 3.2.1 Tools of analysis

To facilitate analysis of these three texts I made use of the software called NVivo10. NVivo is a platform for analyzing non-numerical data within qualitative research by supporting the creation of categories called ‘nodes’ where commonalities identified by the researcher can be collected from multiple sources. The software, unlike some other automated textual analysis tools, does not automatically review the text or offer pre-designed categories; rather this task remains with the researcher. By first familiarizing myself with the texts, using old-fashioned highlighters and notes in the margins, I identified the themes or arguments that were reoccurring in the three texts. NVivo was utilized during a later round of text analysis, allowing me to categorize fragments of the documents into nodes for deeper analysis. Although my corpus of literature was not cumbersome large, the software assisted greatly in my process of organizing emergent themes into one place while simultaneously maintaining links back to the original text, thus allowing me to go back and forth between the fragment and the context from which it originated. NVivo thus provided a handy way of collecting and analyzing text fragments as well as for producing infographics of the resulting categorizations.

This frame analysis, while serving its purpose of identifying, describing and locating voices in the presentation of an argument, is also one of a multi-phase process of exploring the political impacts that ideas and structures have on each other. What it contributes is a sensitivity to and analysis of the flows of power and influence more so than the material flows of food, where food and its production become the manifested sites of a problem. And this is exactly what critical discourse analysis intends to do – it is not an analysis of an institution or a text or a social phenomenon in isolation but rather is designed as an interdisciplinary analysis of the *relationship* between these different entities, between discourse and something else (Fairclough, 2010; Wood & Kroger, 2000) – here that ‘something else’ being African smallholder food insecurity.

To describe something is not to explain something. What follows in the bulk of this chapter is more of a descriptive exercise in the form of a review, without the intention of valuating or evaluating the emergent categories such as would be found in an assessment. I therefore do not offer summarization or valuation of the categories as ‘good’ or ‘bad’, but focus on identifying which statements about African smallholder food insecurity are given salience in a particular framing. At the conclusion of this chapter I locate the

emergent framing using food regimes as an analytical tool for exploring emergent relations in the global food system. More in-depth analysis of this framing occurs in chapter 4 where a critique of agricultural modernizations tenets is done based on their diverse political impacts within the global food system.

## 3.3 The framing

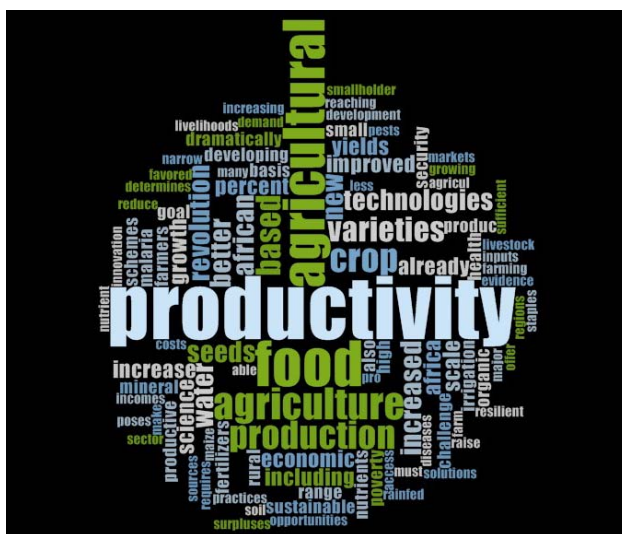
Regarding African smallholder development, one approach currently has more resonance than others, and it is this approach that I discursively engage with in this study. The question being explored here is, what are the key elements that make up and define this dominating approach and how can we understand them in a larger context? In the following sections I will analyze the key texts of the World Bank, AGRA and the Earth Institute in an attempt to identify common tenets about how these texts frame the situation of African smallholder food insecurity, and the role that they allot to agriculture in problem and solution formulations. Below you will find seven tenets common to all of the texts, including an interpretation and description of them by drawing on other literature, locating the voices of these actors within the arguments. The associated word cloud in each sub-section is a product of the textual fragments that I identified as part of the argument, and are there to provide the reader with a graphic image of the language used in the texts, giving prominence to the most common words by representing them in larger text. The first italicized quote in each sub-section comes from one of the three texts and is meant to highlight the general message to follow.

### 3.3.1 Produce more food, more efficiently

*Using agriculture as the basis for economic growth in the agriculture-based countries requires a productivity revolution in smallholder farming (World Bank, 2007, p. 1).*

One central argument found in the texts is that African farmers need to dramatically increase their agricultural productivity through adopting science-based interventions such as new seeds, fertilizers and innovative practices. This is deemed essential not only for the impoverished farmers

themselves but for the poor agriculture-based countries they reside in, as “no country or region of significant size has been able to lift itself out of poverty without raising productivity in its agricultural sector” (Annan, 2007). Also in relation to global projected demands of food, productivity should increase primarily through crop intensification and not extensification, that is, through getting higher yields on existing farmland instead of putting new land under cultivation.



**Figure 3.1: Word cloud for “Produce more food, more efficiently”. Source NVivo/author**

Although global statistics on yield averages are variable (Pretty et al., 2011), average staple crop yields in tropical Africa have been calculated as stagnating at a low level of around 1 ton per hectare (Sanchez, 2010). This low level can be attributed to a number of factors including declining soil fertility (Henao & Baanante, 2006), low input availability and use (Gachene et al., 2014) and structural and institutional limits (Green, 2005). Increasing the output of food by putting more land under cultivation is not a viable solution due to competition for land from other activities and the fragility of ecosystems not suitable for intense agricultural production. A dramatic intensification of land already under cultivation is seen as an essential step in order for farmers to increase food security and keep up with growing demands for food (Pretty et al., 2011; Sanchez, 2010).

In order to reach this goal – more production without using more land – all three texts argue that smallholder farmers must adopt new “productive and resilient varieties” (Annan, 2007) of seeds to “raise rural productivity” (Sanchez et al., 2007, p. 16775), thus “using agriculture as the basis for...a productivity revolution in smallholder farming” (World Bank, 2007, p. 1). Particularly evident in the EI text is the key role of science in this process, often naming science- and evidence-based interventions to generate crop surpluses, while the other texts likewise promote working hand-in-hand with “agricultural scientists to breed new varieties” (Annan, 2007) in an effort to “promote innovation through science and technology” (World Bank, 2007, p. 10). Sanchez et al. name increasing food production as the first generic-type intervention in a list of the first-phase interventions they engage with in smallholder communities, calling for the “subsidized provision of improved seeds of high-yielding crop varieties or hybrids...” (2007, p. 16776). The formulations of the Bank and AGRA do not deviate far from this, advocating for “a productivity revolution in smallholder farming” (World Bank, 2007, p. 1) and “dramatically increasing the productivity...of small-scale farmers” (Annan, 2007), respectively. Raising productivity has benefits beyond increasing the accumulative aggregate amount of food, as it serves to stimulate economic growth as we will consider in the following section.

### **3.3.2 Integrate into markets to get out of smallholder farming**

*“Getting agriculture moving requires improving access to markets and developing modern market chains” (World Bank, 2007, p. 20).*

A salient message is that farmers’ integration into the market economy is a critical step towards their development. The argument is that markets open up pathways, both through on-farm and off-farm activities that can increase household incomes. For instance, for on-farm economic activities, markets can help smallholders procure inputs and reach outlets for selling surplus production. For those who then diversify and shift into high-value crops, global and local markets for such products function to link farmers to “the supermarket revolution unfolding in many countries” (World Bank, 2007, p. 12), lifting African economies and supporting an economic transformation of smallholders. Rural non-farm economic activities such as selling labor or establishing businesses and enterprises also requires access to supportive markets that extend “to better serve remote rural areas” (Annan, 2007),

including access to microfinance and microenterprise institutions (Sanchez et al., 2007). The ultimate goal of integrating more fully in markets is to increase household-based capital accumulation by entering the cash-economy (Sanchez et al., 2007), improving the livelihoods of farmers (Annan, 2007), and ultimately facilitating a transition out of agriculture (World Bank, 2007).

While the basis of this argument is still about producing more food, more efficiently for a growing population with diversifying food needs, we simultaneously find a logic where food is seen not in its capacity to feed people but as a source of income and economic growth. Food production is thus “an entry point for entering the cash economy” (Sanchez et al., 2007, p. 16778) once households have moved beyond subsistence. According to the WDR08, “[a]gricultural production is important for food security *because it is a source of income for the majority of the rural poor*” (World Bank, 2007, pp. 3, emphasis added), thereby reiterating the role of productivity in obtaining surplus production to allow farmers to sell their products and earn an income. What is being promoted is thus “commercial farming and business development...diversifying farm enterprise toward high-value products and linking producer groups to markets” (Sanchez et al., 2007, p. 16776).

While markets are referred to as a general category and highlighted for their facilitative role in development, the WDR08 does offer a bit of a caveat in their reference to and recognition of the unequal opportunities and variable outcomes that the proposed move out of agriculture through the labor market might entail - where poverty can end up being moved rather than solved. It is stated that any policy to promote this shift to selling labor on the market is “likely to have gainers and losers”, thus poses a challenge to countries that implement policy instruments for using agriculture for development (World Bank, 2007, p. 6). Despite this recognized risk, the message advocating for a move out of subsistence agriculture through market engagement still resounds throughout the texts unanimously.

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“None of this will be possible without market improvements *to increase access to credit* for small-scale farmers” (Annan, 2007, p. emphasis added). Since smallholder farmers – and in particular women and other underserved groups in society – generally lack access to capital assets, it is difficult for them to self-finance the inputs that would be needed for reaching such

productivity gains as can be obtained with additional inputs. Being able to borrow money from lending institutions in the form of micro-financing and otherwise is promoted as a means to allow farmers to grow and to diversify into new areas. With a larger and more diversified income, farmers will be less vulnerable to fluctuations in factors such as weather-related impacts on the productivity of their land and volatile commodity prices. In an example given by the EI from their first Millennium Village in Kenya, once initial investments of highly subsidized seeds and fertilizers is removed, farmers will be directed to begin purchasing those inputs or getting loans from microfinance providers in order to continue their application to the fields (Sanchez et al., 2007).



Figure 3.2: Word cloud for “Integrate into markets to increase incomes, using credit”.  
Source NVivo/author



The World Bank spells out the key role they place on rural finance in agricultural development in the passage below:

*The microfinance revolution, providing access to credit without formal collateral, has opened access to loans for millions of poor people, especially women, but it has not reached most agricultural activities... However, the range of financial products available to the rural poor has broadened to include savings, money transfers, insurance services, and leasing options. With the rise of integrated supply chains and contract farming, financial intermediation through interlinked agents is becoming more common. Information technologies are reducing transaction costs and making loans less costly in rural areas, for example, using agricultural credit cards to purchase inputs or cellular phones to complete banking transactions. Credit reporting bureaus covering microfinance institutions and the lower tier of commercial banks also help smallholders capitalize on the reputations they establish as microfinance borrowers to access larger and more commercial loans. Many of these innovations are still at the pilot stage, requiring evaluation and scaling up to make a real difference for smallholder competitiveness (2007, p. 13, emphasis added).*

The motivation to “help move people out of agriculture” is most explicitly found in the World Bank report, where it is argued that financial constraints limit smallholders’ ability to compete in markets, with the goal of transitioning out of farming and into paid employment reoccurring throughout the text (World Bank, 2007, p. 2). The MVP has the explicit aim “to demonstrate the feasibility of practical economic transformation” (Sanchez et al., 2007, p. 16778), and together with AGRA they focus on promoting a *different* kind of agriculture rather than an explicit transition out of agriculture as found in the WDR08, speaking more of enterprise development and the creation of “commercial farming communities” (Sanchez et al., 2007, p. 16776).

### **3.3.3 Foster public-private partnerships**

*“Our underlying hypothesis is that the interacting crises of agriculture, health, and infrastructure in rural Africa can be overcome through targeted public-sector investments [...] to increased private-sector saving and investments (Sanchez et al., 2007, p. 16775).*

In order to capture economies of scale and transition out of smallholder farming, it is argued that the integral role to be played by states will be to

provide necessary infrastructure to foster private-sector investment in rural development. Due in part to policies of Structural Adjustment Programmes starting in the 1980s, a lack of investment by the state has stunted development in the rural sector in much of sub-Saharan Africa (Bryceson, 2009a; Stein, 2011). States during this period of structural adjustment were obliged to remove support structures to allow for an uninterrupted integration into the market with the aim of reaching national fiscal balance. What in hindsight happened has instead been an unfortunate ‘leaving behind’ of rural residents who essentially carried a heavier burden than their urban-dwelling counterparts as investments during this period were unequivocally urban-biased (Lipton, 1977; Lipton & Longhurst, 2010). Even as the proprietor of structural adjustment, the World Bank in the WDR08 admit in hindsight that their expectations of structural adjustment “too often...didn’t happen” (World Bank, 2007, p. 138). Until the recent turn of the century a general process of ‘deagrarianization’ has been taking place where people who could no longer afford to earn a living through farming were instead inclined to take on other, formal or informal, forms of employment in rural areas and through moving to urban areas (Bryceson, 1996).



Figure 3.3: Word cloud for "Foster public-private partnerships". Source NVivo/author

To attempt to make amends for the 1980s ‘lost decade’ (Bryceson, 2009a, p. 3) and sluggish recovery since then, an argument of agricultural modernization contends that states should once again step in as mediators and supply adequate infrastructure so as to facilitate the integration of rural inhabitants into channels of economic growth potentials. This state intervention includes the building of physical infrastructure such as roads, power lines, water and sanitation and other means of communication. It also implies the creating of infrastructure in the form of investment-friendly legislation that makes investment by the private sector seem lucrative and worth engaging in for the private sector.

AGRA, as a voice from philanthropy and other private investors, advocates for strong partnerships, where “all who share our goals are invited to the table” including “farmer’s unions, women’s associations, networks of agro-dealers and civil society organizations” (Annan, 2007). “They [farmers] need to see national policies put in place that accelerate rural economic growth, investment, and job creation”, particularly policies that support women farmers (Annan, 2007).

A call for “smart subsidies” (Sanchez et al., 2007, p. 16779) and “market-smart approaches” (World Bank, 2007, p. 13) shows recognition of the finesse with which states will need to maneuver – too much state interference creates dependency and disincentives for private sector investment, yet food aid and other social assistance for the “chronic and transitory poor can increase both efficiency and welfare” (World Bank, 2007, p. 18) along with more progressive investments that facilitate innovations as part of an agriculture *for* development agenda. The EI argues that “poverty in rural Africa can be overcome through targeted public-sector investments to raise rural productivity, leading to increased private-sector savings and investments” (2007, 16775) and emphasize multiple times that “public-sector investments are designed to stimulate, rather than replace, private-sector investments” (Sanchez et al., 2007, p. 16776). Through coordinated and deliberate public-private partnerships, it is argued that investment in research, donor coordination and market-facilitating infrastructure will lay the foundation for realizing the development potential of smallholder farmers.



where “the connections among agriculture, natural resource conservation and the environment must be [managed as] an integral part of using agriculture for development” (World Bank, 2007, p. 4) through investing in sustainable production systems.

Particular attention is paid in all three texts to water and the need for water management strategies in terms of securing health (Sanchez et al., 2007), increasing land under irrigation (World Bank, 2007) and helping “farmers get the most ‘crop for each drop’” (Annan, 2007). Recognizing the value of ecosystem functions makes natural resource conservation possible while still ensuring economic growth – the argument is that we do not need to choose between the two. “The world remains captive to the old idea that we face a choice between economic growth and conservation. This is a false choice. Our fight against poverty is directly linked to the health of the earth itself” (Annan, 2007). Or as the WDR08 frames it, “[t]he answer is not to slow agricultural development, but to seek more sustainable production systems and to enhance agriculture’s provision of environmental services. Many promising technological and institutional innovations can make agriculture more sustainable with minimum tradeoffs on growth and poverty reduction” (2007, p. 16).

### **3.3.5 Follow those before you**

*“AGRA is answering the call of many African leaders to build on the achievements and lessons learned from the Green Revolution in Asia and Latin America that began more than a generation ago....There is much to be learned from these tremendous successes, as well as from their shortcomings” (Annan, 2007).*

There are countless examples of how the Green Revolution of the mid-1900s triggered smallholder development around the world where new technologies for agricultural intensification, together with a supportive economic and policy environment that facilitated market access and supportive investment in infrastructure have been the lodestars of these developments (Hazell, 2009a). In this framing, African agriculture practices of today are comparable to that of, say, Indian agriculture in the 1950s or Western European agriculture in the 1700s.



past century, and must now build on the achievements and lessons of the Asian Green Revolution (Annan, 2007; Sanchez et al., 2007, p. 16776; World Bank, 2007, p. 26). In learning from the past, “MVP interventions are drawn from technologies and practices that have been proven under similar ecological and socioeconomic conditions” (Sanchez et al., 2007, p. 16778), and although there is no proclaimed silver bullet, a “uniquely African Green Revolution” (Annan, 2007) is a desired outcome. As to why Africa was left behind, the WDR08 highlights the uniqueness of African agriculture and institutions as one contextual reason, as well as an historical lack of attention being paid to political economy and governance challenges specific to sub-Saharan Africa (World Bank, 2007), although the reasons are many and identifying a complete picture is complex (Hazell, 2009a).

### **3.3.6 Urgent action is needed**

*“And, though we know this is a journey, that doesn’t stop us from being in a hurry. We aim to make a concrete difference in our lifetimes” (Annan, 2007).*

The urgency placed on concrete action comes perhaps as no surprise coming from action-oriented institutions and considering the high levels of food insecurity found in rural Africa. The immediate food needs of particularly large portions of the African population makes for a dire situation requiring swift action. Drawing on a sense of moral obligation to mobilize on-the-ground efforts, intervention becomes the implied way forward in the texts. After “years of policy neglect” (World Bank, 2007, p. 2), after spending “decades listening to people talk about Africa’s problems, making promises to help” (Annan, 2007), and considering the urgency of climate change and the imminent 2015 target of the Millennium Development Goals, urgent attention is called for across the board. The interventionist project of the EI is designed to be complete by 2015, by which time they argue that “the poverty trap can be overcome and the MDGs [can be] achieved” by following the multi-sector investment scheme of the MVP (Sanchez et al., 2007, p. 16776).

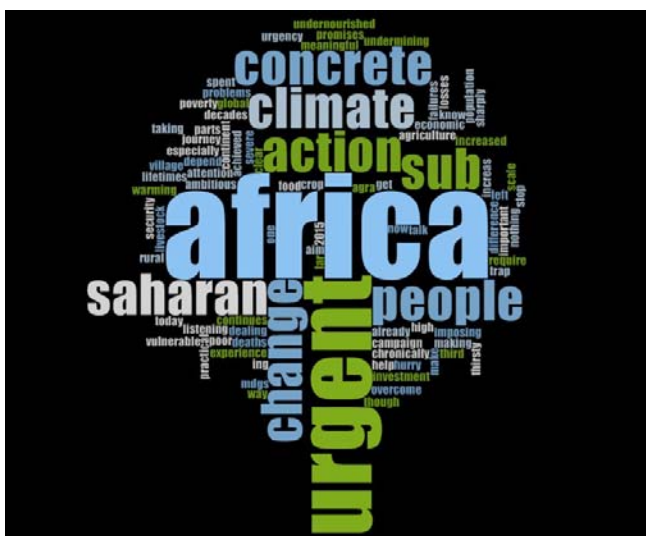


Figure 3.6: Word cloud for "Urgent action is needed". Source NVivo/author

What kind of urgent action is being called for, and by whom? Investments that promote agriculture itself is the underlying theme of the WDR08 with its agriculture *for* development rhetoric and these investments, as discussed in the next section, take place on African soils and in African policies. Considering the italicized quote above from the Alliance, the “we” who needs to make a concrete difference is self-referencing to the Alliance, implying the key role that an international community of expert actors should play in taking concrete action “now, today, in a clear and meaningful way” (Annan, 2007).

### 3.3.7 Look to the fields of African smallholders

*We must address poverty at its core. In Africa, this means enabling small-scale farmers to grow and sell Africa’s food” (Annan, 2007).*

Very concretely, yet rather implicitly stated in the texts, it is in the fields of African smallholders that the problems (i.e. low productivity, poverty and food insecurity) and concomitant solutions (i.e. increased productivity, market integration and capital accumulation) lie. While taking inspiration from agricultural development elsewhere in the world, solutions are framed as needing to be sensitive to the particularities of African smallholder





annual welfare gains for developing countries estimated to be five times the current annual flow of aid to agriculture” (p. 11) and that “[l]ow public investment in biotechnology and slow progress in regulating possible environmental and food safety risks have restrained the development of genetically modified organisms (GMOs) that could help the poor. The potential benefits of these technologies will be missed unless the international development community sharply increases its support to interested countries” (p. 15). Therefore, political actions taken away from African fields such as concluding the Doha Round negotiations and prioritizing GMO investment are two solutions explicitly referred to in the WDR08 that make reference to the political economics of smallholder food insecurity.

However, with the above exception of the WDR08 notwithstanding, the role of processes occurring outside of rural Africa are viewed in these texts less as problems to address and more as factors that contribute to the problems that *should rather* be solved, i.e. low productivity and low market integration of smallholders. The exogenous influences tend to be framed as structural influences to adapt to rather than to be solved. Instead it is argued that agriculture-based countries need a growth strategy – and agriculture itself is seen as being uniquely poised to make that growth happen. The World Bank makes this connection very explicitly in the report title by referring to agriculture *for* development. In other words, sustainable growth and poverty reduction can be achieved by tapping into the powers of agriculture “as an economic activity, as a livelihood, and as a provider of environmental services” (World Bank, 2007, p. 2). That solutions exist on-farm is framed in all three texts in a way that will empower smallholders, as their participation in designing solutions becomes legitimated, as expressed on several occasions in Annan’s speech:

“the work of AGRA will continue to be *informed by African farmers in the field*”; “We launched our programmes *only after extensive discussions with farmers in the field*”; “We are focused on developing *locally-driven* and adapted solutions”; “African nations and *farmers will choose* those that are best suited for our African cultures, climates, and economies”; “We will move forward by *empowering farmers and engaging rural communities*”; and “let us all do our part to *help Africa’s small-scale farmers end chronic poverty*” (Annan, 2007, p. emphasis added).

What can be interpreted through the WRD08 text is that this importance attributed to agriculture over other sectors of the economy is not only due to endogenous features of agriculture itself, but can also be attributed to

demographic constellations of poverty where “three of every four poor people in developing countries live in rural areas...and most depend on agriculture for their livelihoods” (World Bank, 2007, p. 1). “Given where they [(i.e. most food insecure people)] are and what they do best [(i.e. smallholder farming)], promoting agriculture is imperative” (World Bank, 2007, p. 1). So in other words, had the same proportion of poor people in developing countries lived in urban areas and worked as seamstresses or lived in coastal areas and collected seashells for a living, perhaps the central role of agriculture itself would shift to promoting the fashionability of dresses or shell cosmetics.

### 3.4 Relating to a food regimes framework

I will now place the emergent framing of agricultural modernization from this chapter into a larger context of structuring processes of the global food system by using the concept of *food regimes*, that is, periods reflecting social and political arrangement at specific times in history based on implicit rules and norms (Friedmann, 2005). We can speak of food regimes in complimentary ways – where it can both serve to historicize the global food system starting from the 1870s into different historical moments of implicit rules and power structures with unstable periods in between (ibid.); as well as function as an analytical device to identify relationships manifesting through food that identify broader relations of power in the global political economy (McMichael, 2009). For the purpose of this study I will first briefly identify historical moments and shifts leading up to the current dominant food regime, so that we can then locate the voices of the preceding text analysis as they relate to the framework of food regimes.

Harriet Friedmann (1987, 2005) and Philip McMichael (2005, 2006, 2009) identify the unfolding, dominance and collapse of different food regimes in the global food system, starting in the late 19th century as European states promoted processes of industrialization and emerging European settlers and colonial states expanded during what is called the first, colonial-diasporic food regime (Friedmann, 1987). After decades of a crisis-ridden food system during years of the great depression, a second food regime emerged with a new hegemonic center based in the U.S., adopting new farm policies defined by export subsidies in the form of ‘food aid’. This

second, mercantile-industrial food regime began in the context of a post-WWII economy and lasted until the mid-1970s. It has been highlighted as a time predominated by the flow of surplus food from the U.S. to countries of the global South when the U.S. national market becoming inundated with an oversupply of wheat as a result of strong state protection measures (McMichael, 2009). Globally, the second food regime includes the development of new forms of consumption based on meat and wheat where “US wheat became the global standard and increasingly became the grain of choice of NIC [Newly Industrializing Country] consumers” (Kenney et al., 1989, p. 141). Internal contradictions and tensions intensified towards the end of this second food regime, such as the growing competition of subsidized export of surpluses from the U.S., Europe and elsewhere as well as the intensified concentration in the U.S. agricultural sector of a few large-scale producers and industries from what was originally a strong foundation of farmers and farmer movements. These tensions, together with a new neoliberal agenda taking form in the 1980s led to agriculture losing its central position in industrialized societies of the U.S. and the UK (Ward, 1993; G. A. Wilson, 2007). Yet the expansion of industrial agriculture continued elsewhere in the world through international policies that “institutionalized the process of agricultural liberalization on a global scale” (Holt-Giménez & Shattuck, 2011, p. 111). Policies in the U.S. became less farmer-friendly as they rewarded large farms and “intensified concentration of industry power and farm size” (Friedmann, 2005, p. 247) in what is now referred to as the corporate-environmental food regime that guides relations in the food system starting from the mid-1990s until today.

The fluid and unstable qualities of food regimes can be seen in the current crises and problems emerging in the global food system, as discussed in chapter 1. Although dominant, implicit rules still guide how actors can deal with/relate to each other, some of the rules are being questioned and challenged through social movements which, according to their orientations and approaches to addressing current challenges, can be looked at in a framework created by Eric Holt Giménez and Annie Shattuck (2011). In this framework movements are divided into two categories – one that captures the attempts to stabilize the current food regime using the current guiding logic and a second category of movements that attempt to use the instability of the reigning regime to push for a new rule-governed structure based on an alternative ideology. A further level of categorization is found in the

framework of Holt Giménez and Shattuck, which is not distinguished in this study.

| Reigning food regime  | Alternative social movements   |
|---|--|
| <ul style="list-style-type: none"> <li>Guided by agricultural enterprise</li> <li>Privileged voices from global institutions, agribusiness, large aid and development organizations</li> <li>Logic of market liberalism, food security</li> <li>Approach includes increased industrial production, public-private partnerships, microcredit, microenterprise, concentration of agricultural system</li> </ul> | <ul style="list-style-type: none"> <li>Guided by social justice and autonomy</li> <li>Privileged voices from farmworkers and labor organizations, agrarian- and rights-based movements</li> <li>Logic of agroecology, food sovereignty</li> <li>Approach includes better safety nets, democratically controlled and locally sourced food, agroecologically-based agricultural development</li> </ul> |

**Figure 3.8 Movements in the corporate-environmental food regime. Adapted from Table 1 of (Holt-Giménez & Shattuck, 2011).**

From the frame analysis of this chapter we can locate the tenets of agricultural modernization within what is labeled in figure 3.8 as the reigning food regime. We can recall the seven tenets as giving salience to increasing food production using modern yield-enhancing technologies through market-based channels. It is further argued that the state plays an integral yet facilitative role in creating an investment-friendly environment for private companies to develop and enhance the way food is produced in rural Africa, intensifying production in ways that are sensitive to impacts of climate change, using tools and lessons from earlier efforts in other parts of the world to close the production gap.

By using the movements and moments of food regime analysis, the framing of agricultural modernization can be seen as a force within the current regime of corporate-environmental priorities, in other words, as a boat with the gust of supporting winds. Yet in light of emergent crises in the global food system, the dominant message and relations are contested by other logics of production and human relations to food, as other boats navigating through the sea of food insecurity.

### 3.5 Concluding summary

Addressing the challenge of African smallholder food insecurity is high on the international development agenda. Currently, there is a dominant framing of both the problems of and the concomitant solutions to smallholder food insecurity being promoted by prominent international actors. This chapter gives a text analysis of three texts by three influential actors of international development efforts. These actors represent the *science*, the *inspiration* and the *mobilization* of resources that together give legitimacy to and drive certain ideas forward.

The framing of agricultural modernization for African smallholder food security identified in this chapter presents the situation in the following way: Africa's overall development is dependent on the development of the agricultural sector, which requires urgent mobilization of resources by the international community. In this framing, low levels of technology and poor soils lead to poor yields and poor farming management. Agricultural development in this framing includes the adoption of science- and technology based production practices that increase yields and thus keep agricultural from encroaching onto new, fragile land in order to meet growing food needs. There are past successes to learn from, such as the Asian Green Revolution that can be utilized but that need to be adapted to contemporary circumstances and African exceptionalism. This includes the transformation of farmers into commercial enterprises using modern technologies, facilitative markets, and nationally supplied infrastructure to support private-sector investments into agriculture.

The framing identified in this chapter is used as a basis of analysis in the remainder of the study. In the final section of this chapter, the framework of food regimes has been employed in order to place the framing of agricultural modernization into a wider context, both historically and in relation to other contemporary features of society.



# Chapter 4: Assessing agricultural modernization

## 4.1 Introduction

Smallholder food insecurity is a complex problem. On the one hand, it seems clear: where food is scarce or insufficient in meeting people's needs, having more and healthier food should fix that problem. But on the other hand, recalling the relational and non-material dimensions of food (as discussed in chapters 1 and 2) reminds us that the production and consumption of food are not only rudimentary acts of survival but also social acts of being human. Food plays a central role in our cultural identities and in how we relate to each other and to the world around us. The fact that agriculture is an activity lying at the intersection of agro-ecological systems, climate change, food security, human health and development makes food production a complex arena for bringing about change, one where politics and power are endogenous features. In this chapter we shall focus on this politics of food and framing by identifying some contradictions that arise from an agricultural modernization framing of smallholder food insecurity.

By questioning the production of knowledge (Hall, 1997, 2007) and highlighting how discourse is situated within social contexts rather than as something naturally occurring or in some way parallel to social interactions, this chapter explores the role that a certain framing has on how smallholder food insecurity is predominantly understood and how solutions are thus approached.

A prominent framing of agricultural modernization for attaining smallholder food security, as identified in chapter 3, presents the problems of and solutions to smallholder food insecurity in a particular way. In this framing, focus is on local biophysical and managerial conditions of smallholders in a way that serves to minimize the role of wider social and



political forces and contextual place-based social and ecological features. The problem and solution is thus framed primarily as existing “at the site of resource use, in and amongst the world’s poor” (Robbins, 2012, pp. 17-18). By lifting out and thus increasing the salience of these features of smallholder food insecurity over others, solutions are steered in a direction that logically adheres to this framing, that is, by modernizing smallholder production practices.

Inspired by W. Sachs (1993), Paulson and Gezon (2005) contend that focusing solely on the manifestations of problems, particularly environmental problems, has implications for social justice when non-localized forces are excluded from our range of vision:

“A focus on identifying proximate causes of ecological degradation rather than analyzing structural factors, institutional dynamics, or global forces has often led to placing responsibility for change on impoverished minority communities or poor populations in the developing world rather than on more globally powerful societies and economies” (2005, p. 7).

We can take an example of this practice of highlighting proximate problems and solutions that exclude the contextual dynamics. A video clip produced by the Earth Institute presenting the Millennium Villages Project begins by showing the desolate situation of a ‘typical’ African rural area, while the narrator tells us that “the immediate causes of hunger in Africa are depleted soil fertility and dependency on rain-fed agriculture” (Earth Institute, 2009). It continues by showing the desperate situation of Malawian farmers, working their bodies and the land hard with little return and little hope. Until one day, the professor from the North comes, provides farmers with seeds and fertilizers, and after only ‘one season’ (the title of the clip) their maize fields are flourishing, their children are happy and eating, they are selling more maize and their lives and livelihoods have been saved.

To be sure, soil fertility and water management are acute challenges faced by many African smallholders (Henao & Baanante, 2006) and they must be improved. Yet, devising solutions based only on these proximate causes of food insecurity makes the idea that change must come from poor communities themselves a logical conclusion. Ultimately it decouples those place-based problems from forces of influence that have less to do with the soil and more to do with social arrangements and forces that lead to the perpetual marginalization and discrimination of smallholders in the first place.

Yet, images such as the one in the video clip are powerful – they are easy to digest and hard to argue against, identifying concrete and measureable problems and offering concrete and measureable solutions. Justifying actions for sustainability based on statistical facts (such as maize yields in this example above) is, as Arun Agrawal (2005) argues, a very powerful way to create knowledge that is difficult to counter with evidence that is descriptive or case specific. “It is in this characteristic of statistical representations – their capacity to displace nonnumericized arguments and advocacy – that their colonizing effects are to be found” (ibid., p. 35).

As a general framework of political ecology as introduced by Robbins (2012), the thesis of degradation and marginalization contends that the increased integration of local production systems into regional and global markets, if approached as an apolitical process, may induce cyclical increases in poverty and exploitation and lead “contradictorily to decreased sustainability of local practice and a linked decrease in the equity of resource distribution” (Robbins, 2012, p. 21). Diminishing soil fertility compromises the sustainability of local farming practices in many parts of sub-Saharan Africa today, yet drivers of hunger and food insecurity are arguably more rightly attributed to social and political challenges than to technical or managerial mishaps (Neumann, 2005).

It is by emphasizing this contextuality of what manifests in the fields of smallholders that critical analysis in this chapter unfolds. By highlighting the political nature of what otherwise can be framed as apolitical, we see the emergence of contradictions that challenge the logic of the agricultural modernization framing as identified in chapter 3. This chapter therefore continues by taking the key tenets of agricultural modernization, a framing that currently holds a privileged position among efforts to alleviate food insecurity in countries of the global South and particularly in sub-Saharan Africa, and brings some of their fundamental contradictions into focus.

We may recall that the problems identified by this agricultural modernization framing are not necessarily being criticized for lack of relevance. Indeed, the argument for increasing the productivity of smallholder farms in Africa, at the heart of the agricultural modernization framing, is a conviction that is widely shared even from scholars holding rather different worldviews (for example see Altieri, 2009; Foley et al., 2011; McIntyre et al., 2009a; Pretty et al., 2011). My intention with identifying and now problematizing agricultural modernization is to demonstrate that (1) it is a framing that, by the nature of framing (Goffman, 1974) is subjective and

not a neutral description of smallholder food insecurity and that (2) the framing itself has social and material impacts that contradict the stated intention of the framing to alleviate food insecurity. To borrow words of James Ferguson (1990) in his seminal study of development in Lesotho, my intention “is not to show that the ‘development’ problematic is wrong, but to show that the institutionalized production of certain kinds of ideas [...] has important effects, and that the production of such ideas plays an important role in the production of certain sorts of structural change” (p. xv). Or as Tim Forsyth (2003) puts it, analyzing discourse and the production of knowledge “does not imply the belief that environmental knowledge is unreal or imagined, but instead indicates an interest in how statements about the real world have been made, and with which political impacts” (pp. 15-16).

Considering that the framing of agricultural modernization itself has emerged from particular political and historical arrangements, the next section offers a historical placement of agricultural modernization beginning in the early 1900s, relating this development to a food regimes framework. Following that is the identification of several contradictions emerging from the framing of agricultural modernization in formulating causes and their affiliated solutions to African smallholder food insecurity.

## 4.2 Historicizing agricultural modernization

Understanding that discourses are products of specific times and social contexts and that they mirror relations of domination and power (Mels, 2009), I proceed to give a contextual presentation about an ‘origin’ of agricultural modernization. Considering political economic developments in the world, we may begin at the agricultural heartland of the United States Midwest in the years just prior to the Great Depression when family-farm agriculture dominated the rural landscape. As highlighted by Bernstein (2010), drawing from work by Terence J. Byres (1996), scholars have identified different spaces of agrarian transitions originating in different places and different eras, making it a rather contentious issue about exactly where, when and how capitalist, agrarian transformations began (Kulikoff, 1996). This ‘American path’ is but one, yet I choose to highlight this one as it distinctively informs a food regime framework where U.S.-centered surpluses

and farming models strongly influence development mechanisms in the rest of the world economy.

We can relate historical developments of agricultural modernization over the past century rather succinctly to the framework of food regimes as presented more in depth in chapter 3 (Friedmann, 1987; McMichael, 2009). The first regime has been identified as starting with the mechanization of agriculture in the 1870s and lasts until the end of World War I. At this time, starting in the 1920s, family farming in the United States began suffering from overproduction and plummeting selling prices, leading to an erosion of the land, the livelihoods and the agricultural sector at large that lasted over two decades (McElvaine, 2010). To counter this bottoming out of the agricultural sector, policies that were part of larger New Deal national policies brought American agriculture into an age of mechanization and modernization through a newly-adopted logic of production heavily influenced by assembly line practices used by the automobile giant Henry Ford.

This policy change led to the development of a so-called Fordist regime of accumulation in agriculture and in the wider U.S. economy that “both made possible and called forth a fundamental revolution in the food delivery system” (Kenney et al., 1989, p. 135). Farm households became swept into new economic patterns both as *producers* through the adoption of mass produced agro-inputs and outputs and as *consumers* of processed foods and consumer goods that were previously not part of the rural household economy to the same degree (Kenney et al., 1989, p. 136).

In the framework of food regimes, the second food regime began in the late 1940s shortly after World War II and is identified as an era when extensive grain stocks were exported to the Third World in the name of food aid, with the U.S. being a dominant exporter (Friedmann, 2005). This regime included not only the exportation of food but of a logic of industrialized food production to developing countries (McMichael, 2012a), a topic we shall momentarily return to. It was a model originating in the U.S. which had by the 1950s and 60s spread to Japan, Britain and the European Economic Community in the form of national regulations on the farming sector (Friedmann, 2005).

This era of intense agricultural development that existed from the end of World War II until approximately 1985 has been called the era of productivism, and is characterized as:

a period when the main preoccupation of agriculture was maximum food production to ensure national or regional self-sufficiency, as a time when agriculture held a central 'hegemonic' position in society, and as an era characterized by a small but powerful and tight-knit agricultural policy community. In addition, productivism has seen a 'strong' state with predominantly top-down policy-making structures, and with farming techniques that have often relied on the application of high external inputs and the use of heavy machinery (G. A. Wilson, 2007, p. 3).

Productivism as an identifying feature of this modernization process has further been described as "a commitment to an intensive, industrially driven and expansionist agriculture with state support based primarily on output and increased productivity" (Lowe et al., 1993, p. 221). As part of this transition to a new food regime and new logic of production, U.S. family farm units converted into capitalist forms of production through support of the New Deal and technological developments such as affordable tractors, commercial fertilizers, and hybrid seeds (Buttel & Newby, 1980; G. A. Wilson, 2007).

This agricultural transformation functioned to not only integrate farm families into new economies as producers and consumers but to integrate "local food systems, via trade liberalization, into a global system marked by a division of labor that would allegedly result in greater efficiency and greater prosperity in the aggregate" (Bello, 2009, p. 11). The number of farms decreased rapidly during this time while average holdings increased in the hands of those relatively few who continued to work the land (Strange, 1988).

Simultaneous to the rise of industrialized agriculture in the mid-twentieth century in the United States, this modernizing, productivist era included a preoccupation with achieving food security in developing countries from the mid-20<sup>th</sup> century (G. A. Wilson, 2007). At this time, especially in Asia, fears were rising about the potential for widespread famine. Concern was also growing amongst Western powers that "escalating hunger and poverty would lead to the spread of communism (or red revolution)" (Hazell, 2009b, p. 25). With the financial backing and political ties of the Rockefeller Foundation and Ford Foundation, key agronomic developments based on the discoveries of Professor Norman Borlaug were developed, including modern varieties of crops such as wheat, maize and

rice. These new crop varieties, together with state-driven developments of food-grain commodity chains, market mediation of inputs and outlets for trade, and new technologies were all parts of the process making up the Asian Green Revolution of the 1960s (Djurfeldt et al., 2006; Kloppenburg, 2004; Perkins, 1997). This package of inputs was instituted and made available throughout Asia and parts of Latin America and the Middle East with the goal of boosting food grain production. With increased agricultural subsidies going to staple grains such as rice, wheat and maize, the period from 1960 until the turn of the century saw prices of these major food staples fall by as much as 60 percent, thus boasting improved levels of nutrition by making staples more affordable and augmenting caloric intake (Barrett, 2013; Evenson & Gollin, 2003; Rayner et al., 2006). The Green Revolution was therefore deemed successful in averting an anticipated mass starvation in parts of Asia by increasing yields of staple crops and giving rise to national food self-sufficiency.

The story changes by the mid-1980s when “global political and thought leaders seemingly took for granted that the world would enjoy plentiful food in perpetuity” (Barrett, 2013, p. 2), and by the 1990s investment in agricultural research and development was on the decline in high-income countries. Based on development ideologies that heralded industrialization to be the engine for economic growth, government, donors and scholars began directing attention away from agriculture, a neglect which led to diminished productivity growth in the agricultural sector (ibid.).

As industrialized agriculture continued to spread and develop in many parts of the world in the mid-20<sup>th</sup> century, this movement did not blanket the globe in an even fashion. Large discrepancies became apparent between countries and continents where Green Revolution policies and technologies took hold and where they did not. In this regard, we may now look specifically at developments of agricultural modernization during the past half-century on the African continent.

#### **4.2.1 Agricultural modernization in Africa**

The kinds of yield increases of the 1960s in some parts of the world in connection with the Green Revolution did not occur to the same extent in Africa. A prevailing international view is that African agriculture yields have rather remained stagnant ever since the 1960s (Sanchez, 2010), while others highlight the net production growth that occurred in Africa, yet which

coincided significant population growth thus led to decreases measured in per capita (cf. Pretty et al., 2011). With low productivity and what in hindsight were poor development policies of the mid- to late 1900s, today the poverty situation in some parts of sub-Saharan Africa is precarious, with some nations having extremely high levels of undernourishment, for example Burundi and Eritrea, where respectively 67 and 61 percent of the total population is considered to be undernourished (FAO, 2013d). Even when considering ‘African exceptionalism’, which limits the extent to which experiences from Asia can be directly transferred to Africa in terms of knowledge and technologies (Kates & Dasgupta, 2007), a comparable averting of famine in Africa based on the Asian experience of the 1960s is currently being sought after on a grand scale in sub-Saharan Africa.

The advanced, mechanized farming practices utilized in most industrialized countries is far from what is being practiced in much of sub-Saharan Africa today where the majority of agriculture-based societies in the world are currently found (Veltmeyer, 2009). In stark contrast to highly mechanized production practices found in Europe, the U.S. and parts of South America, most agriculture in sub-Saharan Africa is hand-tool or draft animal based and makes up the livelihood of as much as 80 percent of the labor force in many countries (McMillan & Headey, 2014) – this compared to, for example, one percent of the labor force in the UK or three percent in France (World Bank, 2014c).

As a response to repeated food crises flaring up in Africa, the World Bank dedicated their annual World Development Report in 1981 to agricultural development in Africa that called for, among other measures, improved domestic agricultural policies as part of a package to accelerate development in the region (Berg, 1981). Today, prominent organizations in Africa such as the New Partnership for Africa’s Development, the International Fund for Agricultural Development, the Alliance for a Green Revolution in Africa and even the African Union have declared that transforming agriculture and increasing productivity of the smallholder is how contemporary challenges of food insecurity and poverty in Africa will be addressed (African Union, 2014; AGRA 2015b; IFAD 2011; NEPAD, 2003). The Maputo Declaration, endorsed by heads of state and government of the African Union in 2003, included a pledge to allocate at least 10 percent of national budgetary resources to agriculture and rural development (African Union, 2003), which demonstrates the degree of political commitment, at least formally, to African agricultural development.

## 4.3 Contradictions of agricultural modernization

What follows is an analysis of the dominant framing of agricultural modernization as identified in chapter 3. When placed as the lodestar of how to identify problems of and solutions to smallholder food insecurity, giving salience to technical and proximate components of food insecurity, I demonstrate in this chapter how agricultural modernization embodies a number of contradictions through favoring particular framings of smallholder food insecurity over others, and how it serves to depoliticize the livelihood of smallholder farming and the phenomenon of smallholder food insecurity.

Recognizing the relational features of food, food production and food security – as has been discussed in detail in chapters 1 and 2 – reminds us that the political nature of food plays an important role in what drives the global food system. Therefore, problems arising as part of that system require that we consider the politics embedded in the phenomenon at hand rather than observing it as a non-political occurrence. The phenomenon under investigation here is that of African smallholder food insecurity, and by directing our analysis to relations of power and politics, it comes to be argued that although many of the tenets of agricultural modernization indeed warrant attention, the framing serves to naturalize and legitimize certain circumstances that are rather part of more complex socio-political relations that are problematic for smallholder development.

We shall now look at claims of this agricultural modernization framing as they relate to 1) environmental impacts of agriculture, 2) food production and aggregate food needs, 3) the relation of global capital and local economies, 4) livelihood transformations of smallholders, 5) legitimacy claims in crises and 6) time and space relations embedded in what manifests in the fields and households of African smallholders. Each of these six points draw from the tenets of agricultural modernization as highlighted in chapter 3 and will be addressed below.

### 4.3.1 Agriculture, Environment

As seen in the previous chapter, a basic tenet of agricultural modernization is that the productive efficiency of smallholders must increase. Further, it is argued that this increase in productivity must be gained by getting ‘more crop



per drop', that is, by using natural resources more effectively. Win-win scenarios are presented as being not only possible but necessary, where conservation and economic growth go hand-in-hand (Annan, 2007). It is argued that farmers will need to be incentivized to keep vulnerable land out of production through 'getting the prices right' and using the land currently under cultivation more intensely to avoid the spread of agriculture into new, vulnerable areas when trying to meet growing food needs.

A contradiction in this framing can be found by placing agriculture in a context of the wider environment. Advocating for environmentally-friendly practices *on-farm* through yield-enhancing inputs such as modern varieties of seeds and fertilizers has implicit tensions with environmental impacts of those same practices *off-farm*. For example, while inputs such as improved seeds and mineral fertilizers have been estimated to account for 30 to 50 percent of global yields (Stewart et al., 2005), the improved inputs themselves need to be manufactured and generally have high embodied energy requirements. To illustrate this, it has been calculated that the indirect energy consumption for intensive crop production typically exceed the energy consumption on-farm (Woods et al., 2010), meaning that framings based solely on on-farm measurements provide an incomplete illustration of the overall energy efficiency of such a food production system. Particularly nitrogen fertilizer production, using the Haber-Bosch process, is the most energy-intensive aspect of modern agriculture (Pelletier et al., 2008), a production process that becomes veiled or simply unaccounted for when focusing on field-based calculations of the environmental impacts of farming.

Highlighting the local environment and specific spaces being used for food production in this way can also have the effect of decoupling what happens on the farm environment from the impact of food production on the global environment (van der Ploeg, 2010). If we take climate change as an example, the vulnerability of small farmers to drought and extreme weather events is often highlighted in an agricultural modernization framing as an argument for the need to adopt new, more resilient seed varieties, for example drought-resistant maize seeds. Yet, the contribution to climatic stressors *by agriculture* through industrialized inputs such as the production of those drought-resistant maize seeds becomes essentially ignored and thus, reinforced.

Even when greenhouse gas emissions from agriculture are highlighted as a problem, as they are in the World Development Report 2008, it is often framed from the perspective of deforestation's negative impact on climate

change that occurs as a result of agriculture extending into new spaces to make up for low yields on existing land. While deforestation is indeed a problematic growing trend globally (World Bank, 2007), often as a result of agricultural expansion (although, recent work by Rudel (2013) identifies how deforestation in sub-Saharan Africa has substantial rural *and* urban drivers), the framing fails to include greenhouse gas emissions from energy-intensive production of yield-enhancing inputs.

Using this wider understanding of the environment, studies have suggested that modern agriculture is “less energy-efficient than traditional peasant agriculture, uses more chemical pollutants, and simplifies biodiversity by relying on a very small number of seed varieties and thus placing little value on the many varieties of seeds that have co-evolved over thousands of years through peasant farming” (Martinez-Alier, 2009, p. 59). For example, maize in sub-Saharan Africa historically displayed a high genetic diversity during the first 500 years of its existence on the continent. Quite the reverse, today one finds overwhelmingly the white kernel variety being planted, sold and consumed as part of the transformation of maize into a market item where homogeneity and ideas of modernity are desired traits over that of genetic diversity (McCann, 2005). It is anticipated by the Intergovernmental Panel on Climate Change (IPCC) (Olsson, Opondo, et al., 2014) that these modern seed varieties in Africa will be severely impacted by climate change, where production will be reduced by 17 to 22 percent in the near-term future scenario and “well-fertilized modern seed varieties are projected to be more susceptible to heat stress than traditional ones” (p. 812). Depletion of genetic diversity itself has been concluded to have an impact on the functioning mechanisms of ecosystems (Cardinale et al., 2012) with implications not only for food production but for society more generally.

Therefore, we can see a contradiction in highlighting the relationship between agriculture and the environment in a rather narrow sense as is done in the framing of agricultural modernization. Considering a wider context of the global environment shows how yield-enhancing inputs contribute to environmental problems by having high off-farm energy consumption, by contributing to greenhouse gas emissions, and by depending on a reduced genetic variety of seeds that are projected to be more vulnerable to impacts of climate change.

### 4.3.2 Food needs, Food production

In an agricultural modernization framing, certain statements about food needs and food production are placed in direct relation to each other. What we understand is that there are over 800 million people, mostly smallholders, who are currently food insecure and that by 2050 the world will need to produce 70 percent more food (or even more, see (Tilman et al., 2002)) in order to meet demands for a growing and developing global population. These food needs, both present and future, are then coupled with calculations of the relatively low yields achieved by African smallholders when compared globally with their counterparts in industrialized production systems. The graph in figure 4.2 shows this extreme gap in yields, where average cereal yields in the United States currently average around 7 tons per hectare while in developing countries of sub-Saharan Africa they are around 1.4 tons per hectare.

This gap is highlighted in the framing of agricultural modernization as a productivity potential that is currently not being met; a gap which arguably can be closed through the introduction of science-based knowledge and innovations that increase nutrient availability and soil fertility (Sanchez, 2010; Tittone & Giller, 2013) thus leads the way in meeting the productivity potential in Africa.

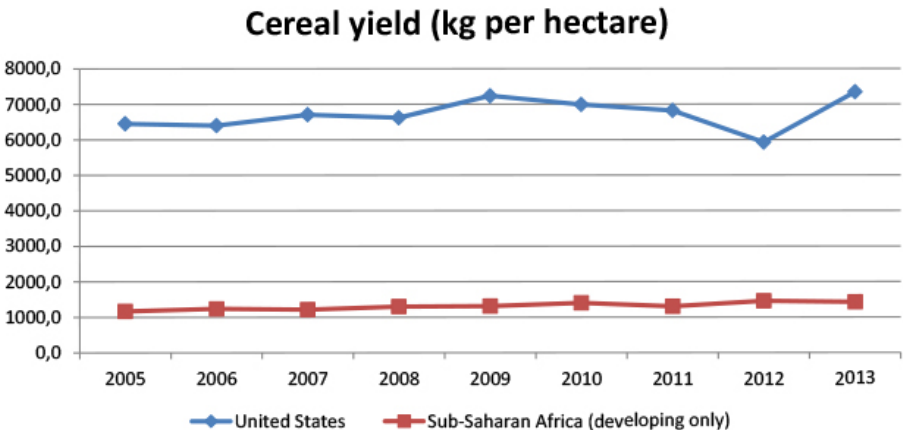


Figure 4.2 Cereal yields (kg per hectare) globally, in sub-Saharan Africa (excluding South Africa) and the United States, 2005-2013. Adapted from (World Bank, 2014b).

What fails to be brought to our attention in this framing is that practices underlying admirable yields in the North are not isolated from yields achieved elsewhere in the world nor are these yields able to be matched in perpetuation around the globe. In modern production systems such as those in place in much of the United States one finds a “severe dependency on fossil fuels at all stages of [the] production process, from the manufacture of fertilizers, to the running of agricultural machinery, to the transportation of its products” (Bello, 2009, p. 36). The contribution of agriculture to total greenhouse gas emissions is already substantial, and manufactured nutrient resources are calculated to be reaching their limits (Roberts, 2008). Therefore, comparisons such as these become ambiguous as they fail to problematize the contradiction of the high environmental footprint of many of the agricultural practices in place in high-yielding farming systems.

Considering future food needs, it is no question that anticipated increases in demand and population will require more food resources coming from somewhere, and increases cannot be reliant on extending indefinitely into new land and using more resources (FAO, 2014a). The low yields in African agriculture are indeed a problem, and there is significant scope for increasing food production within current production systems in Africa. However, agricultural modernization unproblematically implies that it is a matter of African agriculture modernizing production in line with industrialized production systems so that both current and future food needs can be met. This claim tends to oversimplify the tricky and non-straightforward relationship between food needs and food production.

The link between food needs and food production is full of contradictions and complexity, where history has time and again shown how hunger has become essentially decoupled from the global food supply. For example, we may consider that since the 1980s, enough food has been produced at any given time to ‘feed the world’ (Bello, 2009; FAO, 2003, 2014a), yet chronic food insecurity has also continued to exist during that entire time. To take this quantitative measurement out of context is problematic and risks being misinterpreted as advocating for ‘business as usual’. However, highlighting the connection between aggregate levels of food supply and demand underscores that food security has historically not been due to inadequate amount of food production but rather more rightfully attributed to “unequal income and unequal access to food” (Bello, 2009, p. 7) where the particular importance of *access* has been argued for and recognized by the likes of Sen and others since the 1980s (Sen, 1982).

As a fitting contemporary example, in the United States which boasts of some of the highest agricultural productivity achievements in the world there are over 45 million people, 14.3 percent of the population, whose access to resources are limited and who thus live in a state of food insecurity (Coleman-Jensen et al., 2014). A recent global manifestation of this contradiction revealed itself during the economic and food crises of the late 2000s when in 2008 over 2.2 billion tons of cereal were produced in the world, an *increase* of 5.4 percent from the previous year (FAO, 2008a), yet during the same year record numbers of people suffered from food insecurity, tipping the charts at around one billion (FAO, 2008b).

There is much certainty in the science community that global temperature increases in the not so distant future will put pressure on food production and indeed, may lead to a situation where food production will struggle to meet food needs (Denman et al., 2007), a situation set to impact drylands the hardest (Anderson et al., 2010). However, mobilizing and giving salience to the rhetoric of increasing productivity in African agriculture in concert with figures of current and future food needs does not give due attention to the role of access, both historically and when devising solutions for the future. And without access, one runs the risk of producing more food, for naught.

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If we continue to look at food needs and food production on the aggregate, as it is presented in the agricultural modernization framing, envisioning food resources in terms of a pie can highlight other ways that meeting food needs, being the ultimate goal here, could be accomplished. Planning for increased food needs in the future – i.e. for more people eating bigger slices – can be achieved through continuously increasing the production of food – i.e. increasing the size of the pie – or by considering how the current supplies are being used – i.e. looking at how the pie today is being used. By focusing on ways to increase the pie, distribution patterns of the current pie tends to become either ignored or decoupled from the dominant framing of how to achieve food security.

For example, food wastage as part of the aggregate food production and food needs is not included in the framing of agricultural modernization<sup>3</sup>. Food wastage, particularly post-harvest losses, counts for particularly high economic, water and land losses as well as greenhouse gas emissions through methane emissions from landfills (Pierson, 2013). Regarding land resources that are ultimately wasted by the food not consumed, an embedded amount of arable land equal to one and a half the size of the United States (SIWI, 2013) goes virtually to waste together with the food wastage.

Current levels of wastage (including waste and losses) are estimated to be between 30 and 50 percent from ‘field to fork’, that is, occurring during post-harvest phases (Lundqvist et al., 2008). This one-third to one-half of all food produced globally – around 1.3 billion tons of food per year, would according to the FAO be enough to feed all of the hungry people in the world three times over (cf. FAO, 2013c). In developing countries this food loss is attributed primarily to inadequate storage and transportation facilities while in developed countries it is wasted primarily at the point of retailer and consumer (FAO, 2013c; Foley, 2013; Lundqvist et al., 2008), not to mention estimates of significant agricultural output losses due to armed conflict and civil strife (FAO, 2000; Panos Institute, 2001). The FAO estimates total economic loss of global food wastage to be at 750 billion USD annually (FAO, 2013c).

The point of this section has been to demonstrate that framing the increase of smallholder productivity as a means to meet food needs both now and in the future gives salience to *one* means of increasing the amount of food on the aggregate without considering ways of increasing efficiency by minimizing losses of that which is already being produced. Further, directly associating food insecurity with amounts of food on the aggregate serves to falsely conflate two, albeit legitimate yet more and more delinked challenges of producing enough food and meeting food needs of all.

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<sup>3</sup> The issue of food waste is indeed recognized and addressed by many of the same institutions that also use the agricultural modernization framing as identified in this study. However, as part of a framework for fighting smallholder food insecurity and what that means for the production systems of smallholders, food waste is not included.

### **4.3.3 Local economies, Global capital**

The type of production revolutions that are called for by the framing of agricultural modernization would be dependent on the financial support of private sector investments and on the capacity of farmers to be able to get credit, taking out loans for starting up and investing in market-oriented ventures. To be sure, decades of disinvestment are influential factors behind current struggles being experienced in much of rural Africa, where market incentives and reigning social structures of production have prompted governments and farmers to cease investments in agricultural improvements (Bryceson, 2009b; Green, 2005; Steen, 2011). Therefore, directing investments back into the rural sector is not problematic, to the contrary. Rather, we can consider contradictions and risks inherent in a move towards intensified private capital investments, supporting a transition into commercial farming enterprises. This further integration with the market economy has implications for the value of agricultural products in transitioning them from their primary use value in the household to their exchange value through sale.

Within the current logic for organizing society under capitalism, David Harvey (2003, 2005b) shows how geographical expansion and spatial reorganization are ways to move surpluses of labor and/or capital in order to avert crises at the point of surplus production. Therefore, the opening up of new sites for flows of capital in the form of new innovations, technologies and institutions, in the case of agricultural modernization by incorporating smallholder households into new market relations as commercial producers, offers precisely this type of movement of capital surpluses into new arenas where exploitation can potentially occur. Such exploitation can, as Ferguson writes, “be accomplished, as it were, behind the backs of the most sincere participants” (1994, p. 181), that is, without any ill intention. However, by simply abiding by a logic of capital development, private-sector actors, while indeed often having a superior capacity to invest in agricultural development compared to many national apparatuses (e.g. financially and know-how), are in effect accountable to seeking investments that are most profitable, and whereby agriculture acts as a mediator of economic growth (McMichael & Schneider, 2011, p. 120). This logic makes private capital volatile, responsive to what pays and what doesn’t, incentivized to withdrawal investments if profitability is at risk, with little room for benevolence or philanthropy towards the smallholder.

Yet even philanthropy, a major form of investment in current agricultural modernization efforts, plays by a set of rules and mechanisms that are not neutral but are created out of interests and framings. Considering this role of philanthropic investment in agriculture, Behrooz Morvaridi (2012) has compiled a study on investments made by the Bill and Melinda Gates Foundation, demonstrating how these investments have done little to address the causes of poverty and inequality. Rather, investments by the Gates Foundation are argued to extend a particular model of industrial farming into new arenas (G. Lawrence & McMichael, 2012; Morvaridi, 2012), using the logic of agricultural modernization. The Gates Foundation is a major funder of the Alliance for a Green Revolution in Africa and an institution that over the past five years has invested more in smallholder farmer development than any other charity in the world (Johnson, 2014).

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Regarding structures and forces at play in the global food system more specifically rather than through capitalism more generally, and as presented in chapter 1, a small number of actors exude large amounts of influence over how the system currently functions. Politically, the global food system is an arena where globally enacted agreements such as the Doha Round of the World Trade Organization have evaded all efforts of their creation, agreements designed in part to reduce distortions in agricultural trade. By entering into global food commodity markets in their current condition, smallholders become exposed to new vulnerabilities of an imbalanced global system where a small number of powerful actors are able to derive benefits of skewed policies that continue to advantage an elite unit (Harvey, 2005a; McMichael, 1997; Wallerstein, 1977). Where engaging in market relations beyond subsistence production allows for the possibility of economic gains, it also therefore exposes farmers to new types of vulnerability, no longer just those related to climatic and biophysical conditions of farming but also to a volatile market that as recently as 2008 showed its instability when food prices skyrocketed, exposing vulnerabilities for producers and consumers alike. As poverty and food insecurity exist not only from lack of market integration but as effects of households being “drawn into the modernization process on highly unfavorable terms” (Rigg, 2006, p. 194), the terms upon which smallholders become participants in market relations through both farm and non-farm activities have political implications. That is, the influx of



relatively “weaker” market participants can serve to support the profitability of those actors already in powerful positions when such power relations are not included in the framing of the role of markets for smallholder development.

In conclusion, prioritizing the role of private-sector investments and naturalizing the integration of smallholders into global markets to alleviate food insecurity involve several challenges and contradictions. Private capital functions from within a logic of capitalism whereby exchange value and profitability trump use value and relations of production. With a few transnational actors monopolizing the global food system, farmers risk exposure to new sets of asymmetrical power relations that have shown to be favorable to an elite few and costly to peripheral others.

#### **4.3.4 Farmers, Livelihoods**

Farm sizes in agricultural-based societies, those found widely in sub-Saharan Africa, are small and are on the decline most acutely but not solely because of population growth and loss of arable land due to land degradation (GRAIN, 2014; Masters et al., 2013). Pathways out of poverty, as presented in an agricultural modernization framing, include attempts to reverse that trend by transitioning some farmers into non-farm opportunities so that average farm sizes can rise again for those who remain in farming. Following this pathway, farmers who have the capacity to adopt new agricultural innovations can expand production and engage in economically self-sustaining commercial farming (Sanchez et al 2007; World Bank 2007).

This promotion of income diversification away from agriculture is not a particularly new phenomenon, the logic of which accompanied the industrial revolution of the 19<sup>th</sup> century and was continued on by post-colonial African governments in the late 20<sup>th</sup> century (Bryceson 2002). Indeed, current calculations estimate that 30 to 50 percent of rural incomes already come from rural non-farm economies in developing countries (J. R. Davis, 2003) and it is likely that this trend of moving away from smallholder livelihoods will continue, whether through ‘push’ or ‘pull’ mechanisms from other parts of society (Morton, 2007).

If we consider the transition of smallholders either into commercial farming or to non-farming activities, those farmers having the capacity to stay on and adopt modernized agricultural practices will, for reasons unelaborated on in the agricultural modernization framing, out-compete

farmers who cannot or do not engage in these new forms of production. This process of industrializing production, although not adoptable for everyone, will have impacts on the community as a whole through the differentiation of the peasantry into various activities and through the movement of surplus labor away from the countryside. It also induces what some call ‘the agricultural treadmill’ (Cochrane, 1958; Röling, 2009; Ward, 1993) of structural conditions that impact the logic of food production, whereby farmers are obliged to adopt newer and newer technologies in order to even keep their means of production buoyant.

There are implications of this tenet based on the kinds of social organizations found in most agrarian societies today. Because as Erik Swyngedouw (2010) states, although the promise that “the ultimate realization of our desires is just lurking around the corner” may be true for some individuals and groups in development activities, “it invariably brings with it all manner of distortions, inequalities, and new barriers” for others.

For example, history reveals that the introduction of improved crop varieties and management systems in Africa have not been adopted by women to the same extent as they have been adopted by men. Through a review of decades of development efforts, Cheryl Doss (2001) has found this discrepancy to be due to challenges regarding the complexity and heterogeneity of households, where complex gender roles play out and are dynamic in nature. A historical overview such as this one indicates the kinds of outcomes that might be expected when naturalizing the role of yield-enhancing inputs and the gender-based dynamics they encompass.

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When competition and increased productivity of the few drive farmers away from farming *en masse*, we may also consider the fate of those individuals who have been ‘freed from their means of production’ (Harvey, 2010; Marx, 1906) and are no longer able to pursue a livelihood from farming, as arduous and insufficient as that livelihood may previously have been. The mobility and labor patterns of small farmers and rural residents in general, as the “backbone of global food production” (Bello, 2009, p. 15), being responsible for feeding the majority of the world (GRAIN, 2014), and as those making up nearly half of the global population (World Bank, 2014a), are patterns that tend to lose salience when focus remains on the ones who succeed in adopting technologies of modernized agricultural practices.

What this mobilization of labor away from rural areas and livelihoods has a tendency to lead to, and as can be seen in many parts of Africa today, is massive increases in non-formal labor in urban peripheries, where sectors of society are not capable of absorbing new city dwellers into productive, meaningful occupations (M. Davis, 2007; Vanhaute, 2008) thus resulting in the creation of niches for petty trade and scavenging a living in the periphery.

We may be reminded that when a comparable uprooting of the rural population happened in Europe in the seventeenth century, parallel processes of industrialization and colonization were underway, providing opportunities for recently displaced rural inhabitants to be absorbed into other sectors or even migrated to other continents, however violent that process may have been (Marx, 1906). What can be seen in many countries in the global South today is instead a growing urban population living on the semi-periphery – either physically though living in informal settlements or economically by not being absorbed into a formal work force, often occurring in concert with each other. Indeed, “the processes that underpin the production of ‘new’ poverty (broadly, the incorporation of rural communities and households into the economic mainstream through market integration) offer the means by which individuals and households can escape from ‘old’ poverty (that arises from dependence on traditional technologies, limited income, and remoteness/dislocation from the resources of the state and the market)” (Rigg, 2006, p. 194). Yet, we may recall that it is not the *movement* of poverty that is sought after but its alleviation, when applying an agricultural modernization logic to smallholder production systems.

To view this process of moving poverty more systematically we can perhaps draw from the concept of the “politics of disposability” (Giroux, 2012, 2014; Giroux & Evans, 2014), a concept that stems from a context of ‘excess youth’ in contemporary urban America but that captures similar processes of created obsolescence as can be seen in smallholder development. In reference to processes whereby individuals and groups become excessive in society, we can see through a politics of disposability where those individuals structurally suffer the fate of further marginalization through processes that push them into communities where disinvestment, violence and incarceration become means of control; means that serves to reduce the problem to matters of individual blame and away from systemic forces that perpetuate or worsen the ‘excessiveness’ of certain groups and individuals.

To exemplify this process in a context of labor mobility patterns in sub-Saharan Africa, we can consider a recent declaration of Malawi's president Pether Mutharika who, upon entering office in 2014 declared a war on crime in the country due to increases in criminal activities in urban areas. As part of this emerging commitment, one that ensures increased national expenditures on strengthening police force and resources, I find it telling when the Malawi Police Inspector General is quoted from a radio interview as confirming that "[t]here is rapid rural-urban migration in this country. The number of the unemployed young people is also very high, with very few opportunities of employment or informal businesses" (Masina, 2014). From this we might see the systematic creation of excess as part of a politics of disposability at work, which in the case of Malawi is strongly tied to politics of rural development and the effect of created obsolescence of rural smallholder livelihoods.

From this section we can consider how pathways out of poverty that systematically create situations whereby only some can prosper at the loss of others would necessarily need to take into consideration other processes that it brings along with it. In this light, the promotion of science- and market-based development will surely create opportunities for prosperity for some, mainly male famers, yet with the lack of opportunities elsewhere it also reinforces existing structures of power and discrimination in the community. The 'pushing' mechanism whereby smallholders are forced to locate new sources of livelihoods can, without commensurate 'pulling' opportunities elsewhere serve to move or aggravate poverty and food insecurity instead of solve it.

#### **4.3.5 Crisis, Legitimacy**

A common message resonating throughout the framing of agricultural modernization is the urgency with which actions need to be taken to avoid devastating crises by mid-century. A common message is this: with an expected global population of over 9 billion people by 2050, food production will have to increase by 70 percent or more from what it is today. This increase in production will have to be done without increasing the use of critical and limited resources, and will have to take into account that climate change will make this process all the more precarious. We are told that African agriculture is in a state of crisis, and that the capacity of the land to produce food and the capacity of people to earn livelihoods are in dire situations. "The logical solution..." as Leach and Mearns (1996, p. 2) state,

becomes “implicit from the starting assumptions”. In the case of agricultural modernization, that solution is that African agriculture has to change along the lines of modernization set out before them in order to avoid catastrophic results in the near future for themselves and future generations.

Once again, it is fully possible to be convinced by notions and trends drawn upon in this framing while at the same time consider political implications of calls for urgency. Considering land management, studies on conventional responses to environmental change such as land degradation in Africa have been shown to be inappropriate or even counterproductive, and that evaluations of environmental change can be wrong, misguided or at least not as value-neutral in method or conclusion as they are presented to be (Hoben, 1995; Leach & Mearns, 1996). In post-colonial regions, “environmental questions are central to policies and programs that exert control over the rural world”, having implications for those who depend on using rural resources when state authority expands further into rural areas (Fairhead & Leach, 2003, p. 4; Neumann, 1997).

The work of Thomas Homer-Dixon (1999) considers how environmental scarcity of renewable resources such as clean water and arable land can legitimate conflict over those resources that can serve to aggravate social cleavages. And in the situation of global food needs both now and in the future, the scenarios of scarcity serve to elevate the soils of farmers to that of a common resource with global importance (ecologically, politically and symbolically), which could easily lead to a violation of the rights and needs of the farmers using or owning the land (Büscher, 2012; White, 2014).

The challenges facing the global food system and the African food system in particular are indeed daunting, and can rightfully so conjure a sense of urgency. Yet in this mode of crisis we must consider the implications urgency itself has on the legitimization of certain measures and agenda setting. Circumstances that risk the provision of basic food needs can evoke a fear that can both legitimize particular actions and also, as highlighted by Swyngedouw (2013), serve to depoliticize processes by which assumedly neutral scientific and managerial fixes are invoked as being inevitable.

#### **4.3.6 Africa here & now, Non-Africa there & then**

As part of a framing of agricultural modernization in Africa, reference is often given to Green Revolution agricultural development processes that happened elsewhere in the world starting in the mid twentieth century.

Presenting development as an “evolutionary path”, the World Bank explicitly plots trajectories of nations as they have transitioned from low-rung agricultural-based countries into urbanized countries (World Bank, 2007) through a process of modernizing and mechanizing the agricultural sector. Interventions in rural Africa are thus framed as needing to use proven technologies and practices, learning from their successes and shortcomings, in order to stimulate an African Green Revolution so that African countries can progress along the same evolutionary path of development.

One impact of framing the development process in this way is that it naturalizes this evolutionarily path, a path on which Africa is currently ‘bringing up the rear’ as though it was left behind during the wave of agricultural development that swept the globe in the mid-1900s. Change therefore becomes isolated to Africa, and more specifically to African agriculture and how things are managed on the soils of African fields. This serves to decouple both current and historical social forces that impact the situation faced by smallholders as well as naturalize the path that should be followed, independent of social and ecological contexts of production.

We can view the way this kind of technical, managerial and localized framing places a burden of responsibility for change on poor populations in developing countries. Paulson and Gezon stand critical to the tendency of both government and non-governmental agencies “to address ecological problems with immediate technical solutions and ignore ways in which nonlocal policies and capital flows influence and perpetuate resource-use patterns at local levels” (2005, p. 8). Looking at policies and investments that have clear implications for African agriculture, we can consider the turbulent time of disinvestment it has been through since the 1970s. Divestments included for example the removal of national subsidy programs in many countries for food and agriculture, driven mainly by stipulations of structural adjustment programs (SAPs) enforced by the World Bank and the International Monetary Fund in the 1980s coupled with general economic liberalization. Despite other intentions, the failure of these policies has led to an increase rather than decrease of uncertainty for rural households (Arrighi, 2002; Bryceson, 1999, 2009b) and some scholars would even claim that “[t]he policies of structural adjustment...combined with global trade liberalization under the auspices of the World Trade Organization have been *the greatest contributors* to the current food crisis” (Bello, 2009, pp. 17, emphasis added).

Focusing on changes that need to occur at the site of smallholder farming also serves to advantage and naturalize privileged knowledge about best agricultural practices (i.e. the means) and the narrative of where countries should progress towards (i.e. the goal). Yet if we are to view singular conceptions of development as neither universal nor value-free (Forsyth, 2003; Forsyth et al., 1998) we can identify the salience given to scientific conceptions of food production and to Western conceptions of the development trajectory as part of ‘the development project’.

Specifically to sub-Saharan African agrarian development, we would also need to consider transformations since the late 1970s within a context of wider transformations of global capital. Giovanni Arrighi (2002) identifies a crisis of world capitalism in the 1970s, at the same historical time as a shift in food regimes as identified by McMichael (2009), that triggered responses from the then hegemonic powers in the United States to maintain their own power and prestige. And even in situations of transformation where industries and urbanization were bringing economic growth to previously agrarian, developing countries, it is argued by Arrighi (2002) that these processes had impacts that ultimately disadvantaged developing countries. For example, a demand for cheap industrial products and the emergence of the so-called Washington Consensus of the 1980s essentially eliminated the “development-friendly regime of the preceding thirty years [...] and Third World countries were invited to play by the rules of an altogether different game” of intensified world-market competition (*ibid.*, p. 23), that continues into the modern era burdened by crises of capital found throughout the world.

To summarize, where agricultural modernization frames African smallholder food insecurity as a problem of technologies and practices, and that development will follow an evolutionary path on which Africa is currently lagging behind, rather than a natural and value-free political process of technology adoption and a trajectory of modernization, this framing supports a particular ideological approach that is neither inevitable nor universally applicable. Focusing on problems in ‘Africa here and now’ also turns attention away from historical and global policies that continue to influence the situations and processes that manifest in rural Africa.

## 4.4 Concluding summary

The framing of agricultural modernization is historical and it embodies a number of contradictions. This chapter identifies the logic and political economic conditions from where the framing is derived, starting in late 19<sup>th</sup> century United States, paying attention to its developments in relation to African agriculture since the mid-20<sup>th</sup> century.

Contradictions embedded in this framing of the problems of and solutions to African smallholder food insecurity are presented accordingly. By highlighting proximate, quantifiable causes of food insecurity, agricultural modernization decouples problem and their logical solutions from wider social forces and from the contextuality of smallholder livelihoods. The chapter identifies contradictions in the way agriculture is placed in relation to the environment, in the conflation of food production and food needs, and in the promotion of private investment and commercialized agriculture that are subservient to the logic of capitalism. When opportunities for prosperity through agricultural modernization are available only to some farmers but that impact the livelihoods of all, the social patterns of who adopts technologies and the fate of non-adopters can reinforce and worsen processes of marginalization. Without appropriate opportunities available for surplus labor, the problem of food insecurity is moved instead of fixed, a process seen in the growing informal labor and living sectors in parts of Africa today.

Legitimacy of reigning institutions and knowledge is strengthened and naturalized in the context of a crisis. Studies from African development have shown how the formulation of problems and solutions can bring about inappropriate or even harmful measures in the name of solving the problem. By focusing on proven technologies and a predesigned trajectory of development, agricultural modernization naturalizes both the means and the goal of African agriculture, a process that might instead be understood as having multiple drivers and multiple pathways.





# Chapter 5: Observing discourse in action

## 5.1 Introduction

Up until this point, I have developed arguments for seeing food, food production and food security as being relational as much as they are material. I have also developed arguments for seeing framings of social phenomena as neither objective nor complete but rather subjective, partial and in the case of agricultural modernization, infused with contradictions.

The aim of this chapter is to move beyond texts and abstract arguments to investigate what can happen when discourses materialize through development efforts that lead to change ‘on the ground’ in people’s lives. This transition from text to social practice still fits snugly within the realm of a discourse analytical framework inasmuch as discourse, as presented in chapter 2, exists not only in the form of texts and talk but also as social action in multidirectional processes of producing and reproducing each other (see for example figure 2.1). By this multidirectional process we can consider how action-oriented development projects, rather than being merely vessels for implementing pre-existent discourses, aid in the creation and direction of those discourses.

This transition to more empirical material also extends what until this point has been theoretical arguments about agricultural modernization to include a contemporary application of this framing under analysis. I do this by using the Millennium Villages Project (MVP), a development project driven by the Earth Institute that is the substance of one of the three pieces of textual analysis in chapter 3.

In this chapter and the next, I will take the case of the MVP in Malawi in southern Africa to observe an example of how the framing of agricultural modernization is presently being actualized. Choosing this site among the

rich diversity of development projects in the world serves the purposes of this study in a number of ways. As was introduced in chapter 3, the MVP came into being in the mid-2000s as commissioned by the then UN Secretary General Kofi Annan to his chief economist Jeffrey Sachs to produce a plan for achieving the Millennium Development Goals (MDGs) (J. Wilson, 2013). The MVP thus maintains the goal of achieving the elimination of persistent poverty in rural sub-Saharan Africa through putting the MDGs into place – the MDGs being one of if not *the* most universally known and influential ideas of development for humanity as a whole and the “world’s biggest promise” (Hulme, 2010) to make our world a better place. The MVP has appeal to a broad audience by drawing on a multitude of theories and ideas, offering “something for everyone” in its approach to development (Carr, 2008, p. 338). It is this direct bloodline between the MDGs and the MVP which provides for a rather straightforward transformation of a well-known *idea* of development into a large-scale *effort* with little in the way of lag time or inertia, offering a rare opportunity to investigate the fluidity between ideas and practices – or to use the terminology of Critical Discourse Analysis, between discursive and non-discursive elements of society. The MVP is also an arena from which one can observe linkages between macro-level forces, such as mandates devised in New York, and micro-level social processes of place making and framing in recipient African villages. In other words, the nature of the Millennium Villages Project lends itself nicely to the methods of analysis adopted in this study, particularly Extended Case Method and Critical Discourse Analysis.

As this empirical part of the study is based primarily on fieldwork carried out in a village together with the people and processes existing there and then, I have experienced a great deal of fluidity in how my own questions have developed, been modified, and emerged as the study and my situational knowledge progressed. However, as a starting point several overarching inquiries have guided me, each as an articulation of what my chosen methods prompt and allow for in the context of this research. Generally my inquiries revolve around what happens “when places that have been imagined at a distance...become lived spaces” (Gupta & Ferguson, 1997, p. 40). In other words, how does the imagery of a successful, modern Millennium Village, designed based on an agricultural modernization framing, interact with the people, institutions and structures existent in a Millennium Village Project site?

When evaluating technological intervention in agriculture, it has been argued that local social structures, and the power that they ensue, are often overlooked by more tangible indicators of biophysical or economic conditions (Ho et al., 2009). As has been argued in this research and elsewhere, understanding the contextual and place-based relations of the people and the places on earth where food insecurity exists is critical. On the other hand, solely focusing on empirical evidence without a strong theoretical grounding runs the risk of remaining contextually bound and missing broader connections (Carr, 2006). To avert landing in either extreme (i.e. as only general, theoretical or only local, empirical) this discursive research aims to maintain a wide lens of analysis by weaving ‘the local’ with ‘the global’ and ‘the theory’ with ‘the practice’ in an attempt to highlight some complex relations of an otherwise seemingly straightforward normative challenge of smallholder food insecurity.

## 5.2 Context of the project and the places

How I specifically go about investigating these research questions will be illustrated momentarily, but first, we can start by getting some context to this study by expanding on the substance of the Millennium Villages Project and then expanding on what kind of situation it meets when implemented in Malawi and more specifically, in Mwandama.

### 5.2.1 The MVP

In 2005, the international NGO Millennium Promise was established by the Earth Institute “with a specific mandate to translate the world’s goals into tangible results”, committing itself to the realization of the Millennium Development Goals by their due date of 2015 (Millennium Villages, n.d.-a). Via the Millennium Promise as a platform and the United Nations Office for Project Services as personnel reinforcement, the Millennium Villages Project is designed to create arenas where “vision becomes action” through a mobilization of the MDGs in areas where extreme poverty is at its worst in sub-Saharan Africa (ibid.). The project, spearheaded by Dr. Jeffery Sachs as director of the Earth Institute, commissioned by the then UN Secretary General Kofi Annan, embraces what is claimed to be a new approach to

development by providing inputs into multiple sectors simultaneously as a way to help stimulate poor farmers to get out of the poverty trap and into commercial farm and non-farm economic activities (Millennium Villages, n.d.-b). A package of interventions are applied to recipient project villages to address challenges related to agriculture, environment, health and nutrition, education, energy, water and sanitation, infrastructure, community development and business and cooperative development (Millennium Villages, n.d.-b; Sanchez et al., 2007). The MVP is intended to be a demonstration of how to eliminate extreme poverty by using simple, low-cost, proven practical interventions through ‘big push’ efforts (Hyden, 2007) of capital transfers directly applied into the selected project sites dubbed ‘millennium villages’ (Millennium Villages, n.d.-b; J. Sachs & McArthur, 2005; Sanchez et al., 2007). The arrangement of a Millennium Village is rather a grouping of a select number of smaller villages referred to within the project as one village ‘cluster’, and initially there were 12 Millennium Village clusters in ten sub-Saharan African countries that, between the lot of them, are claimed to represent the farming systems used by 90 percent of farmers in Africa (Millennium Villages, n.d.-b). Looking specifically at the agricultural sector interventions of the project, they are meant to stimulate farmers to increase food production through the provision of improved seeds, fertilizers and agronomic training in an effort to diversify from subsistence into commercial farming communities (Sanchez et al., 2007). The MVP site included in this study is that of the Mwandama cluster in southern Malawi. The Mwandama cluster is subsequently divided (within the context of the MVP, but not otherwise distinguishable) into seven sections of varying size, that together represent 114 villages and an estimated 35,000 people, as visualized in figure 5.1.



**Figure 5.1: The structural set up of the Millennium Village Mwandama, Malawi**

The MVP enters each of its 12 project sites in sub-Saharan Africa with a conceptual package of technologies and practices designed to stimulate multiple sectors in the recipient societies, each society with their own particularities regarding cultures, values, institutions, practices, etc. As one of those sites having its own particularities, we can now look a bit closer at Malawi and consider circumstances specific to the country since Malawian independence in 1964.

### **5.2.2 Malawi**

Malawi is an overwhelmingly rural, landlocked country in southern central Africa, bordered by Mozambique to the east and south, Zambia to the west, and Tanzania to the north. Officially named the Republic of Malawi, the country gained independence in 1964 after 74 years of colonial rule as the British Protectorate of Nyasaland. Currently over 15 million people live in Malawi with an annual growth rate of 2 percent. Total fertility rate is lowering but still high by global comparison at 5.7 births per woman, and mortality rates also remain high due in large part to the widespread prevalence of malaria, malnutrition and HIV/AIDS, with an HIV prevalence

of around 10 percent in 2010 as calculated during the last nationally representative survey (Government of Malawi, 2014).

Around 84 percent of the population of Malawi live in rural areas and most depend on rain-fed smallholder farming on plots averaging 0.23 hectares per person (FAO, 2014b). Particularly in the densely populated southern region, the landscape is filled with small plots, mostly of maize, running edge to edge, in concert with expansive estates extending farther than the eye can see. Here in the estates lies the main source of exports of Malawi in the form of tobacco, tea, cotton, coffee and sugar, with burley tobacco accounting for about 80 percent of agricultural exports and 60 percent of national export value (World Bank, 2013b). The average Malawian diet is based heavily on maize porridge, or *nsima* as it's called in Chichewa, the national language of Malawi together with English. *Chimanga ndi moyo*, or, 'maize is our life', is a phrase that indicates the centrality of maize to a nation that is one of the highest per capita consumer of maize in the world, eating on average 293g/person/day (Ranum et al., 2014) and spending on average 40 percent of household food expenditures on it (FAO, 2014b). Mostly matrilineal (inheritance through female lines) but also patrilineal (inheritance through male lines) customary land tenure systems exist and are cultural practices that remain strong to this day (Berge et al., 2014).



**Figure 5.2: Petty trade at Limbe bus depot (left), Roadside charcoal for sale in Thondwe (right). Photos: author, 2013.**

Without commensurate opportunities for earning a living available in the cities, there is a growing prevalence of informal settlements and petty trade in and around major cities and towns, as seen in the images of figure 5.2. Such solutions tend to offer little in the way of durable, sufficient living conditions including access to improved water, sanitation and secure tenure (UN-Habitat, n.d.). These demographic trends are not particular to Malawi, but rather mirror a growing global phenomenon of ‘slumification’ (M. Davis, 2007), a demographic shift that has led to what some city residents whom I interviewed experience as higher levels of criminal activity in and around the major cities of Lilongwe, Blantyre, Mzuzu and Zomba (Zomba residents, personal communication, November 2012).

Located in the southern hemisphere at 13° S 34° E, Malawi has a sub-tropical climate with seasonal rainfall lasting from approximately November until March and a dry season, as can be seen in figure 5.3. However, as late as January 2015 variability of the rainy season resulted in delayed rains that, when they finally arrived nearly two months late, came as a downpour resulting in massive flooding. Over one million people have been affected with an estimated 230,000 people having been displaced as of March 2015 (UNDAC, 2015). Besides the current state of emergency, the ensuing destruction of over 49 thousand hectares of agricultural land makes famine a looming threat for the country in the coming months (ibid.).

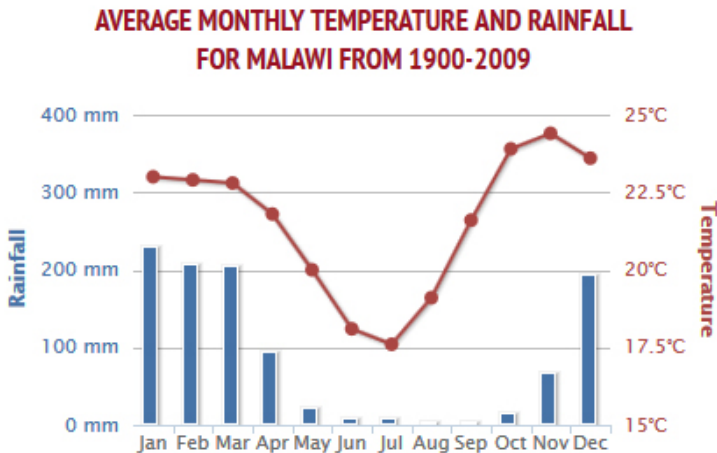


Figure 5.3: Average temperature and rainfall in Malawi. Source (World Bank, 2015)



Pressure on the land is particularly high in the southern, more densely-populated part of the country. At just over 2 kg/ha, average cereal yields in Malawi in 2013 were low relative to world averages of ca 3.8 kg/ha but slightly higher than in sub-Saharan African averages of ca 1.4 kg/ha (World Bank, 2014b). The limited productivity of the Malawian farming system has been attributed to a number of factors such as erratic rainfall, chronic malnutrition, unfavorable policies towards smallholders in terms of land, labor and markets (Mhone, 1992), nitrogen-poor soils (SOAS, 2008), shortage of land relative to rural population (Peters, 2006), politics of soil conservation measures starting in the colonial period (Mulwafu, 2011), minimal or ineffective agricultural research and extension (Peters, 2006), as well as institutional arrangements internal to the peasant organization of production (Green, 2005).

Some of the current challenges facing Malawians include rising living costs due to inflation and devaluation of the currency kwacha, fuel and forex shortages and unreliable or unavailable electrification leading to a high reliance on charcoal, inducing deforestation. Although relatively peaceful, Malawi has recently experienced bouts of social unrest and critique due to political oppression (not least in the education sector) and governmental corruption. Most notably is the 'Cashgate' scandal where in 2013, millions of dollars of state funds were siphoned to civil servants through illicit payments and money laundering, a scandal ultimately leading to bilateral donor suspensions and withdrawals, which is a serious situation for a country where 40 percent of the budget is derived from foreign aid (Jomo & Cohen, 2014).



**Figure 5.4. Malawi, with Lake Malawi in blue and Zomba district in red.**

Of the different countries that are involved in the MVP, Malawi offers something unique by way of the national program in place that supports farmers through seed and fertilizer subsidies. After years of longer-term trends such as the HIV/AIDS epidemic, economic recession, and “generally declining livelihood security at the household level”, a major food crisis erupted in the country in 2002 and again in 2005 (Barrett & Maxwell, 2007, p. 125). The late president Bingu wa Mutharika, having come to power one year earlier, in a bold act of political defiance reintroduced a national starter pack program of strong government subsidies of seeds and fertilizers despite IMF and World Bank policies stipulating the withdrawal of government interventions (Bello, 2009). Although first shunned by international donor agencies such as the IMF for distorting market forces, the national Farm Input Subsidy Programme of Malawi has been hailed by some (but not all – see (Chinsinga, 2013; Lunduka et al., 2013)) as a success story of ‘smart’ subsidies that fostered “the Malawi miracle” – an example for the rest of Africa to follow (Denning et al., 2009; GRAIN, 2012).

### 5.2.3 Mwandama

“Today, I call on every country to look closely at this success. It is a case study in what is possible, even in the poorest places in the world.” – UN Secretary-General Ban Ki-moon when visiting the Millennium Village Mwandama in May 2010 (quoted in Millennium Promise, 2011, p. 14).

Reaching Mwandama is most easily done using a van or a 4x4 vehicle, bouncing along the bumpy, hard packed red dirt road that leads to the village. While driving there, there is however also the constant presence of children and adults walking along the edges of the road as well as the occasional bicycle. Along the way you pass a Catholic church and school complex off to one side, some small clusters of households and the occasional woman or group of women sitting by the roadside selling cooking oil, mangoes or tomatoes, or whatever product is in season. One also passes by extensive tobacco fields, the main one being the Gala Estate where day workers are often present in the fields, and a lone pond with a manned pump house and a single irrigation line drawn from there to nourish the valuable cash crop. Despite barren fields and late rains, as was the case this late November day, just before planting season the tobacco had been in the ground since mid-October and was starting to grow well.

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Malawi is one of the few countries that was originally the site of two Millennium Villages – Gumulira and Mwandama. Gumulira, also known informally as ‘the Madonna village’ due to the pop singer star’s appearance at and financial support to the place, ended as an MVP project site in 2011 due to budgetary constraints (A. Daudi, personal communication, November 29, 2013) and was later taken up as a project site by the South Korean NGO Merry Year International (Merry Year, 2013). The currently running project is in and around the village Mwandama, located in the southern part of the country in the Zomba district of the Shire Highlands at 900-1200 meters above sea-level (see figure 5.4). Since the project’s inception in 2006, Mwandama has experienced a major lift in agricultural productivity, with maize yields increasing from an average of 0.8 tons per hectare before the project to an average of 4.5 tons per hectare for the first three years (Millennium Villages, 2010b).

The Zomba district is characterized by the five main tribes in the area with the main religions being Muslim and Christian (Blantyre City Investment Unit, 2013). In day to day living there is little in the way of strife or ethnic conflict inflicting the area. Mwandama is located in the middle of the district with Thondwe being the closest major reference point. The center of the village lies 6 km off of the newly furbished, nearly complete tarmac road that connects the hub cities of Blantyre (ca 50 km to the southwest) and Zomba (ca 20 km to the northeast). This makes Mwandama relatively well connected to markets, with Thondwe market (7 km away) functioning as the main market for both inputs and outlets followed by Nachikwangwala, a smaller market based right in the village.

With Mwandama being heralded by the UN as a success story of poverty alleviation to look upon, not just within the context of the MVP but of smallholder development everywhere, I turn my attention here to investigate this place as representing, in the words of Flyvbjerg (2006, p. 229), a critical case through its “strategic importance in relation to the general problem”, the general problem being the persistence of smallholder food insecurity and poverty in the world.

## 5.3 Contribution of this study

By maintaining a discourse analytical perspective and with power as my primary lens of analysis, this study provides an interpretation of the MVP directly from one of the project sites, thereby broadening a body of knowledge about the project that specifically investigates and interprets impacts on power (whether localized or broader) based on a recipient community. Save for work of Diepeveen (2008), Wanjala (2013) and Wilson (2013, 2014b), scholarly literature in this area is rather thin and knowledge of the project comes primarily from the project itself.

This is arguably a rather crucial point when critically examining the Millennium Villages Project – considering *how* we know *what* we know about the project. The MVP itself has produced a variety of forms of documentation about how it came about, the multi-sector approach it takes, and the milestones of its achievements. These modes of communication include peer-reviewed articles as well as proclamations, videos, and personal narratives from recipients of the project about different ways in which the

MVP has improved their lives and empowered them individually, as a family or as a community (see for example Flood, 2011; Millennium Villages, 2008, 2010a). The project has also produced information in the form of progress reports since its inception on indicators relating to e.g., malaria, child health, school attendance and agricultural yields; all indicating rather substantial quantitative improvements. One can also find academic and journalistic discussions that both promote the concept of the MVP (Denning et al., 2009; Sanchez et al., 2007) as well as those that raise critique of the project (Carr, 2008; *Nature* editorial, 2012). More on this scholarly debate will come in chapter 6.

What this study contributes therefore is an investigation of the [re]formation of values and processes that actively address normative ideas that can hinder the capacity and agency of particular people or groups in society (Diepeveen, 2008; Sen, 2009). By approaching food security not through an investigation of yields per hectare but through human relations that contextualize the lives of people whose food security is at risk, a goal of this research is to attain a deeper understanding of a problem and, perhaps, insight as to why it continues to vex humanity despite so many years and resources being invested in solving it.

## 5.4 Field methods in Mwandama

To conduct the study of power in Mwandama, I have relied upon several methods before, during and after the time spent in the field. In this section I provide an elaboration of my strategies during different phases of the research process in an attempt to highlight not only the final product of ‘*this method*’, ‘*that criteria*’ or ‘*the conclusion*’ but to give space to and honor the processes through which my ideas and approaches have evolved.

Since I use power as a lens of analysis, research in Mwandama was both deductive, or theory-driven but also abductive, or unravelling in situations whereby inquiry that is neither theory-bound nor data-bound is used in order to learn something new (cf. Brinkmann, 2014). To increase my understanding of the project and how it has been received in the community, I have used accounts of people living in or having intimate expertise of the project and the project village in order to access “the concepts that participants use to structure their world, and the ‘theories’ they use to account for what goes on”

(N. W. H. Blaikie, 2009, p. 90). In recognition of the multiple truths and the plurality of knowledge in the world (Dei et al., 2000), I entered the field without a strict set of guidelines or an intention to ‘extract’ knowledge in a formalized way, allowing me to be open to emergent issues and situations.

As a social scientist undertaking a qualitative study in a setting that I have little first-hand knowledge of, I have inevitably ended up relying on some pre-established conceptions, which include “things we scarcely know we ‘know’”; ideas that are “just part of the baggage of our ordinary lives, the knowledge we rely on when we aren’t being scientists” (Becker, 2006, p. 13). While personal biases are present in all types of research, hermeneutical qualitative studies do not attempt to reduce biases but rather strive to uncover and include them (Carlson, 2010). Reflexivity about my own influences on the design, carrying-out, and interpretation of results has been a conscious part of the process of this fieldwork, although unacknowledged influences are surely present as well.

#### **5.4.1 Pre-Mwandama preparations**

In the months preceding the fieldwork in November of 2013, I drew from a wide range of sources, looking for information and support that would facilitate my access to the people and the project I was keen on learning more about. Firstly, I had experiences from my own exploratory visit to Malawi in November of 2012 to help in attuning my fieldwork to some of the particularities, whether cultural, pragmatic or logistical, that can make fieldwork that much smoother.

Although the approval of my presence in the country and specifically Mwandama was only a condition to be arranged through the Malawian government, I chose to establish contact with the head office of the MVP in Zomba to inform them of my intentions and ask for their consent in staying in the project village and in speaking with staff members. This process of gaining approval ended up becoming especially cumbersome and exposed a dynamic of the program that I will return to in my analysis in chapter 6.

In an early attempt to throw out a wide net and learn about current events in the country, I started by visiting web-based news sources from Malawi such as The Nation and Nyasa Times. I also searched through articles and blogs of scholars who have either studied the MVP in various capacities or had a connection to Malawi. Through this I became aware of an NGO that had experience of working with the MVP in Mwandama some years ago, and

initiated contact with them. Through that connection opened up a wide range of both Malawian and non-Malawian contacts that were supportive in different capacities and at different phases of the research.

In developing the analytical focus of this fieldwork study I utilized the group of scholars at my research institution with common interests in subsistence agriculture systems. Based on input from this group I organized the concepts I wanted to investigate in Mwandama into a table. In the table my inquiries were categorized according to 1) the academic questions I had, 2) the justification as to why that would be an important question to ask, and 3) how that question could be formulated in a way that captured the point but was accessible and suitable for the context within which it would be asked. I further centrifuged this table into respective categories by considering which topics I should preferably discuss with farmers, which should be discussed with MVP representatives, and which were suitable for a broad range of respondents. The table was not exhaustive nor did I intend to address each question in a structured and rigid way, rather it functioned as a guideline for approaching my upcoming conversations once in the field.

During this time of preparation I constantly had to consider how to maneuver through the methodological challenge of exploring something as tacit and contextually sensitive as relations of power – relations that often exist ‘below the surface’ and that belong to a sphere that is not necessarily open for public discussions and analysis. In addition, I was concerned that my stay in Mwandama would be too brief for me to even know what would be important to discuss in order to better understand social dynamics there, as well as to establish any sort of personal relationships of trust where people could feel comfortable enough to be forthcoming and open with me. I adopted two methods that recognize this dilemma and that can serve to reduce (although never eliminate) the impact of innate challenges of qualitative fieldwork.

The first was a method used and introduced by a colleague of mine, where questions may be posed as hypothetical scenarios using ‘what if’ questions in an effort to remove pressure on the respondent who may otherwise consider the personal implications of speaking about his or her own experience in a particularly negative or positive fashion. Secondly, Edward Carr’s (2010) recognition of the place of ‘the foreign white researcher’ in a preexisting narrative can be seen as a first step in minimizing or shifting the embedded uneven power relation that field research such as mine would implicitly imply. In my case I attempted to contest and minimize

this role by purposefully and consistently identifying myself as a student rather than a researcher, again with the intention of emphasizing the respondent's role as 'knower' and as someone who could in all earnestness teach me rather than the other way around.

Through the assistance of a former colleague of mine, I hired a research assistant who had experience working in the area around Zomba and who also spoke all of the languages we could potentially find in Mwandama, namely Chichewa, English and Yao. Before entering Mwandama, my assistant and I spent several days together in Zomba in preparation for fieldwork, including discussing research methods and intentions and, perhaps most intricately, discussing interpretations of the concepts we intended to explore. Particularly, the terms 'food security', 'innovation', and issues pertaining to 'representation' needed to be disentangled and contextualized to the best of our capacities.

#### **5.4.2 Respondent selection**

Once in Mwandama, I relied primarily on nonparticipant and participant observations (i.e., by both remaining as observer and participating as an active member, respectively), as part of an Extended Case Method as well as narrative walks and more traditional semi-structured interviews (see Burawoy, 2009 and chapter 2 of this book). My sample design evolved in stages and was flexible in nature. Mostly, this was due to the need to make decisions on-the-spot without the possibility of contacting respondents in advance. The exception to this was in the cases where respondents were based within a relatively close vicinity to the family we were staying with in the village and where we were able to get word to them and plan a day and time to visit in advance. However, not a single interview or meeting was arranged prior to our arrival at the village. Purposive sampling was used to identify and approach individuals and groups in an effort to include a wide variety of experiences (Teddlie & Yu, 2007) in order to be exposed to multiple interpretations of the project.

In some instances those who were interviewed were chosen based on convenience sampling, i.e. drawing on a sample of people that are easily accessible and willing to participate (cf. Teddlie & Yu, 2007). This was done due to arising circumstances regarding the opening of the local grain bank in the center of Mwandama (more on this grain bank in chapter 6). On the days when we were fortunate enough to talk to farmers of the MVP that travelled



long distances to purchase maize from the grain bank, we selectively invited some them to talk to us individually in a semi-structured interview format, lasting about 15-30 minutes each. We were able to use this approach on a number of days in the mornings, giving us the rare opportunity to hear the experiences of farmers living in more remote villages, voices that otherwise would have been missing from my material due to the long distances that we would have needed to travel to reach each of these places.



**Figure 5.5 Eligible farmers buying maize from the grain bank (left), Typical interview set up (right). Photos: Author, November 2013**

Besides this group of respondents, my field assistant and I were able to discuss with staff members of the project, including coordinators of some of the different sectors: Environment and Agricultural, Community, Monitoring and Evaluation, and Cooperatives. Particularly with the Environment and Agricultural coordinator we were able to gain clarity about which interventions that ‘belonged to’ the project. This clarification was necessary since some interventions taking place in Mwandama were not initiated by or financially supported by the MVP, yet other organizations were using the MVP platform while still funding their own interventions. Sometimes the distinction as to whose intervention it actually was became a bit indistinct due to various levels of cooperation. Yet from this information, we sought to talk to as many people as we could who were (1) included in the MVP interventions, (2) excluded from the MVP interventions, (3) MVP ‘success stories’ and (4) experiencing struggles or tensions due to the MVP interventions. These individuals and households were targeted with the help

of MVP staff, grain bank staff, our host family, and through dialogue with previous respondents.

### **5.4.3 Interview practices**

Having an abductive strategy, my intention was to get the accounts of participants and hear their experiences of the project through their words, on their terms. This strategy does not however imply the passive social researcher who just follows people around with a pen and paper! It requires making inquiries, disrupting routines or throwing a kink in otherwise stable processes in order to, as Blaikie calls it, “encourage reflection” on constructed meanings and interpretations (N. W. H. Blaikie, 2009, p. 90). In order to build rapport and to participate in the community as much as possible, I was fortunately able to arrange to stay with a family in the village Mwandama for much of the time. And although my first exploratory visit to Malawi in 2012 included only a brief one-day visit to the village, some individuals upon my return in 2013 said they recognized me from that day, which I believe helped support my legitimacy and interest, and granted me some amount of ‘street credit’ that helped in being put in contact with a host family and a wide range of people to talk to during my stay. The anonymity of respondents, besides those holding official positions within the project, have been upheld in all instances where I was not explicitly given approval for making personal references.

A common interview practice I had when conducting semi-structured interviews with farmers from distant villages (as presented in the previous section) was to be sure to shut off and put away any electronics besides a mobile phone. We were allowed to sit in a room of the MVP complex that was not occupied, having in it a large desk with a comfortable office chair on one side and a long bench on the other side. My research assistant and I always offered the comfortable chair to our respondents, giving them the position associated with dominance. As often as possible I introduced myself in rudimentary Chichewa and, even though speaking through the interpretation of my assistant, addressed my questions directly to the respondents before turning to my assistant. Only upon completion of the interview did we offer a 1 kg bag of sugar as remuneration for their time without advertising that there would be any form of compensation from the beginning.

My intention was to carry out most dialogues using narrative walks. As previously introduced, narrative walks serve to reduce the asymmetrical power relation in interview situations by physically being in areas where interviewees are in the position of 'knowers', and where dialogue can be accompanied with and strengthened by seeing or interacting with the landscape that is part of the topic of interest (Jerneck & Olsson, 2013). When discussing with farmers at their homes or their fields, there were however certain customs and conditions that limited the number of dialogues that occurred as narrative walks. Most commonly, upon reaching the individual at his or her home we were offered a rolled out straw mat to sit on, even before agreeing to engage in any discussion (see for example figure 5.5). Another limit to narrative walks was the sheer heat of the days, over 34 degrees C most days, where walking in the fields without shade was not a desired activity for anyone and the time of the year just before planting was perhaps less visually informative than when the fields are planted. Therefore, narrative walks were mostly confined to cooler places around the household or sitting in the shade.

#### **5.4.4 Strategies for analysis**

A combination of insights from field notes, interviews, reports and my own reflections have created the bases from which analysis has occurred, relying on tools used within qualitative research.

I was particularly adamant about writing everything down from the moment I started the trip to Malawi, recording impressions, emotions and reflections starting in the airport in Copenhagen. While in Mwandama I took moments 'in between' to transcribe my field notes from interviews and from my general impressions rather than saving this task until after leaving the village. This was done at least once a day but often two to three times per day. Adopting this process of withdrawing at intervals perhaps reduced the quantity of discussions I was able to engage in. However, it is my conviction that by adopting this process the quality of the material became increasingly comprehensive, as I was able to return to people I had talked to within a short time span in order to revisit or clear up any pieces of information that felt unclear or that could be approved by respondents as legitimate interpretations of our conversations. I read through my field notes numerous times, and from this I gathered some key emergent themes that appeared throughout, and I have structured the analysis in chapter 6 based on these emergent themes.

A limitation I am particularly conscious of arises due to the short time spent in Malawi and Mwandama. In 2012 I was in Malawi for 10 days for an initial preparatory visit, and one year later in 2013 I was in the country for three weeks. Short-term exposure to the site of field observations creates the potential for possible misinformation or distortions (Baxter & Eyles, 1997, p. 514), but by maintaining email contact with some of individuals with whom I worked or discussed with as part of the project, I have had the opportunity to check up on and address issues even long after returning to Scandinavia.

### **5.4.5 Producing knowledge from fieldwork**

My 'reading material' for creating understanding in the following chapter has been both from reading texts but mostly from reading landscapes, experiences, stories and events during fieldwork in Malawi. In 2012 I was conducting fieldwork between November 27<sup>th</sup> and December 6<sup>th</sup>, and in 2013 I was there between November 14<sup>th</sup> and December 2<sup>nd</sup>. During my first visit I spent the majority of my time in the city of Zomba with the intention of testing the legitimacy of the type of research and research questions I wanted to pursue. For this I met with scholars and practitioners, mostly from Chancellor College of the University of Malawi, who could advise and comment on the research questions and approach I intended to follow. The aim and character of the second field visit was rather different, as my intention was to spend as much time as possible at the site of the Millennium Villages Project in Mwandama together with a research assistant. Most of the time during this second round was spent talking with a variety of people who are living and working directly with the project in the village of Mwandama.

While doing fieldwork, it can be argued that a task of the researcher is to consider to what degree she can relate and extend local experiences to something beyond the local, to significantly broader social relations, processes and conceptualizations that have their point of departure far away from the concrete place and time of fieldwork. In accordance with structuration theory, agents both constitute and are constituted by structures in their lives, meaning that social forces exist in the moment of their recreation by agents. The dialectic process of mirroring and shaping that exists between structures and agents can appear so natural and unquestioned that it becomes as ubiquitous as air yet as seemingly impenetrable as a cement wall when investigating it. A classic example of this dialectic process, especially present in agricultural communities, is that of gender roles

in household reproduction. The practice of women and girls being assigned the task of fetching water for example, often an extremely time-consuming and laborious task, is a local experience of those women and girls doing the fetching. Powerful household norms of roles, national and international patterns of patriarchy and historical conceptions of the inferiority of women weave together and can lead to this behavior being taken for granted and naturalized. Yet, the act of engaging in that behavior (going to fetch water) does not challenge these different forms of institutions and thus serves to recreate and reinforce the roles and ideas that adhere to them. So the single act of fetching water has linkages that are as local as they are national, international, historical and abstract.

Within qualitative work, “experiences and meanings are assumed to be largely bound to the time, people and setting of the particular study”, or idiographic (Baxter & Eyles, 1997, p. 515). Yet despite this contextual meaning of things, qualitative researchers can extend experiences and lessons to include nomothetic processes that may seem abstract, distant and out of context from the place and time of study, but which are arguably as influential as the most local of things. So as messy and muddled as this relationship between structure and agent may be – and the relationship between various scales and periods of influence – it is precisely these types of relations and representations that I argue to be pertinent for getting to grips with the persistent challenge of smallholder food insecurity.

The pursued design of this study does not allow for nor does it have the intention of having direct transferability to contexts outside of Mwandama<sup>4</sup>, although my findings echo recent empirical findings by Japhy Wilson from the MVP in Uganda (2014a). What this work does intend however is to lift out micro processes of people living and working in Mwandama, in relation to the MVP, and explore connections to macro processes of the global food system, national and international framings of agricultural modernization, and power dynamics of smallholder farming.

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<sup>4</sup> Although, the MVP’s top-down approach might promote similar processes and experience in their other project villages.

## 5.5 Concluding summary

Critical discourse analysis extends all the way from texts to social practices. This chapter gives an explicit account of the contexts and my preparations for and research practices of observing discourse in action. As an example of agricultural modernization in a development project, the Millennium Villages Project (MVP) in Malawi is the site of my field research in this study. I give particular account of how I approach some of the characteristic qualitative research practices and challenges as part of fieldwork in Malawi, including strides to maintain research significance, relevance, rigor, credibility and ethics.



# **Chapter 6: Confronting the Millennium Villages Project in Malawi**

## **6.1 Introduction**

November can be an interesting month for a farmer in Malawi. As a maize farmer, with maize being the absolutely most essential crop, it is now planting time. Probably something secondary such as soya beans, pigeon peas or cassava will be planted along the ridges or slightly later in the growing season, to avoid disturbing the maize. They have prepared the fields and have recently acquired some hybrid maize seeds for planting and hopefully some top dressing and basal 23-21 fertilizer. If they didn't receive fertilizer from the government or an aid organization or do not have enough money to buy it, the harvest will probably be smaller, but they'll plant maize anyway and use some kind of manure mixture to coax a crop from the old soil. In November they stand poised, ready to take to the fields once enough rain has come to give the soil a good soaking. At some point during the month the sky seems to promise a downpour, then the first drops come and perhaps even continue to fall heavily through the darkened sky. After an hour of moisture treatment, the dehydrated ground that has been dry for half a year has already absorbed every drop yet shows no sign of dampness. The hot sun and clear skies return. That was not enough rain. They wait. The family grain bin is starting to get low. November is almost over, the rains are late. Once they do plant, these next few months of waiting for the harvest might be tough. In February the price of buying maize in the market could be even 3-fold what it is today. It will probably be out of reach. And there's no guarantee that there will be enough for sale, even if they did have the money to buy it when



national or private traders come to market. Everything depends on the maize. And the maize depends on the rains. And the rains have still not come.

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I've been fortunate enough to twice spend time in Malawi and specifically Mwandama, walking the same roads, engaging in the same pastimes, eating the same foods, and waiting for the same rains in this now unpredictable but so crucial month of November. Each time I've stayed past the end of November without experiencing that first vital soaking of the earth. This hypothetical scenario above is my own, sewn together by the discussions and experiences I had in Mwandama where the phrase *chimango ndo moyo* – maize is life – has a particular stronghold. The presence of this rhetoric is undeniable in this part of Malawi where, even before the seed has been planted in the ground, every available nook and cranny of land, including ditches along roadsides is prepared in its striking ridged pattern where maize will be planted and, by God's grace, grow.

I came to Malawi for fieldwork to confront the Millennium Villages Project (MVP) at its project site in Mwandama. While there, I did not find any obvious social movements or public responses that were critical to the project. No banners, no Twitter, no marching in the streets. Only in conversation with other researchers familiar with the project did I find any signs of concern that the project may have some shortcomings. Otherwise, in any other conversation I had, the person had either not heard of the project (this was the case surprisingly often, even in Zomba where the MVP headquarters was located) or if they had, they did not have a particularly strong opinion on it. Those involved in the project however, from office security guards to drivers to project managers and, most importantly, to recipients in Mwandama, showed great amounts of gratitude and support, being able to point out numerous improvements brought about by the project.

Big-time celebrities such as Bono, Angelina Jolie, Brad Pitt and Madonna have given the weight of their public support to the project, and the coffers supporting the project, including George Soros, Nestlé and Unilever, have made the MVP a powerful presence on the continent for a decade, with massive financial support in its wings. Most notably, the Islamic Development Bank (IsDB) in 2013 announced it will offer 104 million USD to finance projects in eight African countries, including the scaling-up of some current MVP countries and establishing a Sustainable Villages Program

in new countries (Millennium Villages, 2013a), all in collaboration with the Earth Institute to keep the momentum going.

On what grounds then, one might ask, do I base my critique of a project that in its most apparent forms is a welcome contribution to the development of a poor rural community in Malawi? Am I just searching for fault or ‘thriving on pessimism’ as Jeffry Sachs might say (J. Sachs, 2006) to something that is otherwise well received and bringing needed improvements to the lives of many people?

We may recall that poverty and by extension food insecurity is more than what meets the eye (or belly for that matter), and that power exists and can be exercised in multiple dimensions. By using interpretations of power broadly and of power in smallholder farming specifically, as presented in chapter 2, the intention with this investigation is to see how the Millennium Villages Project, through mobilizing various resources at its disposal, impacts the food security of communities as indicated through its impact on relations of power throughout the project. And as William Easterly urges us, “we have to be tough on the ideas of the Planners [i.e. advocates of traditional aid], even while we salute their goodwill” (Easterly, 2008, p. 2)

The MVP boasts one of the largest multi-sector development efforts present in sub-Saharan Africa today with over \$250 million dedicated in the original budget (\$25 million annually over 10 years) (Millennium Promise, n.d.) and a strong discourse of development of the MDGs at its back. As an interventionist project and especially as one of this caliber, the project has an undeniable position of influence and power. The directives and actions of the project matter. The inherent power of the MVP exists in multiple arenas and in all types of relations they enter in to, even when – or perhaps *especially* when – these relations of power are not acknowledged and reflected upon as part of the process through which intervention takes place.

This chapter presents stories and lessons that have unfolded and the processes I’ve witnessed as part of my fieldwork in Mwandama. It concludes with a section that integrates lessons from my own work and things I’ve learned along the way to a broader discussion about the MVP’s role in African development.

## 6.2 Fieldwork findings

From the numerous discussions, interviews and casual conversations I had as part of doing fieldwork in Malawi (broadly including preparations, in transit, on site and virtual dialogue afterwards), a number of emergent categories have materialized from my field records whereby the MVP plays a significant role in the way power is used or impacted through the mobilization of its resources.

Discourse analysis, as this step of the research is a crucial part of, is concerned with the “potential importance of absence”, while at the same time not “ignor[ing] the obvious” (Wood & Kroger, 2000, pp. 91-92). And as even *non-action* is a type of action, recalling for example Lukes’ (2005) dimensions of power from chapter 2, I have used a categorization of analysis that divides findings based on (1) processes that are actively and intentionally initiated by the MVP and (2) processes to which the MVP is indifferent towards or lacks engagement with and in so doing supports an implicit order of things. I start by identifying the process or phenomenon at hand and how I relate to it as part of this research project (i.e. through literature reviews, interviews, observations, etc.). Then, using the power framework established in chapter 2, I expand on the presence of and mobilization of power and what this implies in regards to power features of smallholder farming in the context of Mwandama.

### 6.2.1 MVP setting the agenda

Inherent parts of any society are the continuous processes of meaning-making and place-making, processes that foster a sense of belonging through constructions of locality and identity. These processes can function through stated or implied rules that make us, *us*, something distinct from *them*. Defining what it is that *we* do, what *we* eat, how *we* communicate, etc. It is now rather well understood within ethnographic studies that these processes do not happen in isolation, and that cultures, places and identities are fluid concepts constantly under construction (cf. Gupta & Ferguson, 1997).

For recipient societies of interventionist aid, which the MVP is an example of, this process of creating meaning and identity becomes in many ways appropriated or at least dominated by the influx of aid resources, whether those resources are material, facilitative or ideological, and whether

this is an intentional process of creating meaning or not. For example, the identity of being a ‘millennium villager’ or of belonging to one of the seven sectors, or as a household in need, are introduced constructions of identities that become the basis for receiving or being denied certain privileges from the project, thus become part of an identity that has salience in Mwandama. And with the intention of the MVP being the transformation of the recipient society from what it is into something presumably better, this intention assumes that the lives and identities in that recipient society are somehow wrong, invalid or inappropriate (cf. Long & van der Ploeg, 1989).

Gupta and Ferguson (1997) remind us that “the establishment of spatial meanings – the making of spaces into places – is always implicated in hegemonic configurations of power” (p. 8) and are not specific to development projects. Therefore, this investigation of the influences of the MVP on Mwandama does not presuppose any sort of ‘pure’ or ‘true’ identity of the village before its arrival. Yet we would do well to recognize the relative ‘weight’ that a decade-long project of the magnitude of the Millennium Villages Project might assume in the kind of identities that become salient, and in processes that leave other identities by the wayside.

As a first general categorization of analysis, I highlight processes and phenomena whereby the project, through implementing an agricultural modernization discourse, mobilizes resources that in the situations presented here have negative or contradictory implications for farmers. This is done through affecting the capacity of others to act and mobilize their own resources (e.g. their knowledges, voices, and capacities to farm) in relation to the resources of the project. Three sub-categories are included below.

### *The “rendering technical” of agriculture*

Borrowing a term from Tania Murray Li (2007), rendering technical is a practice that “confirms expertise and constitutes the boundary between those who are positioned as trustees, with the capacity to diagnose deficiencies in others, and those who are subject to expert direction” (p. 7). As a top-down, science- and technology-based intervention project, the MVP promotes the “subsidized provision of improved seeds of high-yielding crop varieties or hybrids, the necessary amounts of mineral and organic fertilizers, and training on best agronomic practices to eliminate hunger months and generate crop surpluses” (Sanchez et al., 2007, p. 16776). Observations of and discussions about this kind of intervention in Mwandama were consistent with the objectives in the above statement and in numerous project reports –

whereby the problem of low soil fertility was presented as a lack of resources (technologies, knowledge), and the dissemination of those resources from elsewhere was the solution.

Although essentially all farmers in Mwandama were continuing hoe-based cultivation with little to no mechanization, the integration of science-based practices and inputs were in the form of hybrid maize seeds and inorganic fertilizers. During the first two years of the project all farmers were given these inputs and in subsequent years, only certain households were provided inputs based on surveys carried out by the project “to determine baseline MDG initial conditions and targets to meet the MDGs” (Sanchez et al., 2007, p. 16780).

To be sure, when analyzing the MVP approach to increasing yields, it is not the intention to increase yields *as such* that is being explored. “Yield increases in Malawi’s maize production are long overdue” (Smale, 1995, p. 820), a sentiment reflected in interview responses claiming that recent yields did not even cover most household consumption needs for more than a few months of the year. Rather, what I problematize is the normalizing of science and technology as the privileged knowledge about and practices of farming. This focus strengthens the idea that best agronomic practices inevitably originate from outside of the community, whereby local knowledge and experiences become systematically demoted to a standard of ‘backwardness’ (van der Ploeg, 1990).

As discussed in chapter 2, an inherent feature of smallholder farming is the know-how and experience of farmers themselves that is often in the form of non-scientific, context-based knowledge and practices. Despite claims of contextualizing interventions through a bottom-up, participatory approach (Kanter et al., 2009; Sanchez et al., 2007), the MVP instead invites farmer to participate in a process whereby the terms of interaction are essentially already determined. By not recognizing and integrating this ‘local knowledge’ as part of context-based development, we can draw parallels to both the first and second dimensions of power (Lukes, 2005; and chapter 2 of this book) where the power of one agent, seen as their capacity to mobilize their own resources, is diminished due to the intervention of authoritative expertise enacted by another agent. As the more powerful actor in a donor-recipient relationship, the ideological and managerial values of the MVP are given salience over the ideological and managerial values of Malawian farmers. Forums for interaction are already contingent upon mandates of a project design that excludes input based on the non-scientific knowledge and

practices of recipient farmers. Therefore, people in Mwandama become essentially recipients of knowledge imparted, processes by which their own knowledge resources become suppressed, or in the long-term, lost.

We can even break down the categories of agents further and find similar processes of power structures reinforced through this action of reifying the role of science and technology in agricultural production. Accepting that human-environment interactions and processes are gendered (Robbins, 2012), and that there is an identifiable gendered organization of land and labor in subsistence farming (Steen, 2011), we can also consider whose priorities become advanced when science and technology become the salient features of food production. As presented in chapters 1 and 2, women are often marginalized in agricultural societies due to structural biases at all levels (Jacobs, 2013; Stamp, 1989) and improved crops and management systems in Africa have not been adopted by women to the extent as they have by men (Doss, 2001, 2014).

Recognizing and integrating local knowledge as part of context-based development would by no means be a simple task, and not either a fail-proof way of approaching development. There is an ongoing debate and challenge even within those advocating for recognition and integration of ‘local knowledge’ into rural development strategies about what that integration would actually mean, and how it might occur without hijacking or reifying local knowledge as *the* truth (Scoones & Thompson, 1994; 2009 and section 2.2.5 of this book). Yet it is arguable from a power perspective that development efforts would need to recognize and even foster the everyday nature of the multiple processes through which farmers make decisions or adaptations based on the contextuality of their own lives. Drawing explicitly on dimensions of power again, we can consider how the “ruling ideology presents the interests of the dominant class as the interests of all” (Burawoy, 2009, p. 58), making certain resources seem apolitical or inevitable through 2<sup>nd</sup> and 3<sup>rd</sup> dimensions of power that might rather be seen as part of hierarchical and oppressive structures in society.

### *An island of development*

The MVP model follows a classic interventionist discourse, whereby projects are viewed as having clear time and space boundaries (Long & van der Ploeg, 1989, p. 229). Through applying proven technologies and best-practices to predetermined problems (Sanchez et al., 2007), we can see how the MVP approaches a project community almost as if it were a universal version of

itself, devoid of its own historical and contemporary contexts and of parallel processes that are fluid and dynamic.

In this section I highlight dynamics that emerged from the application of proven technologies and fixed solutions in Mwandama. Each situation is in relation to the risks attributed to climate change to the livelihood of smallholder farming.

Anticipated impacts of climate change on agriculture are well established within the climate science community. The Intergovernmental Panel on Climate Change (IPCC) says that in Africa, climate change will “amplify existing stress on water availability” while also claiming that “increasing temperatures and changes in precipitation are *very likely* to reduce cereal crop productivity” on the continent (Niang et al., 2014, p. 1202). With these indications, those whose livelihoods are dependent on growing rain-fed maize year after year can be considered to be particularly vulnerable.

In theory, the MVP recognizes this unsustainable situation for the rain-fed maize smallholder. Transitioning into commercial enterprises, away from smallholding, is part of the intended outcome of the project yet, as discussed in chapter 4, this transition is not designed to be attainable by everyone. The method used by the MVP to propel farmers into income-earning activities has been through the administration of subsidized maize seeds and synthetic fertilizers to boost maize yields. Rather than facilitating the transition of farmers into alternative production systems that are more resilient, the project has during a ten-year period served to maintain and reinforce reliance on a practice that risks leaving farmers and their assets more vulnerable to anticipated stresses from climate change. While access to maize seeds and fertilizers were very welcomed and indeed became the most obvious association people had with the project, we may analytically take a step back and consider how this practice feeds into vulnerability scenarios whereby smallholders will with near certainty experience worsening conditions when they are dependent on the production and consumption of cereal crops.

Again, this is no simple task. For example, informal social support systems in Malawi still can depend tacitly on the growing of maize. As it was presented to me, a farmer who grows maize will be eligible for support from family, neighbors and friends if the harvest were to fail. Yet if that same farmer had abandoned maize production to plant something else instead of maize, he or she would risk becoming isolated from that same support system upon crop failure (Zomba residents, personal communication, November

2012). To work with these types of societal norms and codes would require an approach where not only the technology is made to work but that it is designed to be in tune with the society more generally.

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We can now look at a separate yet related situation from fieldwork where the MVP did in fact include interventions in the project that take the risks of climate change into account by planting trees. Tree varieties include mango and orange trees as well as varieties that are known for their deep rooting systems that do not compete with crops for water near the surface but instead draw up nutrients and moisture from deeper layers of soil. Some of the trees were planted on vulnerable pieces of land in the village to promote soil stabilization and to absorb carbon from the atmosphere, adapting to and working to mitigate climate change.

One such vulnerable piece of land in Mwandama was on a hill that, as an outsider, became an identifying feature for me in the otherwise relatively flat landscape. Upon this hill live several families, some of whom are also cultivating the land on the hillside as can be seen in figure 5.6. As part of the MVPs initiative to combat runoff and the loss of topsoil, trees were planted on their fields and the families were instructed to stop cultivating the land in order to protect it. In discussions with MVP staff, cultivation on the hill was framed as people planting maize there in an effort to expand their land under cultivation in such a way that, over time, crept up along the hillside into vulnerable areas, increasing the loss of topsoil to runoff.

While slowing down topsoil runoff was a welcome input, the households I spoke with that were impacted by this tree planting framed the intervention as one where decisions were made without their involvement and that put them in a situation where they were forced to disregard the project in order to ensure the basis of their livelihoods.





**Figure 5.6: The hillside with contested landuse in Mwandama. Photo: Author, November 2013.**

The people I spoke to who were using this land asserted that the land they were cultivating on the hill was the only farming land they had, which had been inherited from their parents and had been under production for a long time. Planting something to reduce the loss of topsoil was a welcome measure, but the placement of the trees cast shadows on their crops, keeping them from growing. And although compensatory land was offered by the project, the affected families did not feel confident that they could rely on this land being made available over the long term. Since these families were completely dependent on the land for survival, accepting terms of new land is not a decision that they could afford to take lightly. Their concern was that the agreement for newly provided land could be withdrawn by the project and they would suddenly be left with nothing.

When these families refused to remove their fields from the hill, the MVP called in a Traditional Authority (TA); a regional-level person in the chief system of rule. The TA subsequently utilized his authoritative right, an authority system of legitimacy that in Malawi is complex and contested

(Peters & Kambewa, 2007), to claim that hill to be his own, and that the MVP should plant their trees on it. At the time of my fieldwork in 2013 the households I interviewed were planning on planting in their fields again this season, not sure of what the consequences may be but without other options that did not compromise their capacity to produce their own food.

In this situation, we can see how the project was able to, in an active decision-making process, mobilize resources from pre-existing power structures in this community that bypassed dialogue and served instead to marginalize the affected land users' capacity to generate a livelihood. This is an example of where a generally 'good' and sound intervention had the contradictory side effect of disempowering individuals in the short-term, even when the goal of improving soil conditions and mitigating climate change is an important measure for smallholders in the long-term. Perhaps with a more open dialogue, solutions could have been designed in such a way to reflect the specific conditions present without coming at the cost of the autonomy of those involved.

### *One voice above all*

To see another process by which the MVP sets the dialogue agenda, we can turn to an emergent situation at a preparatory phase of my fieldwork, before setting foot in the project village, when access to the project site and my capacity to share my findings was jeopardized by procedures used by project leaders.

For my second visit to Malawi in 2013, I established contact with the headquarters of the MVP in Malawi to inform of my plans to stay in the village and as a means to hopefully facilitate access to project employees. Through numerous email conversations, over a period of many weeks, my initial request was elevated to include project affiliates in Nairobi, Kenya and finally to senior research scientists of the Earth Institute of Columbia University in New York.

While obliging to most requests they had in regards to justifying my research aims and objectives, the request to "confirm in writing that [I] accept that [I] cannot publish [my] findings without the explicit permission of the MVP" (email conversation, 16 sept 2013) went well beyond acceptable control procedures to become a means by which alternative voices about the project were being controlled. Such a practice by the project to monitor and dominate over independent research serves to censure discussion and regulate free movement and free speech, the latter being particularly important in

Malawi where as recent as 2011 allegations of governmental censorship of academic teaching led to the termination of certain university teachers, mass demonstrations and university strikes (Berman, 2011).

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As a second situation regarding the inherent power held by the project over access to information, upon arrival to Mwandama, my capacity to discuss with individuals on site rested upon the consent of one higher-up employee of the project. Via a telephone conversation I was fortunate enough to be granted approval to ask questions, or rather, that those who I asked questions were given approval to answer me. What turned out to be a rather smooth and non-dramatic process could however also be considered in the context of this study as part of structures of control over knowledge and how it can serve to monitor and dissuade a more heterogeneous image of the project, thus strengthening the voice of one.

By giving salience to the vantage point of the project itself, the reigning ideology of those setting the agenda can become naturalized and strengthened. In this we can see a process of the second dimension of power – the power to police what is and what is not to be discussed – linking directly to project leaders in New York. This reaction reflects a tendency that has been highlighted by other researchers who have engaged with the MVP, and will be returned to in section 6.3.

### **6.2.2 MVP reinforcement through indifference**

As elaborated on in chapter 2, where the values and ideas of one actor become absorbed and portrayed as representing the values and ideas of others, thus snuffing out conflict before it even arises, whatever ideology that reigns becomes strengthened and reinforced, and that which is status quo becomes naturalized and perpetuated. In this regard, we can consider the *lack of* directives and *lack of* actions of the MVP to matter as much as their actions. The current section therefore differs from the previous inasmuch as I now highlight situations from fieldwork where resources of the project were discernibly lacking or showed indifference towards existing ideas or subjectivities that serve to disempower the smallholder.

### *Conflating maize with food security*

Malawi is currently one of the highest maize consuming societies in the world, but this was not always the case. As the historian James C. McCann writes in his book *Maize and Grace* (2005), maize was introduced to sub-Saharan Africa around the year 1500, perhaps later to southern Africa, in a rather “unremarked, though [...] not unremarkable” way (p. 23). In Malawi, records show that maize was first a supporting crop with high genetic diversity that only after the 1930s turned to a monocrop grain of almost exclusively the white maize variety. This journey of maize from a genetically diverse complimentary part of household food supplies to a single variety commodified cereal crop is attributed in McCann’s view to a number of influences including political forces, a shifting urbanizing workforce, a growing regional exchange economy, world market preferences, and the fact that maize had less labor requirements and could be eaten in its early, green-milky stage during the lean season. By the 1930s maize had surpassed wheat as the region’s major cash crop and sorghum as the major food crop (McCann, 2005, p. 110).

Presently in Malawi, having enough maize to last all 12 months of the year has become deeply conflated with being food secure both rhetorically and in practice. Since 2005, Malawi has the Farm Input Subsidy Program (FISP) in place that is primarily a maize production subsidy. It currently targets around half, or 1.5 million, households with 5-10 kg hybrid maize seeds and 100 kg of accompanying fertilizers, driving significant maize productivity growth in the country since its inception (Pauw & Thurlow, 2014).

As one of the central components of the MVP agricultural interventions, the project annually provides free-of-charge 10 kg of hybrid maize seeds and accompanying fertilizers (50 kg basal 23-21 and 50 kg urea). In the first years of the project it was provided to all households and in subsequent years it was given only to households that were considered to be the neediest according to their baseline survey (Sanchez et al., 2007). Besides maize, the project also promoted other crops by offering free ground nuts and pigeon peas during initial years of the project, crops that were already present and being grown by some farmers in the villages (project representative, personal communication, November 2013). Households receiving free supplies from the project were not eligible for receiving subsidized inputs from the national subsidy system.

Although the MVP is a multi-sector project and has invested in the construction and provision of things like water wells, electricity, a health clinic and infrastructure and supplies for education, it is the support for maize production that is the most readily identified with the project by villagers. “To the farmers, the MVP is fertilizer” said one informant. This yearly provision of seeds and fertilizer was also a reoccurring theme of my interview discussions with farmers, both in terms of what they felt they benefited from the project, but also where they thought the biggest challenges would lie once the project leaves. Nearly all of the recipient families, according to MVP statistics and supported by my interviews, have been able to increase maize yields during the time of the project due to the provision of subsidized seeds and fertilizers. When inquiring about the food security situation, numerous respondents, referring to themselves or to the community in general, alluded to the increased availability of maize. “Now”, as one respondent said, “we have grain for six to eight months of the year instead of three to four months”. After the project leaves in 2015, the biggest general concern according to interviews was that a majority of the households will fall back into food insecurity since the cost of fertilizers would be again out of their reach.

By providing free hybrid maize and fertilizers, the project did indeed support the community and increase the availability of food through the increased maize yields and in some cases, with the inclusion of ground nuts and pigeon peas, added to the variety of food available in the community. However, by not actively working with the transition away from maize as the unquestionably dominant staple crop, the project has served to naturalize this central and unquestioned place of maize and thus strengthen its taken-for-granted place in society. Yet maize and especially the use of high-yielding hybrid maize seeds has a complex history in Malawi that is all but natural, and has important political dimensions, not least in the political aspirations of post-colonial leaders (Bezner Kerr, 2013; Smale, 1995).

Although maize is generally an efficient cereal, and some interviewees argued that people cannot do without it in modern-day Malawi, others spoke of how laborious tending to maize is for farmers, where “the worst part [of our maize dependency] is the breaking of the backs”, and it’s success requires sufficient rain and fertilizers, inputs that can never be guaranteed year to year.

In regards to the dependence on fertilizers, an abductively ‘stumbled upon’ situation (Brinkmann, 2014), not for me but for the MVP, arose when a

fertilizer mixture, locally called *mbeya*, was learned about by a project employee, tested and was shown to produce even better yields and promote better soil health than through the use of chemical fertilizers alone. *Mbeya* requires only a fraction of the amount of chemical fertilizers otherwise used in combination with locally-available materials such as corn husks, ash and manure.

Despite the incredible productivity results of *mbeya*, its success led to certain troubles for the project management in deciding how and in what capacity the MVP should stand behind its adoption. And this quagmire is perhaps not so strange, considering how *mbeya* drastically reduces the need for commercial fertilizers, and thereby does not fall in line with the project's proven solutions. Certainly, it also would have impacts on the market influence and profit potentials of some corporate partners of the project in Malawi, such as the fertilizer suppliers Agrium Inc. and The Mosaic Company (Millennium Villages, n.d.-a)). In interviews with recipient farmers, the knowledge about *mbeya* as a fertilizer alternative was identified as one of the advantages of the project that they would be able to continue with, even after the project ends.

With or without the wonders of *mbeya*, farmers from Mwandama are no less dependent on their maize than before, themselves serving to reinforce the legitimacy of the national phrase *chimanga ndi moyo* – maize is life. And in its indifference to the problem, the MVP has served to support this misnomer of maize security being equal to food security.

### *Overlooking Mwandama's manifold features*

Project reports and headlines maintain a rhetoric of being participatory, that the needs of farmers are unique and that the project is designed around these varied needs. This appears to follow the understanding that "heterogeneity is...a structural feature of agrarian development" (Long & van der Ploeg, 1989, p. 236) and that in order for development to succeed, it should take this diversity into account. Yet, a contradiction appears already prior to entry into a project village, whereby the reliance on a standard definition of problem and solution creates a protocol of action whereby proven methods are expanded to communities and households that had not previously accessed them. How does this inherent tension play out in Mwandama in the face of local idiosyncrasies or alternative definitions of development?

As mentioned previously, I experienced essentially no resistance to the presence of the project or the methods they employed in Mwandama. Yet a

few situations from fieldwork indicate that activities promoted by the project did not turn out the way they were intended according to project literature. As we shall see, these failures or untended side-effects are arguably due to an indifference towards processes of ongoing political and social struggles already present in the community that reinforce inequality and keep benefits from getting where they need to go.

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The first situation is in regards to the creation of farmer's cooperatives in Mwandama. During a semi-structured interview with the MVP coordinator of cooperatives, I understood that formally, seven cooperatives were established by the MVP in Mwandama, one in each of the seven sections that collectively represent the 114 villages and 35,000 people in the entire Mwandama cluster (see again figure 5.1 for the structural arrangement of Mwandama). To support the start-up process of creating the cooperatives, the MVP invited all villagers to an initial gathering, one in each section with a twofold purpose; firstly to allow the farmers themselves to define challenges they have experienced in reaching the Millennium Development Goals, and secondly to lobby for the creation of cooperatives as a way of working together to solve those challenges. Participants of these events that were interested in forming a cooperative were invited forth directly after the larger gathering and became the basis from which the cooperative would develop. The MVP then assisted in getting through the legal procedures of establishing a farmer's cooperative, which in Malawi are not particularly tricky yet can be extremely costly relative to local resources, by bearing the initial cost of approximately 150,000 kwacha (around 170 Euro) per cooperative.

What became apparent during conversations with the coordinator of cooperatives was that in each of the seven cooperatives, the main activity revolved around increasing access to agricultural inputs and accessing good markets for selling crops, primarily maize and secondarily soy, pigeon peas and ground nuts. The seven cooperatives had on average 50-60 members, the largest having 105 members. I was assured that members of the cooperatives included both males and females, young and old.

There was no official reaction to this complete uniformity of activities for the cooperatives, and financial support was given to their official formation. In 2013, eight years into the project, I understood that some of the initial cooperatives had fallen into a state of dormancy since over one year

ago. This falling out was attributed by the coordinator to a lack of understanding on the behalf of the cooperative leaders of what it means to have a cooperative. “It is a new phenomenon [for the farmers], but it is slowly getting to them that it’s a business entity. [...] They need to think like a business” (MVP representative, personal communication, 26 November, 2013).

Is it possible that of 35,000 people in 114 villages, there was complete uniformity of the role a farmer’s cooperative could and should play? The lack of variability doesn’t necessarily need to indicate a problem, yet given the fallout of some cooperatives we may consider how the project overlooked the role of power in establishing the cooperatives in the first place.

And according to some scholars, the MVP would be mistaken to assume that the variable needs and voices in the community were all heard in the single start-up meetings, or even that those ideas that were voiced were somehow representative of peoples realities uninfluenced by the presence of the project. Indeed, as Andrea Cornwall (2004) argues:

“One of the ironies of the efforts of development agencies to foster autonomous spaces for popular organization and self-reliance is that their very presence and agency as instigator may come to affect, rather fundamentally, what these spaces might come to represent to those who participate in them. The very act of soliciting the ‘voices of the poor’ can all too easily end up as an act of ventriloquism as ‘public transcripts’ are traded in open view” (p. 82).

Not only the deliberative space itself but the agenda of the start-up meetings was contingent upon how farmers’ challenges related to the Millennium Development Goals, where only particular views would be relevant and could be voiced. Framing the cooperatives agenda from the beginning as being about challenges related to the Millennium Development Goals, together with the pre-defined methods and goals of the MVP, implies that the space where cooperative agendas were set occurred long before the initial gatherings in Mwandama, so that even upon the participation of recipient farmers, their capacity to influence the agenda was negligible.

Therefore, by not problematizing this homogenous response by for example pursuing an agenda to ‘unpack’ some variability amongst the cooperatives or allowing participant farmers to present challenges they experience *other than* those in relation to the MDGs, the cooperative efforts of the project have already now, even before the end of the project, exemplified how its own indifference towards the inherent power dynamics



of the process they invoked may have contributed to the collapse of otherwise ‘good’ forums for development through farmers cooperatives.

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We can now consider two more situations from fieldwork whereby interventions of the project resulted in contradictory outcomes through an indifference towards social and political tensions in the community. As mentioned before, the MVP has targeted interventions based on a base-line assessment performed in the beginning of the project (Millennium Villages, 2010b, p. 103), meaning that even within the MVP village, divisions exist between households who receives certain benefits and those who do not. Targeted intervention may not be problematic per se, yet we can see how it has led to unintended consequences in Mwandama.

As brought to my attention during interviews with farmers from the farther off villages of the project (see section 5.4.2), where only selected households were given free seed and fertilizer inputs, acts of thievery became common in spaces where such behavior was not common previously. Just prior to harvest time when maize in the fields was ripe, farmers would find large parts of their harvest being stolen directly from the fields at night. “When I would come to harvest, a lot of [the maize] would be gone” proclaimed one respondent. In order to prevent this, recipient households from that section formed a local policing force with 10 people from each village of the section who alternated monitoring the fields day and night during harvest time. Since then, no maize has been stolen. Perhaps this story serves a more anecdotal purpose, yet it is an example of a situation resulting directly from, according to my interviewee, the uneven access to the valuable inputs in their community, creating social tensions.

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Another situation reveals where targeted interventions, meant to reach poor, ill or newly formed households of the MVP, remained in the hands of those closest to village chiefs. During one of the days I was in Mwandama, the MVP assisted the private company Seed Co in distributing a new kind of maize seed than what is usually grown in that area, namely an open pollinated variety (OPV). What became apparent just a few days after the initial seed distribution process was that households receiving the seeds were

in many instances selected by the chiefs based on acquaintance and not based on need (project representative, personal communication, November 2013). What should have been a line of communication from the MVP to the chiefs and onward to the so-called ‘lead farmers’ in each village ceased at the point of the chiefs who used the opportunity to benefit those closest to them, reinforcing processes of elite accumulation and nepotism.

Again, the existence of internal political struggles and inequalities that allowed for this diversion of resources is nothing that has been *created* by the project, yet these channels of power accumulation became passively *reinforced* through project mechanisms that failed to identify and actively work to resolve them. As literature would suggest, these social, political and economic power relations that exist in a society act to limit the potential of development interventions when such relations are not recognized, given space, and addressed by the intervention heedfully (Cornwall, 2004; Diepeveen, 2008; Jacobs, 2013).

### *Perpetuating aid dependency*

Foreign aid is currently a political hot potato in Malawi. In September 2014 the government under Peter Mutharika presented a ‘zero-aid’ budget as a result of the recent freezes put on aid from donor countries due to allegations of government corruption over the past few years. Yet, around 40 percent of the national budget has previously been supported by donor investments and despite appeals from the government for lifting the freeze, even Britain, Malawi’s biggest aid donor, is hesitant to resume budgetary support until measures are in place to discipline financial management systems (Jomo & Cohen, 2014; Nyasa Times, 2015). So although most aid to the Malawian government is presently on hold, the dependence on aid in order for governmental support systems to function is still a topical and unresolved concern at a national level.

As an NGO, the bilateral aid freezes did not affect the presence of the MVP, yet in accordance with the initial design of the project to last for ten years, it is scheduled to withdraw support in 2015. As the most influential actor for a decade in this community, I inquired during interviews in Mwandama about perceptions of what might happen individually and as a community once the project was gone. The responses serve to show how in different ways the project fixates images of the role of the farmer and the role of aid that reinforces and perpetuates dependency on the influx of aid rather

than on creating a strategy for supporting the development of an independent smallholder community.

“Those who work hard will be fine” was one response that reoccurred in various conversations, whereas another response spoke of the hopes of another donor coming along in order to keep everything that has been built up from falling apart, else that people might go back to being hungry. “I heard rumors that Japan is coming in next” replied one respondent (which incidentally, according to a press release by the project, is true for the project villages in Kenya, Nigeria and Rwanda, but not Malawi (Millennium Villages, 2014)). From discussions with a project employee I understood that other organizations and companies are currently running parallel projects in Mwandama include AGRA, Save the Children, UNAids, Coca-Cola and Unilever, each with their own project implementation strategies and having various points of collaboration with each other. The prospects for continued development aid are therefore in place, yet we might also consider the impact of perpetual aid on the capacities of recipient farmers to mobilize their own resources in such an environment of dependency.

In regards to questions of sustainability and cost of the MVP, particularly in the years after 2015, it is made clear on the project website that “scale-up is only possible if the ODA [(official development assistance)] promises [of rich countries] come true” (Millennium Villages, n.d.-b). Therefore, the basis upon which the project can be maintained and expanded is dependent upon a continuous reliance on foreign aid. And in the case of ODA specifically, since commitments were made in 1970 to commit 0.7 percent of national incomes, the weighted average of ODA from donor countries has never exceeded 0.4 percent (OECD, 2010).

It is a rather well-established understanding that aid itself can be a double-edged sword, and some even view aid as causing more problems than it solves. Over a period of 50 years 2.3 trillion US dollars have been transferred in development-related aid from the ‘West’ to the ‘Rest’ (Easterly, 2006), and around 1 trillion of those have gone straight to Africa (Moyo, 2011). Yet as both of these authors argue and as can be understood by the continued high levels of poverty found in the world, this aid has not resulted in fixing the problems they set out to fix, calling this failure of aid the “second tragedy of the world’s poor” (Easterly, 2006) that stems from the very fundamental – yet arguably flawed – idea that aid is the best solution to the problems of poverty (Moyo, 2011). Aid dependency and its proliferation – exemplified by the multiple donors present in Mwandama alone, and the

post-project dependence on donor country financial support – can also become a debilitating condition for those in recipient communities, whereby the addition of a lender or donor, rather than add to the aggregate benefit, may even “diminish development and make things worse for poor people” (Chambers, 2013, p. 40) after a certain, non-predetermined threshold.

As argued by Long and van der Ploeg (1989), and what is counterintuitive to the claimed purpose of development, is that the presence of interventionist development activities *themselves* can be a contributing factor to the absence of autonomous agrarian development in locations where development projects take place, when those development activities “aim to control the pattern of local economic and political development” (p. 236), as is the strategy of the MVP. The authors continue that “[i]ndependent forms of production and decision-making may also be undermined by the process of being integrated into new, external networks of institutions” (p. 241). So the power of farmers in recipient communities to make decisions and mobilize resources independently can indeed become inhibited when aid inadvertently serves to channel decisions of farmers to align with motivations of the project. Representative of the third dimension of power, this exemplifies where ideologies and processes of dominant actors become structurally internalized by all, without any apparent signs of struggle or disagreement.

## 6.3 Putting findings into perspective

Putting findings from this fieldwork into perspective, we can consider some ongoing scholarly debates about the Millennium Villages Project since its inception. Perhaps one of the most controversial public debates about the MVP centered on a publication by project leaders in the *Lancet* (Pronyk et al., 2012) regarding successes attributable to the project in their model villages after the first three years. This data was criticized very shortly after its publication based on the methodological grounds upon which claims were made, particularly in regards to data on child mortality rates (Bump et al., 2012). The initial lead author proceeded to retract some of the original findings (Pronyk, 2012). A detailed overview of the controversy can be found in Clemens and Demombynes (2013). An editorial response to this controversy was published in the prestigious journal *Nature*, arguing that project leaders “have been reluctant to publish a full breakdown of costs”,

making external scrutiny of the project challenging. For the MVP, “[g]reater transparency is essential to build trust and credibility” (*Nature* editorial, 2012, p. 147) if the project is to reach its full potential.

A handful of field-based studies on MVPs have been performed by independent researchers over the years, each with its own epistemological and methodological points of departure. In 2006 just after the inception of the project in its first village site in Sauri, Kenya, the development consultant Sam Rich (2007) visited this site and compared information about the project through official channels and those he got when discussing with people through an unarranged stay in and around the village. For him, “it was clear that dissenting voices were not welcome” when people with critical opinions about the project, employees as well as recipient farmers, were wary to discuss with him unless under anonymity, which resonates with my own experience of getting permission to visit and publish information about the MVP in Malawi. In Rich’s report, similar sentiments to those in my study about the project cementing the role of maize in society were raised by his informants, as well as critique about the project’s lack of engagement with wider social forces that serve to undercut the potential for lasting impact.

Stephanie Diepeveen (2008) has also conducted an early study on Sauri, considering the theoretical foundations of the project. Her research, similar to my own, found a tension between stated objectives and the potential for the project to fulfill them. She found that although the objectives of the project appear to engage in empowering the smallholder as advocated for in Amartya Sen’s theory about freedom, the project fails to recognize power relations other than gender in its Baseline Report that could potentially affect people’s relative levels of agency in the community. This according to Diepeveen renders the project unequipped to offer means of empowerment by not having knowledge of the full palette of institutional power relations in Sauri.

A quantitative analysis of the same village Sauri, in comparison to a neighboring control village, was published in 2013 by Bernadette Wanjala and Roldan Muradian (2013). In their study they calculated that, despite the MVP inducing indirect positive effects on economic welfare, the project’s claim to be able to increase cash income through increasing agricultural productivity did not hold when land holdings were low and household sizes were high, as is the situation for most smallholder households in Kenya.

What comes of Japhy Wilson’s (2014a) research in the village Ruhiira, the project village in Uganda, is a rather unique account of the MVP as more than just reproducing a de-politicized propagation of neoliberalized

development (as he himself highlighted in his own theoretical study the year before (J. Wilson, 2013)). In the first study, Wilson characterizes how the MVP embodies the paradoxical character of neoliberalism whereby it “remains within the contours of actually-existing neoliberalism, even as it violates its ideological precepts” of the supposed natural order of a market society (J. Wilson, 2013, p. 115). After fieldwork in Ruhiira however, he adjusted his critique when experiencing how the project was in essence creating a ‘fantasy machine’, seeing how “the MVP is less concerned with the successful implementation than with the projection of an *image* of success on the international stage” (2014a, p. 1150). Lessons from my own fieldwork do resonate with Wilson’s claim, inasmuch as the actions of the project (in section 6.2.1) were protective of external critique and the inactions of the project (in section 6.2.2) were all processes that compromise the projects capacity to lead to an independent, dynamic community, thus undermining its own stated claimed intentions.

While Wilson is critical at the level of ideological visions of the project, Edward Carr (2008) offers a less revolutionary critique of the project that suggest the adoption of a critical perspective in order for it to succeed. Firstly, Carr is critical to the obscurity of the theoretical influences informing the project, which causes a degree of internal incoherence (similar to the initial critique of Wilson (2013)). Also, with its current dependence on pre-identified problems and over-generalizations of recipient villages, Carr claims the project fails to challenge the development status quo. Yet despite these drawbacks, Carr does not call for an abandonment of the project altogether but rather for the integration of a critical grassroots approach into the project. By including such a critical, locally-rooted perspective internally to the project, he argues that it would more easily be able to identify “local definition and legitimization of problems and solutions, and would allow us to see how sectoral issues come together to form ‘problems’ (and the means of addressing them)” (Carr, 2008, p. 341).

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Focusing less on the top-down versus bottom-up question of development practices, we may take a moment to consider as part of this analysis of power the inherently ‘outside-in’ quality of interventionist development. In other words, what are the implications that the MVP and interventions like it create conditions of resource-rich givers and resource-poor receivers?

Perhaps what we find ourselves coming to here is a critical impasse of modern development projects? That is, when applying a logic whereby knowledge or other resources are to be imparted by one dominant party unto another, subservient party, leading to the creation or reinforcement of “distinctions and confluences, dividing us/modern from them/primitive and local/backwards from foreign/progressive” (Robbins, 2012, p. 68), and ultimately driving an ideological control over the meanings and values of things, identities and knowledges. How can anyone with the capacity and desire to help those who are struggling do it in such a manner that does not infringe on their integrity?

We can find numerous examples of projects that, although not overcoming, at least recognize and grapple with innate relations of power in development while still maintaining impacts of scale. Taking one example from the same context as the MVP in Malawi, that is, the same colonial history, smallholder-dominated societies, *chimanga ndi moyo* dynamism, and social conditions of production, the Soils, Food and Healthy Communities project in northern Malawi (SFHC) (Bezner Kerr et al., 2007; Msachi et al., 2009) is an endeavor that, starting in 2000, continues to support development towards, as the name indicates, healthy communities. Also with a multi-sector approach, the SFHC experiments with leguminous plant options as part of the smallholder crop repertoire. Studies (Snapp et al., 2010) indicate that legumes have the capacity to address many of the big challenges faced by smallholders including poor soil fertility, vulnerability to commercial fertilizer price and availability and low household nutrition (especially that of children).

As part of the project, the promotion of legumes is carried out within the context of the community, including the social and cultural dynamics that ultimately impact whether or not the project could succeed, regardless of the ‘known solution’ of legume promotion. Challenges such as patriarchal formations that diverted earnings away from the household, gendered labor burdens and intergenerational conceptions about nutrition were all included in project activities (Bezner Kerr et al., 2007; Msachi et al., 2009; Patel et al., 2014). The project also actively challenges strongly embedded conceptions about the role of aid and development in Malawi, actions that led to legitimacy struggles at the start of the project, yet that ultimately have succeeded in sewing new ideas about not only agriculture but also about the roles and needs of men, women and children in a community (Msachi et al., 2009). In this capacity, the project exemplifies how smallholder

development, even when done using ‘outside-in’ contributions, can be sensitive to and work towards the empowerment of individuals and project communities.

## 6.4 Concluding summary

Whether through its active interventions or through its indifference towards relations of power already present in the recipient society, this study has found that the Millennium Villages Project has created or reinforced a number of adverse processes in the village Mwandama. When setting the development agenda, the MVP has privileged scientific knowledge and science-based practices of farming over those knowledges and practices that are sensitive to the context and needs of farmers. As an ‘island of development’ the MVP’s reinforcement of hybrid maize and commercial fertilizers does not take the risks of this dependence to climate change stressors into account while at the same time using hierarchies of power and threats to try to push their agendas through. Aid dependency and maize dependency are particularly strong processes already underway in Malawi that work to the detriment of the smallholder. By not engaging with and actively working to reverse these harmful processes, the MVP has served to naturalize and strengthen each of these dependencies even further.

When comparing my findings to other scholars and debates concerning the Millennium Villages Project, certain grounds for criticism overlap. Particularly, the way the project attempts to uphold an image of development and success has been criticized for lacking transparency and which, upon further inquiry or analysis, has shown to disregard inherent tensions of interventionist development and the myriad of experiences by people impacted by the project.





# Chapter 7: Summing up and looking forward

## 7.1 In food matters, power matters

The global food system exposes a very cruel irony in the current state of the world, where some people producing food are the same people that risk suffering from lack of proper food. With unprecedented levels of over- and under-nutrition, with just over and just under 1 billion people in each category, respectively, plus calculations of hidden hunger at around 2 billion people, some might go so far as to say that the food system is broken. Malfunctioning. Simply not doing its job of supplying the universal human right to food. Or perhaps, as argued in this thesis, it's not a fault unique to the food system per se, but that the problems exposed there go so deep that they originate from the organizing foundation upon which the food system itself rests; a foundation whereby power structures, often functioning in tacit ways, are prominent forces driving the global food system that allow for the sequestering of power to the benefit of an elite few at the cost of a struggling many.

As the American sociologist Immanuel Wallerstein (1977) said already back in the 1970s – a statement I rephrase that has been inspiring me from the start of this research endeavor – hunger amidst plenty and poverty amidst prosperity are not only the moral questions of our time, but also the intellectual questions of our time. No less topical and relevant today as 40 years ago, these questions undoubtedly require direct and immediate attention to ease suffering on an individual and daily scale, but they *also* require some deeper thinking in order to identify their drivers on a larger scale if we stand a chance of ever being able to tackle them.

This thesis challenges taken-for-granted solutions and problem formulations regarding African smallholder food insecurity in an effort to

understand why African food insecurity continues to exist. One goal of the research is therefore to deconstruct and explore ostensibly simple and objective concepts pertaining to smallholder food insecurity in order to draw out the political nature of these concepts. Particularly, I conclude from this thesis that power is an integral dimension of what food *is* and how we should understand it; and that power is equally integral to understanding – and ultimately dealing with – smallholder food insecurity. Further, I argue in this thesis that a dominant framing of agricultural modernization, privileged in efforts to address African smallholder food insecurity, frames problems and solutions in a way that depoliticizes the phenomenon and thus serves to reproduce asymmetrical power relations in the food system.

To begin with, in chapter 1 I flesh out the questions ‘what is food’, ‘what is the global food system’ and ‘what is food (in)security’ and identify how food insecurity is mostly, but not exclusively, a phenomenon that occurs amongst smallholder farmers. This in itself is not a particularly novel contribution, and these terms are so central to the issue of hunger, yet what we can clearly see in chapter 1 is that food, food security and the global nature of the food system are not natural phenomena, devoid of subjective interpretation, but rather they are framings based on a selection of information that is given salience and helps to define problems and suggest remedies.

In very real terms there is no question about what food is – for all living species it is sustenance that is consumed, converted into energy, and used by cells to keep life processes going. No living thing is free of that burden.

Yet food is inherently relational, and by that, political. It is arguably the epitome example of where the ‘social world’ and the ‘natural world’ meet as we harness energy from the earth to meet basic human needs. As provider of a livelihood, it is by far the largest ‘employer’ in the world, with an estimated 2.5 billion people living and working full- or part-time with smallholder agriculture alone (IFAD, 2013). It is also an arena where a handful of transnational corporations exert great influence over consumers and producers and over the very structures and functions of the system. Sentiments of belonging, identity, culture and worth can also be measured against and be inescapably intertwined with food. Finally, food is historical both as the material, perishable product but also in a world-historic perspective of the role it plays in the rise and fall of global powers. So the first sections of this work attempt to demonstrate that the inclusion of power relations when thinking about concepts such as food, food security and

poverty is not only a helpful analytical tool, but a necessary starting point for getting to grips with the vexing problem of global hunger.

And while hunger is a global phenomenon, hunger in sub-Saharan Africa is the focus of this work, particularly hunger amongst smallholder farmers. Chapter 3 uses frame analysis on three texts concerning agricultural modernization in Africa, focusing on three actors that broadly represent the inspiration, the science and the mobilization of resources in influential positions. From a textual analysis of the World Bank's World Development Report 2008, a peer-reviewed article of the Earth Institute about their Millennium Villages Project, and a speech by Kofi Annan about the launch of the Alliance for a Green Revolution in Africa, chapter 3 categorizes seven key tenets of a dominant framing of African smallholder food insecurity. According to this framing, African smallholder food insecurity is presented as a problem that (1) requires the urgent mobilization of resources from the international community to solve problems of (2) low technology and poor soil management in Africa. It is claimed that (3) more intensive production systems based on scientific knowledge and expertise need to be pursued, (4) learning from past successes elsewhere in the world to (5) help African farmers transition into commercial enterprises using modern technological innovations, facilitative markets and (6) nationally supplied infrastructure to support private-sector investments. This needs to take into consideration what is uniquely African about the problem and provide solutions accordingly that will (7) reduce local environmental impacts.

Using a critical realism worldview and Steven Lukes' (2005) concept of dimensions of power, chapter 2 presents the theories I've used to incorporate the decisive role of power in society generally and in smallholder farming specifically. In chapter 2 I combine lessons from political ecology concerning the dialectical relationships between humans and the rest of nature together with a research model provided by discourse analysis to establish a basis from which my research has unfolded. Chapter 2 also considers theoretical conceptualizations of power while also presenting power features particular to smallholder farming. These features include the dependence on factors of production based on environmental conditions outside of the control of the farmer such as rain, pests and 'natural' rhythms of growing cycles and the peripheral nature of farming mostly taking place in rural areas and away from centers of decision-making, which further has implications for the reliance on the transport of products (often perishable) from the site of production. Compared to factory production, farm products and processes lack

homogeneity and require a pluralism of knowledges. Further, a foundational feature of smallholder farming is the important role that women play in all stages of food simultaneously to the widespread existence of gender-based biases in agriculture.

By using this research springboard in chapter 2, and the framing of agricultural modernization in chapter 3, chapter 4 analyzes the tenets of agricultural modernization to identify contradictions whereby asymmetrical power relations are strengthened rather than transformed through this framing. Firstly, agricultural modernization stresses the need to adopt science- and technology-based methods in order to protect the local environment from encroachment of land under production, yet excludes environmental externalities that on-farm intensification results in through the production of chemical fertilizers and off-farm emissions. Secondly, the unproblematic combining of messages of the need for increasing food production and increasing global food demands conflates two challenges that are becoming more and more disconnected when issues of access are not included. Thirdly, the highlighted role of private-sector investment ignores the poor terms of trade present in the current global food system that work to the disadvantage of small actors and the volatility of private capital towards profitability. Fourthly, without commensurate opportunity to secure a livelihood from elsewhere, the inevitable push of some households out of smallholder farming, so that the remaining households can grow, serves to move food insecurity to new margins of society instead of solving it. Fifthly, the presentation of a crisis has the effect of giving legitimacy to solutions that follow the same logic as the problems, which in the case of agricultural modernization are presented as value-neutral. Finally, by isolating change to African smallholders, agricultural modernization serves to decouple current and historical social forces that are at play in what manifests in the fields of smallholders as well as naturalizes the development path that Africa should follow.

In chapter 5, I investigate an application of the agricultural modernization framing in an African smallholder setting. One of the influential actors identified in chapter 3, the Millennium Villages Project (MVP) of the Earth Institute, has since 2005 invested heavily in project villages in ten sub-Saharan African countries, following a multi-sector approach that includes the ideological principles of agricultural modernization. At the MVP project village Mwandama in Malawi in southern Africa, I twice visited the project site to conduct fieldwork and

chapter 5 presents the contexts and research procedures used as part of that fieldwork where a primarily abductive approach was used.

Chapter 6 presents findings from fieldwork when confronting the MVP in order to locate impacts related to power. Visible improvements in the lives of those people living in Mwandama were in so many ways admirable: infrastructure in the form of a school, a health clinic, electricity lines, a maize mill, an office complex and a massive storage facility are some of the noteworthy improvements to the area thanks to financial and technical support by the project. Particular to agriculture, the most visible inputs of the project include the provision of free maize seeds and fertilizers to poor households, subsidized maize for home consumption, and a soil ridging pattern and fertilizer mixture that could improve production. Yet as my initial claim is about the production and reproduction of power relations in connection to the project, analysis during fieldwork did not stop at evaluating the provision of material improvements. Using qualitative research techniques such as interviews, participant observations and non-participant observations I was able to identify processes that created or reinforced power relations in society that impact the relative power of the project and the recipient community. I categorized these processes broadly into what the MVP is *actively* doing through interventions, and what processes they remain *indifferent* towards and thus reinforce indirectly.

Firstly, the MVP, through its extraordinary capacity to mobilize resources, was able to set the development agenda in Mwandama which, served to privilege technical knowledge and understandings of food production while marginalizing local knowledges and local ecologies in a way that benefited already elite members of the community. Secondly, being a 10-year project and using a blueprint approach to smallholder development, the project suffered from being an ‘island’ of development, in essence isolated both in time and space from historical and contextual processes that impact the capacity of the recipient community to maintain or extend any benefits of the project into something more substantial and enduring. Thirdly, the practice of the MVP controlling the knowledge about and image of their project was a finding from before I even set foot on the soils of Malawi. Restricting access to knowledge and information is the basis of an ongoing scholarly debate about the project and reflects my own experience of interactions with higher-up project officials.

As a second category of fieldwork findings, and what at first may seem unrelated yet is significant to a critical discourse analysis, is identifying how

the MVP, by *ignoring* and *not addressing* existent social and political tensions in the society serves to reinforce such relations. The three examples from fieldwork used in this thesis include the project's conflation of maize with food security, the privileging of strong voices and values through streamlining development into homogenous, often male-dominated pathways, and the perpetuating of aid dependency. Although the presence of these debilitating relationships in Malawi and widely in sub-Saharan Africa is not the *fault* of the Millennium Villages Project, it is arguably the responsibility of development practitioners, especially ones of the caliber and with the bold vision of overcoming the poverty trap and achieving the MDGs, to put efforts into addressing such structural forces.

## 7.2 Why fight it?

The year 2015 is a significant year for this research. It is the year that the Millennium Development Goals are set to expire and their achievements measured and evaluated. The first of these eight goals includes, to no surprise, addressing hunger as one of the biggest development challenges in the world. And although not met, reports show that the target of reducing the proportion of undernourished people in developing regions of the world by half has come a long way. According to United Nations calculations the proportion of hunger has decreased from 24 percent in 1990-1992 to 14 percent in 2011-2013 (United Nations, 2014). The most recent State of Food Insecurity report of the FAO reassures us that the hunger target "is within reach" (FAO, 2014b, p. 4). And as we already know the majority of hungry people in the world are working in agriculture, which means that the situation for smallholders seems to, on the aggregate, be improving.

Why then should we not just celebrate the development and progress of poor smallholders? Is the critique of agricultural modernization offered here all just deterring from the kind of progress that could be made if we all would just join together and charge ahead?

I have argued in this research that we need more politicized representations of smallholder food insecurity than the dominant framing of agricultural modernization if we are to stand a chance of understanding the complexity of smallholder food insecurity and, ultimately, finding the (multiple) pathways to be rid of it. And I am far from alone in this

conviction. The means for obtaining smallholder food security through agricultural modernization has been considered as not only *not* solving the problem but as making the situation for many farmers even *worse*. Scholars coming from both the natural sciences and the social sciences argue that current efforts to modernize the smallholder may rather exacerbate food insecurity and recreate the conditions that support disparities found in the global food system in the first place. Critique ranges from the adverse effects on environmental goods (Pretty, 2008), the naturalization of a certain hegemonic economic conception of the world (Escobar, 2012), the creation of food and input dependency in the developing world (McMichael, 1997) and the emergence of a powerful transnational corporate food sector (Rosin et al., 2013; Weis, 2007).

Indeed, the major global initiative known as the International Assessment of Agricultural Knowledge, Science and Technology for Development, or IAASTD for short and initiated by the World Bank in 2002, found that “the food security challenge is likely to worsen if markets and market-driven agricultural production systems continue to grow in a ‘business as usual’ mode” (McIntyre et al., 2009b, p. 22). This was a revolutionary finding that, instead of fostering a new way forward has instigated debates, conflict and withdrawn political support, ultimately marginalizing the findings (Feldman & Biggs, 2012) in terms of their contribution to political change.

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Going back to the immediate and daily struggles associated with food insecurity, one might wonder if debating over concepts and ideologies is anything but wasting precious time. What, one might ask, is the worst thing that could happen if we just go along with the dominant way of doing things, despite its faults? In other words, what is *lost* in the agricultural modernization way of framing problems of and solutions to smallholder food insecurity?

As Rosin and colleagues suggest (2013), and this research supports, representations of problems in the food system as isolated, local events having technical solutions have “undermined our ability to respond to global food security in positive and meaningful ways” (p. 5). This resonates with the analytical tool of food regimes (Friedmann, 1987; McMichael, 2009) and the transformational capacity of food movements (Holt-Giménez & Shattuck,



2011). According to the latter, and making use of Karl Polanyi's (1944) 'double movement of capitalism', efforts to *reform* rather than *transform* the food system will not swing the proverbial pendulum far enough, thus will serve to decelerate momentum that could otherwise catalyze movement into a new system order. "The result", Rosin and colleagues again say (2013), "is a failure to acknowledge, let alone address, the injustices inherent to the existing food system" (p. 5), cementing underlying relations of production that have encouraged the types of injustices that exist in the food system today.

## 7.3 What now?

If not agricultural modernization, then what?

This is a difficult question, and I do not have the audacity to try to answer it in these closing remarks. Nor do I even believe it should be answered in any definitive way for risk of perpetuating the notion that there even is one singular solution. However, by keeping a few things in mind we can, if not define, at least identify key features of a way forward that offers potential.

Stock and Carolan (2012) coolly remind us that "conventional agriculture proponents and critics are both equally utopian in their visions about food security" (p. 116). In other words, critical alternative visions, despite how far removed they may appear from what is generally found today, should not initially be written off as too utopian. Because no vision is perfect, and no single angle of vision can see much less handle all of the intricacies and understandings of the multiple needs that food fulfills.

The good news is, the food system can fundamentally change as we have seen in regime shifts over the past 170 years (cf. Campbell, 2012; Friedmann, 1987). This is a heartening starting point considering appeals, in this thesis and elsewhere, for a system-level change that would reframe the role of food in society and revalue the role of power in the food system. It can also remind us that structures of the food system that might seem concrete and inevitable are part of a more complex structure of ideologies and power relations that, although in this historical moment powerfully influence our ways of thinking and acting, are not predetermined and can indeed be transformed.

Another aspect to keep in mind when seeking alternatives is that farming today concerns a lot of people, many of whom are poor, and uses a lot of resources, many of which are limited. So any transition to ‘something else’ would need to take these circumstances into account. And despite decades of development efforts directing smallholders to follow the path of modernity set out before them, portraying the peasantry as in many ways backwards and “destined for oblivion”, the peasant class has proved to be incredibly persistent (Bello, 2009, p. 12). Since the mid-1990s, rather than consenting to a position of periphery and ‘going gently into the night’, the presence of smallholders in global agriculture has been increasing through peasant movements, most notably through the global network La Vía Campesina. La Vía Campesina is an international movement present in over 70 countries worldwide (Via Campesina, n.d.) that embraces an alternative discourse to food security, seeking instead autonomy from the corporate food regime through food sovereignty (cf. Desmarais, 2012). While not representing any ultimate or fully articulated solution to challenges in the global food system, as critical self-reflection has shown (cf. Edelman et al., 2014), food sovereignty stands poised to play an important role in pushing and informing broader social transformations as it calls for the recognition of rights and of the social and political dimensions of the global food system (Patel, 2009; Patel et al., 2007; Wittman et al., 2011).

Rural sociologist van der Ploeg (2008) offers us the term ‘repeasantization’ to conceptualize a revaluation of agriculture that could coincide with alternative visions of what agrarian development could strive for. It resonates with the emancipatory ideas of La Vía Campesina, and implies that the ecological context and social conditions under which food is produced are not only recognized but valued for their pivotal roles in the “reproduction of ecologies and cultures (rather than capital)” (McMichael, 2012b, p. 116). This new valuing system would promote the building of material, ecological capital and allow for production intensification while reducing dependency on monetized inputs. Repeasantization calls for redefining what is modern while widening the lens of agrarian development to include not only developing countries but also industrialized countries in a struggle for “*autonomy and survival in a context of deprivation and dependency*” that characterizes current arrangements of the global food system (van der Ploeg, 2008, pp. 7, emphasis in original).

Another long-standing alternative framing, often dated back to Klages (1928), is that of *agroecology*. Stemming from a discourse of food

production based on ecological principles and concepts, agroecology strives to produce more food, more sustainably (Francis et al., 2003; Gliessman, 2007; Gliessman et al., 1998) and embraces a systems approach that highlights the contextual nature of food production where problems and solutions are unique from place to place (Francis et al., 2003).

From this school of thought we can include the scholar and activist Wes Jackson (1985) who maintains that in order to find a sustainable agriculture we need to consider the problems *of* agriculture. This includes going back to the very foundations of what it means to produce food from nature, and instead of manipulating soil as part of annual monoculture we would need to work with the soil's natural systems of regeneration. And just as with 'repeasantization', this sustainable agriculture would essentially require a reinterpretation and a revaluation of the act of producing food. From the perspective of the smallholder, Robert Netting (1993) confronts what he calls the popular prejudice of farming as being labor-intensive, undignified, dirty or otherwise unattractive by contending that "[u]ntil we have sound comparative measures of the quality of life among both rural *and* urban masses, it would be wrong to dismiss smallholder preferences for hard work and property as somehow misguided and irrational" (Netting, 1993, p. 331). Without romanticizing farm life, or claiming that repopulating the countryside would be easy, this type of questioning offers food for thought about what a good or acceptable life may be.

In conclusion, theoretical and physical responses to agricultural modernization for smallholder food security do exist, such as the few movements and concepts mentioned above. These and others stand poised to make a change, hungry to rectify the mass discrepancies and deprivation produced by our current global food system. Without endorsing any one movement as *the* solution, those that foster the human capacity to collectively and individually transform, act and decide will need to lead the way. For it is in recognizing, respecting and engaging with these features of power that a modern struggle for autonomy and development through food can move forward.

# References

- African Union. (2003). *Maputo Declaration*. (Assembly/AU/Decl.4-11 (II)). Addis Ababa, Ethiopia: Retrieved from <http://www.nepad.org/system/files/Maputo%20Declaration.pdf>.
- African Union. (2014). Briefing Note: On 2014 Year of Agriculture and Food Security in Africa, marking 10th Anniversary of the Adoption of CAADP: Department of Rural Economy and Agriculture.
- Agarwal, B. (1994). Gender and Command over Property: A Critical Gap in Economic Analysis and Policy in South Asia. *World Development*, 22(10), 1455-1478.
- Agrawal, A. (2005). *Environmentality: Technologies of Government and the Making of Subjects*. Durham: Duke University Press.
- Alexander, R. (2012, 20 March). Which Is the World's Biggest Employer? *BBC News*.
- Alkire, S., Meinzen-Dick, R., Peterman, A., Quisumbing, A., Seymour, G., & Vaz, A. (2013). The Women's Empowerment in Agriculture Index. *World Development*, 52(0), 71-91.
- Alliance for a Green Revolution in Africa. (2015a). Our Story. Retrieved March, 2015, from <http://www.agra.org/agra/en/who-we-are/our-story/>
- Alliance for a Green Revolution in Africa. (2015b). Vision and Mission. Retrieved March, 2015, from <http://www.agra.org/agra/en/who-we-are/vision-and-mission/>
- Altieri, M. A. (2009). Agroecology, Small Farms, and Food Sovereignty. *Monthly Review*, 61(3), 102-113.
- Anderson, S., Morton, J. F., & Toulmin, C. (2010). Climate Change for Agrarian Societies in Drylands: Implications and Future Pathways. In R. Mearns & A. Norton (Eds.), *Social Dimensions of Climate Change: Equity and Vulnerability in a Warming World* (pp. 199-230). Washington, DC: The World Bank.
- Annan, K. A. (2007, 14 June). *Launch of the Alliance for a Green Revolution in Africa (AGRA)*. Paper presented at the World Economic Forum, Cape Town, South Africa.

- Apple, M. W. (1993). The Politics of Official Knowledge: Does a National Curriculum Make Sense? *Discourse: Studies in the Cultural Politics of Education*, 14(1), 1-16.
- Arrighi, G. (2002). The African Crisis: World Systemic and Regional Aspects. *New Left Review*, 15(May June), 5-36.
- Avelino, F., & Rotmans, J. (2009). Power in Transition: An Interdisciplinary Framework to Study Power in Relation to Structural Change. *European Journal of Social Theory*, 12(4), 543-569.
- Bachrach, P., & Baratz, M. S. (1962). Two Faces of Power. *American Political Science Review*, 56(04), 947-952.
- Bar-Yam, Y. (1997). *Dynamics of Complex Systems*. Reading, Mass: Addison-Wesley.
- Barrett, C. B. (2013). *Food Security and Sociopolitical Stability*. Oxford: Oxford University Press.
- Barrett, C. B., & Maxwell, D. (2007). *Food Aid after Fifty Years: Recasting Its Role*: Taylor & Francis.
- Baxter, J., & Eyles, J. (1997). Evaluating Qualitative Research in Social Geography: Establishing 'Rigour' in Interview Analysis. *Transactions of the Institute of British Geographers*, 22(4), 505-525.
- Becker, H. S. (2006). *Tricks of the Trade: How to Think About Your Research While You're Doing It*. Chicago: The University of Chicago Press.
- Bello, W. (2009). *The Food Wars*. London: Verso Books.
- Berg, E. (1981). *Accelerated Development in Sub-Saharan Africa: An Agenda for Action*. Washington, DC: World Bank.
- Berge, E., Kambewa, D., Munthali, A., & Wiig, H. (2014). Lineage and Land Reforms in Malawi: Do Matrilineal and Patrilineal Landholding Systems Represent a Problem for Land Reforms in Malawi? *Land Use Policy*, 41(0), 61-69.
- Berman, S. (2011). Rallying for Academic Freedom across Malawi: Journalists for Human Rights.
- Bernstein, H. (2010). *Class Dynamics of Agrarian Change*. Sterling, VA: Kumarian Press.
- Bettini, G. (2013). Climate Barbarians at the Gate? A Critique of Apocalyptic Narratives on 'Climate Refugees'. *Geoforum*, 45(0), 63-72.
- Bezner Kerr, R. (2013). Seed Struggles and Food Sovereignty in Northern Malawi. *The Journal Of Peasant Studies*, 40(5), 867-897.
- Bezner Kerr, R., Snapp, S., Chirwa, M., Shumba, L., & Msachi, R. (2007). Participatory Research on Legume Diversification with Malawian Smallholder Farmers for Improved Human Nutrition and Soil Fertility. *Experimental Agriculture*, 43(04), 437-453.
- Bhaskar, R. (1975). Forms of Realism. *Philosophica*, 15.

- Bhaskar, R. (2009). *Scientific Realism and Human Emancipation*: Taylor & Francis.
- Biesalski, H. K., & O'Mealy, P. (2013). *Hidden Hunger*: Springer Verlag.
- Blaikie, N. W. H. (2009). *Designing Social Research: The Logic of Anticipation*. Cambridge, UK; Malden, MA: Polity Press.
- Blaikie, P. M., & Brookfield, H. C. (1987). *Land Degradation and Society*. London; New York: Methuen.
- Blantyre City Investment Unit. (2013). Mwandama Profile. Retrieved August 6, 2013, from <http://www.investinblantyre.com/mwandama-profile/>
- Boelee, E. (Ed.). (2011). *Ecosystems for Water and Food Security*. Nairobi: United Nations Environment Programme; Colombo: International Water Management Institute.
- Brinkmann, S. (2014). Doing without Data. *Qualitative Inquiry*(20), 720-725.
- Brown, V. A., Harris, J. A., & Russell, J. Y. (2010). *Tackling Wicked Problems through the Transdisciplinary Imagination*. London; Washington, DC: Earthscan.
- Bryceson, D. F. (1996). Deagrarianization and Rural Employment in Sub-Saharan Africa: A Sectoral Perspective. *World Development*, 24(1), 97-111.
- Bryceson, D. F. (1999). African Rural Labour, Income Diversification & Livelihood Approaches: A Long-Term Development Perspective. *Review of African Political Economy*, 26(80), 171-189.
- Bryceson, D. F. (2009a). Africa's Vanishing Peasantries and Global Food Crisis. *Monthly Review*.
- Bryceson, D. F. (2009b). Sub-Saharan Africa's Vanishing Peasantries and the Specter of a Global Food Crisis. *Monthly Review*, 61(3).
- Bump, J. B., Clemens, M. A., Demombynes, G., & Haddad, L. (2012). Concerns About the Millennium Villages Project Report. *The Lancet*, 379(9830).
- Burawoy, M. (2009). *The Extended Case Method: Four Countries, Four Decades, Four Great Transformations, and One Theoretical Tradition*. Berkeley: University of California Press.
- Burman, A. (2015). *Kharisiri Anthropology: The Traits of Our Trade and Other Colonial Monstrosities*. journal manuscript. Human Ecology. Lund University.
- Buttel, F. H., & Newby, H. (1980). *The Rural Sociology of the Advanced Societies: Critical Perspectives*. Montclair; London: Allanheld, Osmun & Co.
- Byres, T. J. (1996). *Capitalism from above and Capitalism from Below: An Essay in Comparative Political Economy*: Macmillan London.
- Büscher, B. (2012). Inverted Commons: Africa's Nature in the Global Imagination. In U. Münster, D. Münster & S. Dorondel (Eds.), *Fields*

- and Forests: Ethnographic Perspectives on Environmental Globalization* (Vol. 5, pp. 31-37): Rachel Carson Center.
- Campbell, H. (2012). Let Us Eat Cake? Historically Reframing the Problem of World Hunger and Its Purported Solutions. In C. Rosin, P. Stock & H. Campbell (Eds.), *Food Systems Failure. The Global Food Crisis and the Future of Agriculture* (pp. 30-45). Oxon: Earthscan.
- Cardinale, B. J., Duffy, J. E., Gonzalez, A., Hooper, D. U., Perrings, C., Venail, P., . . . Naeem, S. (2012). Biodiversity Loss and Its Impact on Humanity. *Nature*, 486(7401), 59-67.
- Carlson, J. A. (2010). Avoiding Traps in Member Checking. *Qualitative Report*, 15(5), 1102-1113.
- Carolan, M. (2012). *The Sociology of Food and Agriculture*: Taylor & Francis.
- Carr, E. R. (2006). Postmodern Conceptualizations, Modernist Applications: Rethinking the Role of Society in Food Security. *Food Policy*, 31(1), 14-29.
- Carr, E. R. (2008). The Millennium Village Project and African Development: Problems and Potentials. *Progress in Development Studies*, 8(4), 333-344.
- Carr, E. R. (2010). The Place of Stories in Development: Creating Spaces for Participation through Narrative Analysis. *Development in Practice*, 20(2), 219-226.
- Cawley, J. H. (2011). *The Oxford Handbook of the Social Science of Obesity*. New York: Oxford University Press.
- Chambers, R. (2013). *Ideas for Development*: Taylor & Francis.
- Chinsinga, B. (2013). 'Smart Subsidies'? A Critical Review of the Malawi Fertiliser Subsidy Programme. *Rural21*, 04/2013, 34-35.
- Clapp, J., & Fuchs, D. A. (2009). *Corporate Power in Global Agrifood Governance*. Cambridge, Mass.: MIT Press.
- Clegg, S., & Haugaard, M. (2009). *The Sage Handbook of Power*. Los Angeles; London: Sage Publications.
- Clemens, M. A., & Demombynes, G. (2013). The New Transparency in Impact Evaluation. *World Economics*, 14(4), 77-97.
- Cloke, P., & Johnston, R. (2005). Space of Geographical Thought Deconstructing Human Geography's Binaries. from <http://public.eblib.com/EBLPublic/PublicView.do?ptiID=254617>
- Cochrane, W. W. (1958). *Farm Prices, Myth and Reality*. Minneapolis: University of Minnesota Press.
- Coleman-Jensen, A., Gregory, C., & Singh, A. (2014). Household Food Security in the United States in 2013: United States Department of Agriculture.

- Coleman-Jensen, A., Nord, M., Andrews, M., & Carlson, S. (2011). Household Food Security in the United States in 2010: United States Department of Agriculture.
- Cornwall, A. (2004). Spaces for Transformation? Reflections on Issues of Power and Difference in Participation in Development. In S. Hickey & G. Mohan (Eds.), *Participation: From Tyranny to Transformation?: Exploring New Approaches to Participation in Development* (pp. 75-91). London: Zed Books.
- Coveney, J. (2006). *Food, Morals and Meaning. The Pleasure and Anxiety of Eating* (second ed.). Oxon: Routledge.
- Creswell, J. W. (2009). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Thousand Oaks: Sage Publications.
- Cummins, S., & Macintyre, S. (2002). 'Food Deserts': Evidence and Assumption in Health Policy Making, 436.
- Cummins, S., & Macintyre, S. (2006). Food Environments and Obesity—Neighbourhood or Nation? *International Journal of Epidemiology*, 35(1), 100-104.
- Dahl, R. A. (1957). The Concept of Power. *Behavioral Science*, 2(3), 201-215.
- Davis, J. R. (2003). The Rural-Non-Farm Economy. *Livelihoods and their Diversification: Issues and Options (July 2003)*.
- Davis, M. (2007). *Planet of Slums*. London; New York: Verso.
- Deere, C. D. (2009). The Feminization of Agriculture? The Impact of Economic Restructuring in Rural Latin America. In S. Razavi (Ed.), *The Gendered Impacts of Liberalization: Towards "Embedded Liberalism"?* (pp. 99-123). Oxon: Routledge.
- Dei, G. J. S., Hall, B. L., & Rosenberg, D. G. (2000). *Indigenous Knowledges in Global Contexts: Multiple Readings of Our World*. Toronto: University of Toronto Press.
- Delisle, H. (2002). Programming of Chronic Disease by Impaired Foetal Nutrition. Evidence and Implications for Policy and Intervention Strategies. Geneva: WHO Department of Nutrition for Health and Development.
- Denman, K. L., Brasseur, G., Chidthaisong, A., Ciais, P., Cox, P. M., Dickinson, R. E., . . . Zhang, X. (2007). Couplings between Changes in the Climate System and Biogeochemistry. In S. Solomon, D. Qin, M. Manning, Z. Chen, M. Marquis, K. B. Averyt, M. Tignor & H. L. Miller (Eds.), *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge: Cambridge University Press.



- Denning, G., Kabambe, P., Sanchez, P., Malik, A., Flor, R., Harawa, R., . . . Sachs, J. (2009). Input Subsidies to Improve Smallholder Maize Productivity in Malawi: Toward an African Green Revolution. *PLOS Biology*, 7(1), e1000023.
- Denzin, N. K. (2001). *Interpretive Interactionism*. Thousand Oaks, Calif.: Sage Publications.
- Desmarais, A. A. (2012). La Vía Campesina *The Wiley-Blackwell Encyclopedia of Globalization*: John Wiley & Sons, Ltd.
- Diepeveen, S. (2008). Putting Empowerment into Practice: Evaluating the Potential for "Development as Freedom" in the Millennium Villages Project. *Undercurrent Journal*, 5(1), 6-13.
- Dilley, M., & Boudreau, T. E. (2001). Coming to Terms with Vulnerability: A Critique of the Food Security Definition. *Food Policy*, 26(3), 229-247.
- Djurfeldt, G., Holmen, H., Jirström, M., & Larsson, R. (2006). *The African Food Crisis: Lessons from the Asian Green Revolution*. Wallingford [England]; Cambridge, Md: Cabi Publishing.
- Djurfeldt, G., Larsson, R., & Stjärnhagen, O. (2003). *Statistisk Verkttyglåda: Samhällsvetenskaplig Orsaksanalys Med Kvantitativa Metoder*. Stockholm: Studentlitteratur.
- Doss, C. R. (2001). Designing Agricultural Technology for African Women Farmers: Lessons from 25 Years of Experience. *World Development*, 29(12), 2075-2092.
- Doss, C. R. (2014). If Women Hold up Half the Sky, How Much of the World's Food Do They Produce? *Gender in Agriculture* (pp. 69-88): Springer.
- Earth Institute, T. (Producer). (2009, April 3, 2012). One Season. *Millennium Villages video channel*. Retrieved from <http://www.youtube.com/user/EarthInstitute/videos>
- Easterly, W. (2006). *The White Man's Burden: Why the West's Efforts to Aid the Rest Have Done So Much Ill and So Little Good*: Penguin Publishing Group.
- Easterly, W. (2008). Planners vs. Seaerchers in African Agricultural Aid *Features: Pro-Poor Livestock Policy Initiative (PPLPI)*, FAO.
- Edelman, M., Weis, T., Baviskar, A., Borrás, S. M., Holt-Giménez, E., Kandiotti, D., & Wolford, W. (2014). Introduction: Critical Perspectives on Food Sovereignty. *The Journal Of Peasant Studies*, 41(6), 911-931.
- Edström, J., Samuels, F., Bongartz, P., Maclausan, I., Proudlock, K., Wiggins, S., & Young, I. (2007). HIV, Nutrition, Food and Livelihoods in Sub-Saharan Africa: Evidence, Debates and Reflections for Guidance *Report for UK Department for*

- International Development (DFID)*. London: Institute of Development Studies.
- Ellis, F., & Biggs, S. (2001). Evolving Themes in Rural Development 1950s-2000s. *Development Policy Review*, 19(4), 437-448.
- Entman, R. M. (1993). Framing: Toward Clarification of a Fractured Paradigm. *Journal of Communication*, 43(4), 51-58.
- Ericksen, P. J. (2008). Conceptualizing Food Systems for Global Environmental Change Research. *Global Environmental Change*, 18(1), 234-245.
- Escobar, A. (2012). *Encountering Development: The Making and Unmaking of the Third World*. Woodstock, Oxfordshire: Princeton University Press.
- Evenson, R. E., & Gollin, D. (2003). *Crop Variety Improvement and Its Effect on Productivity the Impact of International Agricultural Research*. Wallingford, Oxon, UK; Cambridge, MA, USA: Cabi Publishing.
- Fairclough, N. (1993). *Discourse and Social Change*. Cambridge, Angleterre: Polity Press.
- Fairclough, N. (2001). *Language and Power*. Harlow: Longman.
- Fairclough, N. (2010). *Critical Discourse Analysis: The Critical Study of Language* (second ed.). Abingdon, Oxon: Routledge.
- Fairclough, N. (2014). *Critical Language Awareness*: Taylor & Francis.
- Fairclough, N., Jessop, B., & Sayer, A. (2004). Critical Realism and Semiosis. In J. Joseph & J. M. Roberts (Eds.), *Realism Discourse and Deconstruction* (pp. 23-42): Routledge.
- Fairhead, J., & Leach, M. (2003). *Science, Society and Power: Environmental Knowledge and Policy in West Africa and the Caribbean*: Cambridge University Press.
- Fan, S., & Pandya-Lorch, R. (2012). *Reshaping Agriculture for Nutrition and Health*. Washington, D.C.: International Food Policy Research Institute.
- FAO. (1996). *Declaration on World Food Security. World Food Summit*. Rome.
- FAO. (2000). Food Insecurity: When People Live with Hunger and Fear Starvation *The State of Food Insecurity in the World*. Rome: FAO.
- FAO. (2003). Trade Reforms and Food Security. Conceptualizing the Linkages. Rome.
- FAO. (2006). The Double Burden of Malnutrition. Case Studies from Six Developing Countries. Rome.
- FAO. (2008a). Crop Prospects and Food Situation Dec 2008.
- FAO. (2008b). High Food Prices and Food Security - Threats and Opportunities *The State of Food Insecurity in the World* (pp. 56).

- FAO. (2008c). An Introduction to the Basic Concepts of Food Security *EU-FAO Global Governance for Hunger Reduction Programme*. Rome.
- FAO. (2011a). The State of the World's Land and Water Resources for Food and Agriculture – Managing Systems at Risk. FAO, Rome and Earthscan, London.
- FAO. (2011b). Women in Agriculture. Closing the Gender Gap for Development *The State of Food and Agriculture* (pp. 160). Rome.
- FAO. (2012a). FAO Statistical Yearbook. Rome.
- FAO. (2012b). The State of World Fisheries and Aquaculture. Rome: FAO Fisheries and Aquaculture Department
- FAO. (2013a). Crop Prospects and Food Situation March 2013. Rome.
- FAO. (2013b). Food Systems for Better Nutrition *The State of Food and Agriculture* (pp. 114). Rome.
- FAO. (2013c). Food Wastage Footprint. Impacts on Natural Resources (pp. 63).
- FAO. (2013d). The Multiple Dimensions of Food Security *The State of Food Insecurity in the World*. Rome.
- FAO. (2014a). Innovation in Family Farming *The State of Food and Agriculture* (pp. 161). Rome: Food and Agriculture Organization of the United Nations.
- FAO. (2014b). Strengthening the Enabling Environment for Food Security and Nutrition *The State of Food Insecurity in the World*. Rome: FAO.
- Feldman, S., & Biggs, S. (2012). The Politics of International Assessments: The IAASTD Process, Reception and Significance. *Journal of Agrarian Change*, 12(1), 144-169.
- Ferguson, J. (1990). *The Anti-Politics Machine: "Development", Depoliticization, and Bureaucratic Power in Lesotho*: Cambridge University Press.
- Ferguson, J. (1994). The Anti-Politics Machine: "Development" and Bureaucratic Power in Lesotho. *The Ecologist*, 24(5), 176-181.
- Flood, Z. (2011). Breaking Through: Millennium Villages Project Year Five. from <http://www.millenniumvillages.org/videos?page=3>
- Flyvbjerg, B. (2006). Five Misunderstandings About Case-Study Research. *Qualitative Inquiry*, 12(2), 219-245.
- Foley, J. A. (2013, November 12, 2013). Changing the Global Food Narrative. The Dominant Story About the Future of the World Food Supply Is Logical, Well Known and Wrong. *Ensia*.
- Foley, J. A., Ramankutty, N., Brauman, K. A., Cassidy, E. S., Gerber, J. S., Johnston, M., . . . Zaks, D. P. M. (2011). Solutions for a Cultivated Planet. *Nature*, 478(7369), 337-342.

- Forsyth, T. (2003). *Critical Political Ecology: The Politics of Environmental Science*. London: Routledge.
- Forsyth, T., Leach, M., & Scoones, I. (1998). Poverty and Environment: Priorities for Research and Study. An Overview Study, Prepared for the United Nations Development Programme and European Commission: Institute of Development Studies.
- Foucault, M. (1971). Orders of Discourse. *Social Science Information*, 10(2), 7-30.
- Foucault, M. (1984). *The Foucault Reader* (P. Rabinow Ed.): Pantheon Books.
- Francis, C., Lieblein, G., Breland, T. A., Gliessman, S., Creamer, N., Harwood, R., . . . Poincelot, R. (2003). Agroecology: The Ecology of Food Systems. *Journal of Sustainable Agriculture*, 22(3), 99-118.
- Friedmann, H. (1987). International Regimes of Food and Agriculture since 1870. In T. Shanin (Ed.), *Peasants and Peasant Societies* (pp. 258-276). Oxford: Basil Blackwell.
- Friedmann, H. (2005). From Colonialism to Green Capitalism: Social Movements and Emergence of Food Regimes. In F. H. Buttel & P. McMichael (Eds.), *New Directions in the Sociology of Global Development* (pp. 227-264): Emerald Group Publishing Limited.
- Gachene, C. K. K., Karuma, A. N., & Baaru, M. W. (2014). Climate Change and Crop Yield in Sub-Saharan Africa. In R. Lal, B. R. Singh, D. L. Mwaseba, D. Kraybill, D. O. Hansen & L. O. Eik (Eds.), *Sustainable Intensification to Advance Food Security and Enhance Climate Resilience in Africa*: Springer.
- Gaspar, D., Portocarrero, A. V., & St.Clair, A. L. (2013). The Framing of Climate Change and Development: A Comparative Analysis of the Human Development Report 2007/8 and the World Development Report 2010. *Global Environmental Change*, 23(1), 28-39.
- Gee, J. P. (2011). *An Introduction to Discourse Analysis: Theory and Method* (third ed.). London: Routledge.
- Genette, G. (1997). *Paratexts: Thresholds of Interpretation*. Cambridge: Cambridge University Press.
- Giddens, A. (1984). *The Constitution of Society: Outline of the Theory of Structuration*: California Press.
- Giddens, A. (1993). *New Rules of Sociological Method: A Positive Critique of Interpretative Sociologies*. Stanford, CA: Stanford University Press.
- Giroux, H. A. (2012). *Disposable Youth: Racialized Memories, and the Culture of Cruelty*: Taylor & Francis.

- Giroux, H. A. (Producer). (2014, August 14, 2014). Disposable Life. *Disposable Futures*. [online lecture] Retrieved from <http://www.truth-out.org/opinion/item/24060-henry-a-giroux-disposable-life>
- Giroux, H. A., & Evans, B. (2014, June 1, 2014). Disposable Futures. *Truthout*. Retrieved from <http://www.truth-out.org/opinion/item/23998-disposable-futures#a6>
- Gliessman, S. R. (2007). *Agroecology: The Ecology of Sustainable Food Systems*: CRC Press.
- Gliessman, S. R., Engles, E., & Krieger, R. (1998). *Agroecology: Ecological Processes in Sustainable Agriculture*: Ann Arbor Press.
- Goffman, E. (1974). *Frame Analysis: An Essay on the Organization of Experience*. New York: Harper & Row.
- Goodman, D., Sorj, B., & Wilkinson, J. (1987). *From Farming to Biotechnology: A Theory of Agro-Industrial Development*: Basil Blackwell Oxford.
- Gottlieb, R., & Fisher, A. (1996). Community Food Security and Environmental Justice: Searching for a Common Discourse. *Agriculture and Human Values*, 13(3), 23-32.
- Government of Malawi. (2014). Global Aids Response Progress Report (pp. 45): Malawi National AIDS Commission (NAC).
- Grabe, S., Ward, L. M., & Hyde, J. S. (2008). The Role of the Media in Body Image Concerns among Women: A Meta-Analysis of Experimental and Correlational Studies. *Psychological Bulletin*, 134(3), 460-476.
- GRAIN. (2012). *The Great Food Robbery: How Corporations Control Food, Grab Land and Destroy the Climate*. Oxford: Pambazuka Press.
- GRAIN. (2014). *Hungry for Land: Small Farmers Feed the World with Less Than a Quarter of All Farmland*.
- Gramsci, A. (2001). *Selections from the Prison Notebooks of Antonio Gramsci*: Electric Book.
- Green, E. O. (2005). *Peasant Production and Limits to Labour: Thyolo and Mzimba Districts in Malawi, Mid-1930s to Late-1970s*. Lund University, Sweden.
- Grün, F., & Blumberg, B. (2009). Minireview: The Case for Obesogens. *Molecular Endocrinology*, 23(8), 1127-1134.
- Gupta, A., & Ferguson, J. (1997). *Culture, Power, Place: Explorations in Critical Anthropology*. Durham, NC: Duke University Press.
- Gustavson, J., Cederberg, C., Sonesson, U., van Otterdijk, R., & Meybeck, A. (2011). *Global Food Losses and Food Waste*. Rome: FAO.
- Guthman, J. (2008). Neoliberalism and the Making of Food Politics in California. *Geoforum*, 39(3), 1171-1183.

- Göhler, G. (2009). 'Power to' and 'Power over'. In S. Clegg & M. Haugaard (Eds.), *The Sage Handbook of Power* (pp. 27-39). London: Sage Publications Ltd.
- Hall, S. (1997). *Representation: Cultural Representations and Signifying Practices*. London: Sage Publications Ltd.
- Hall, S. (2007). The West and the Rest: Discourse and Power. In T. Das Gupta, Carl E. James, Roger C.A. Maaka, Grace-Edward Galabuzi, Chris Andersen (Ed.), *Race and Racialization: Essential Readings* (pp. 56-60). Toronto: Canadian Scholars' Press.
- Halweil, B. (2002). Home Grown: The Case for Local Food in a Global Market. In T. Prugh (Ed.): The Worldwatch Institute.
- Hardy, C., & Leiba-O'Sullivan, S. (1998). The Power Behind Empowerment: Implications for Research and Practice. *Human Relations*, 51(4), 451-483.
- Harvey, D. (2003). The 'New' Imperialism: Accumulation by Dispossession. *SOCIALIST REGISTER*, 63-87.
- Harvey, D. (2005a). *A Brief History of Neoliberalism*. New York: Oxford University Press.
- Harvey, D. (2005b). *The New Imperialism*. Oxford; New York: Oxford University Press.
- Harvey, D. (2010). *A Companion to Marx's Capital*. London; New York: Verso.
- Haugaard, M. (1997). *The Constitution of Power: A Theoretical Analysis of Power, Knowledge and Structure*. Manchester, UK: Manchester University Press.
- Haugaard, M. (2002). *Power: A Reader*. Manchester: Manchester University Press.
- Haugaard, M. (2010). Power: A 'Family Resemblance' Concept. *European Journal of Cultural Studies*, 13(4), 419-438.
- Havnevik, K. (2011). The Concept of Food Security. Uppsala: The Nordic Africa Institute, Agrarian Change, Property and Resources.
- Havnevik, K., Bryceson, D. F., Birgegård, L.-E., Matondi, P., & Beyene, A. (2007). African Agriculture and the World Bank: Development or Impoverishment? (pp. 75). Uppsala: The Nordic Africa Institute.
- Hazell, P. B. R. (2009a). The Asian Green Revolution *Millions Fed: Proven Successes in Agricultural Development*: International Food Policy Research Institute (IFPRI).
- Hazell, P. B. R. (2009b). Transforming Agriculture: The Green Revolution in Asia. In D. J. Spielman & R. Pandya-Lorch (Eds.), *Millions Fed: Proven Successes in Agricultural Development* (pp. 25-32). Washington DC: International Food Policy Research Institute.

- Henao, J., & Baanante, C. (2006). *Agricultural Production and Soil Nutrient Mining in Africa: Implications for Resource Conservation and Policy Development. Background Paper for the African Fertilizer Summit, 2006. Abuja, Nigeria.*: IFDC-An International Center for Soil Fertility.
- Ho, P., Zhao, J. H., & Xue, D. (2009). Access and Control of Agro-Biotechnology: Bt Cotton, Ecological Change and Risk in China. *The Journal Of Peasant Studies*, 36(2), 345-364.
- Hoben, A. (1995). Paradigms and Politics: The Cultural Construction of Environmental Policy in Ethiopia. *World Development*, 23(6), 1007-1021.
- Holt-Giménez, E., & Patel, R. (2009). *Food Rebellions!* : Pambazuka Press.
- Holt-Giménez, E., & Shattuck, A. (2011). Food Crises, Food Regimes and Food Movements: Rumbblings of Reform or Tides of Transformation? *Journal of Peasant Studies*, 38(1), 109-144.
- Homer-Dixon, T. F. (1999). *Environment, Scarcity, and Violence*. Chichester, West Sussex: Princeton University Press.
- Hornborg, A. (1998). Commentary: Towards an Ecological Theory of Unequal Exchange: Articulating World System Theory and Ecological Economics. *Ecological Economics*, 25(1), 127-136.
- Hornborg, A., McNeill, J., & Martínez Alier, J. (2006). *World-System History and Global Environmental Change*. Lanham, MD: Altamira Press.
- Hountondji, P. J. (1995). Producing Knowledge in Africa Today the Second Bashorun M. K. O. Abiola Distinguished Lecture. *African Studies Review*, 38(03), 1-10.
- Hulme, D. (2010). Lessons from the Making of the MDGs: Human Development Meets Results-Based Management in an Unfair World. *IDS Bulletin*, 41(1), 15-25.
- Hyden, G. (2007). Governance and Poverty Reduction in Africa. *Proceedings of the National Academy of Sciences*, 104(43), 16751-16756.
- IFAD. (2011). *Smallholders Can Feed the World Viewpoints*. Rome: IFAD.
- IFAD. (2013). *Smallholders, Food Security, and the Environment*. Rome: The International Fund for Agricultural Development.
- Iles, A. (2005). Learning in Sustainable Agriculture: Food Miles and Missing Objects. *Environmental Values*, 14(2), 163-183.
- Ismail, M. (2012). Conservation Agriculture. In A. Rossi (Ed.), *Good Environmental Practices in Bioenergy Feedstock Production; Making Bioenergy Work for Climate and Food Security* (pp. 4-13). Rome: FAO.

- Ivanic, M., & Martin, W. (2008). Implications of Higher Global Food Prices for Poverty in Low-Income Countries. *Agricultural Economics*, 39, 405-416.
- Iyengar, S. (1994). *Is Anyone Responsible?: How Television Frames Political Issues*: University of Chicago Press.
- Jackson, W. (1985). *New Roots for Agriculture*. Lincoln: University of Nebraska Press.
- Jacobs, S. (2013). *Gender and Agrarian Reforms*: Taylor & Francis.
- Jerneck, A., & Olsson, L. (2013). More Than Trees! Understanding the Agroforestry Adoption Gap in Subsistence Agriculture: Insights from Narrative Walks in Kenya. *Journal of Rural Studies*, 32(0), 114-125.
- Jerneck, A., Olsson, L., Ness, B., Anderberg, S., Baier, M., Clark, E., . . . Persson, J. (2011). Structuring Sustainability Science. *Sustainability Science*, 6(1), 69-82.
- Johnson, N. (2014). Teaching a Humongous Foundation to Listen to Small Farmers. *Grist Magazine, Inc.* Retrieved from [www.grist.org](http://www.grist.org)
- Jomo, F., & Cohen, M. (2014, January 16, 2014). Malawi's 'Cashgate' Scandal Dents Banda's Election Prospects, online article. *Bloomberg*. Retrieved from <http://www.bloomberg.com/news/articles/2014-01-15/malawi-s-cashgate-scandal-dents-president-s-election-prospects>
- Jørgensen, M., & Phillips, L. (2002). *Discourse Analysis as Theory and Method*. London: Sage Publications Ltd.
- Kanter, A. S., Negin, J., Olayo, B., Bukachi, F., Johnson, E., & Sachs, S. E. (2009). Millennium Global Village-Net: Bringing Together Millennium Villages Throughout Sub-Saharan Africa. *International Journal of Medical Informatics*, 78(12), 802-807.
- Kates, R. W., Clark, W. C., Corell, R., Hall, J. M., Jaeger, C. C., Lowe, I., . . . Svedin, U. (2001). Sustainability Science. *Science*, 292(5517), 641-642.
- Kates, R. W., & Dasgupta, P. (2007). African Poverty: A Grand Challenge for Sustainability Science. *Proceedings of the National Academy of Sciences*, 104(43), 16747-16750.
- Keding, G. B., Msuya, J. M., Maass, B. L., & Krawinkel, M. B. (2011). Dietary Patterns and Nutritional Health of Women: The Nutrition Transition in Rural Tanzania. *Food & Nutrition Bulletin*, 32(3), 218-226.
- Kenney, M., Lobao, L. M., Curry, J., & Goe, W. R. (1989). Midwestern Agriculture in the US Fordism: From the New Deal to Economic Restructuring. *Sociologia Ruralis*, 29(2), 131-148.
- Klages, K. H. (1928). Crop Ecology and Ecological Crop Geography in the Agronomic Curriculum. *Journal of the American Society of Agronomy*, 10, 336-353.



- Kloppenburger, J. R. (2004). *First the Seed: The Political Economy of Plant Biotechnology* (second ed.). Madison, Wis.: University of Wisconsin Press.
- Kulikoff, A. (1996). *The Agrarian Origins of American Capitalism*. Charlottesville: University Press of Virginia.
- Lang, T. (1999). Food Policy for the 21st Century: Can It Be Both Radical and Reasonable? In M. Koc, R. MacRae, L. J. A. Mougeot & J. Welsh (Eds.), *For Hunger Proof Cities: Sustainable Urban Food Systems* (pp. 216-224). Ottawa: International Development Research Centre.
- Lawrence, F. (2011, June 2, 2011). The Global Food Crisis: ABCD of Food - How the Multinationals Dominate Trade. *The Guardian*. Retrieved from <http://www.theguardian.com/global-development/poverty-matters/2011/jun/02/abcd-food-giants-dominate-trade>
- Lawrence, G., & McMichael, P. (2012). The Question of Food Security. *International Journal of Sociology of Agriculture & Food*, 19(2), 135-142.
- Le Billon, P., Sommerville, M., & Essex, J. (2014). Introduction: Global Food Crisis. *Geopolitics*, 19(2), 235-238.
- Leach, M., & Mearns, R. (1996). Environmental Change and Policy. In M. Leach & R. Mearns (Eds.), *The Lie of the Land: Challenging Received Wisdom on the African Environment*. London: The International African Institute.
- Leff, B., Ramankutty, N., & Foley, J. A. (2004). Geographic Distribution of Major Crops across the World. *Global Biogeochemical Cycles*, 18(1), GB1009.
- Levkoe, C. Z. (2006). Learning Democracy through Food Justice Movements. *Agriculture and Human Values*, 23(1), 89-98.
- Li, T. M. (2007). *The Will to Improve: Governmentality, Development, and the Practice of Politics*: Duke University Press.
- Lien, M. E., & Nerlich, B. (2004). *The Politics of Food*. Oxford: Berg.
- Lipton, M. (1977). *Why Poor People Stay Poor: Urban Bias in World Development*: Cambridge, Mass.
- Lipton, M. (2005). *The Family Farm in a Globalizing World: The Role of Crop Science in Alleviating Poverty* (Vol. 40): International Food Policy Research Institute (IFPRI).
- Lipton, M., & Longhurst, R. (2010). *New Seeds and Poor People*: Taylor & Francis.
- Long, N., & van der Ploeg, J. D. (1989). Demythologizing Planned Intervention: An Actor Perspective. *Sociologia Ruralis*, 29(3-4), 226-249.

- Lowe, P., Murdoch, J., Marsden, T., Munton, R., & Flynn, A. (1993). Regulating the New Rural Spaces: The Uneven Development of Land. *Journal of Rural Studies*, 9(3), 205-222.
- Lukes, S. (2005). *Power: A Radical View* (second ed.). London ; Basingstoke: Palgrave Macmillan.
- Lundqvist, J., de Fraiture, C., & Molden, D. (2008). Saving Water: From Field to Fork – Curbing Losses and Wastage in the Food Chain *SIWI Policy Brief*: Stockholm International Water Institute.
- Lunduka, R., Ricker-Gilbert, J., & Fisher, M. (2013). What Are the Farm-Level Impacts of Malawi's Farm Input Subsidy Program? A Critical Review. *Agricultural Economics*, 44(6), 563-579.
- Lupton, D. (1998). *Food, the Body and the Self*. London: Sage Publications Ltd.
- Mahmoud, Y. M. (2007). *Chinese Development Assistance and West African Agriculture: A Shifting Approach to Foreign Aid?* (175), Lund University, Sweden.
- Mann, S. A. (1990). *Agrarian Capitalism in Theory and Practice*. Chapel Hill: University of North Carolina Press.
- Martinez-Alier, J. (2009). Social Metabolism, Ecological Distribution Conflicts, and Languages of Valuation. *Capitalism, Nature, Socialism*, 20(1), 58-87.
- Marx, K. (1906). Capital, Volume I.
- Masina, L. (2014, September 04). Malawi President Vows to Wage War on Crime. *VOA Voice of America*. Retrieved from <http://www.voanews.com/content/malawi-president-vows-to-wage-war-on-crime/2438283.html>
- Masters, W. A., Djurfeldt, A. A., De Haan, C., Hazell, P., Jayne, T., Jirstrom, M., & Reardon, T. (2013). Urbanization and Farm Size in Asia and Africa: Implications for Food Security and Agricultural Research. *Global Food Security*, 2(3), 156-165.
- McCann, J. C. (2005). Maize and Grace: Africa's Encounter with a New World Crop, 1500-2000. from <http://hdl.handle.net/2027/heb.05687>
- McElvaine, R. S. (2010). *The Great Depression: America 1929-1941*: Crown/Archetype.
- McIntyre, B. D., Herren, H. R., Wakhungu, J., & Watson, R. T. (2009a). Agriculture at a Crossroads: The Global Report: International Assessment of Agricultural Knowledge, Science and Technology for Development.
- McIntyre, B. D., Herren, H. R., Wakhungu, J., & Watson, R. T. (2009b). Synthesis Report - a Synthesis of the Global and Sub-Global IAASTD Reports. Washington, DC: International Assessment of Agricultural Knowledge, Science and Technology for Development.

- McMichael, P. (1997). Rethinking Globalization: The Agrarian Question Revisited. *Review of International Political Economy*(4), 630.
- McMichael, P. (2005). Global Development and the Corporate Food Regime. *Research in Rural Sociology & Development*, 11, 265-299.
- McMichael, P. (2006). Reframing Development: Global Peasant Movements and the New Agrarian Question. *Canadian Journal of Development Studies*, 27(4), 471-483.
- McMichael, P. (2009). A Food Regime Genealogy. *The Journal Of Peasant Studies*, 36(1), 139-169.
- McMichael, P. (2012a). *Development and Social Change: A Global Perspective*. Los Angeles: Sage Publications.
- McMichael, P. (2012b). Food Regime Crisis and Revaluing the Agrarian Question. In R. Almås & H. Campbell (Eds.), *Rethinking Agricultural Policy Regimes: Food Security, Climate Change and the Future Resilience of Global Agriculture (Research in Rural Sociology and Development, Volume 18)* (pp. 99-122): Emerald Group Publishing Limited.
- McMichael, P., & Schneider, M. (2011). Food Security Politics and the Millennium Development Goals. *Third World Quarterly*, 32(1), 119-139.
- McMillan, M., & Headey, D. (2014). Introduction – Understanding Structural Transformation in Africa. *World Development*, 63(0), 1-10.
- McNeill, D., & StClair, A. L. (2009). *Global Poverty, Ethics and Human Rights: The Role of Multilateral Organisations*: Taylor & Francis.
- Meinzen-Dick, R. S., Quisumbing, A., Behrman, J., Biermayr-Jenzano, P., Wilde, V., Noordeloos, M., . . . Bientema, N. (2011). *Engendering Agricultural Research, Development and Extension*. Washington, D.C.: International Food Policy Research Institute.
- Mels, T. (2009). Analysing Environmental Discourses and Representations. In D. D. Noel Castree, Diana Liverman, Bruce Rhoads (Ed.), *A Companion to Environmental Geography* (pp. 385-399). West Sussex: Blackwell Publishing Ltd.
- Merry Year. (2013). Overseas Projects. Retrieved August 27, 2014, from <http://merryyear.org/English/GlobalProject>
- Mhone, G. C. (1992). *Malawi at the Crossroads: The Post-Colonial Political Economy*. Harare: Sapes Books.
- Micronutrient Initiative. (2009). Investing in the Future: A United Call to Action on Vitamin and Mineral Deficiencies. Beijing.
- Millennium Promise. (2011). 2011 Annual Report on the Millennium Villages Project.
- Millennium Promise. (n.d.). Millennium Promise Financials. from <http://millenniumvillages.org/millenniumpromise/financials/>

- Millennium Villages (Producer). (2008). One Season: A Report on Progress in Malawi. Retrieved from <http://www.millenniumvillages.org/videos/one-season-a-report-on-progress-in-malawi>
- Millennium Villages (Producer). (2010a). Empowering Women in Mwandama, Malawi. Retrieved from <http://www.millenniumvillages.org/videos?page=7>
- Millennium Villages. (2010b). Harvests of Development in Rural Africa. The Millennium Villages after Three Years (pp. 111): The Earth Institute, Columbia University and Millennium Promise.
- Millennium Villages. (2013a). Islamic Development Bank and Earth Institute Partner to Meet Millennium Development Goals in Rural Africa [Press release]. Retrieved from <http://millenniumvillages.org/press-releases/islamic-development-bank-and-earth-institute-partner-to-meet-millennium-development-goals-in-rural-africa/>
- Millennium Villages. (2013b, August 29). Millennium Village Programs Now in More Than 20 Countries. *Field Notes*. Retrieved March 10, 2015, from <http://millenniumvillages.org/field-notes/millennium-village-programs-now-in-more-than-20-countries/>
- Millennium Villages. (2014). Japan to Support Programs in the Millennium Villages in Kenya, Nigeria, and Rwanda with Second \$5 Million Grant [Press release]. Retrieved from <http://millenniumvillages.org/press-releases/japan-to-support-programs-in-the-millennium-villages-in-kenya-nigeria-and-rwanda-with-second-5-million-grant/>
- Millennium Villages. (n.d.-a). Millennium Promise. Retrieved July 31, 2013, from [www.millenniumvillages.org/millenniumpromise](http://www.millenniumvillages.org/millenniumpromise)
- Millennium Villages. (n.d.-b). Millennium Villages Project. Retrieved February 27, 2015, from [www.millenniumvillages.org/the-villages](http://www.millenniumvillages.org/the-villages)
- Mittal, A. (2009). Voices from Africa; African Farmers and Environmentalists Speak out against a New Green Revolution in Africa: The Oakland Institute.
- Molyneux, M. (1985). Mobilization without Emancipation? Women's Interests, the State, and Revolution in Nicaragua. *Feminist Studies*, 11(2), 227-254.
- Moore, J. W. (2010). Cheap Food & Bad Money: Food, Frontiers, and Financialization in the Rise and Demise of Neoliberalism. *Review Fernand Braudel Center*, 33(2/3), 225-261.
- Moore, J. W. (2011). Transcending the Metabolic Rift: A Theory of Crises in the Capitalist World-Ecology. *Journal of Peasant Studies*, 38(1), 1-46.
- Morton, J. F. (2007). The Impact of Climate Change on Smallholder and Subsistence Agriculture. *Proceedings of the National Academy of Sciences*, 104(50), 19680-19685.

- Morvaridi, B. (2012). Capitalist Philanthropy and the New Green Revolution for Food Security. *International Journal of Sociology of Agriculture & Food*, 19(2), 243-256.
- Moser, C. O. N. (1989). Gender Planning in the Third World: Meeting Practical and Strategic Gender Needs. *World Development*, 17(11), 1799-1825.
- Mosse, D. (2011). *Adventures in Aidland: The Anthropology of Professionals in International Development*. Oxford: Berghahn Books.
- Moyo, D. (2011). *Dead Aid: Why Aid Is Not Working and How There Is Another Way for Africa*: Penguin Books Limited.
- Msachi, R., Dakishoni, L., & Bezner Kerr, R. (2009). Soils, Food and Healthy Communities: Working Towards Food Sovereignty in Malawi. *Journal of Peasant Studies*, 36(3), 700-706.
- Mulwafu, W. O. (2011). *Conservation Song: A History of Peasant-State Relations and the Environment in Malawi, 1860-2000*: White Horse Press.
- Nature* editorial. (2012). With Transparency Comes Trust. *Nature*, 485(7397), 147-147.
- Nederveen Pieterse, J. (2010). *Development Theory: Deconstructions/Reconstructions*. Los Angeles; London: Sage Publications.
- NEPAD. (2003). Comprehensive Africa Agriculture Development Programme (CAADP). Rome: New Partnership for Africa's Development, The African Union.
- Nestle, M. (2002). *Food Politics*. Berkeley, California: University of California Press.
- Netting, R. M. (1993). *Smallholders, Householders: Farm Families and the Ecology of Intensive, Sustainable Agriculture*. Stanford: Stanford University Press.
- Neumann, R. (1997). Primitive Ideas: Protected Area Buffer Zones and the Politics of Land in Africa. *Development and Change*, 28(3), 559-582.
- Neumann, R. (2005). *Making Political Ecology*. London: Hodder Arnold.
- Niang, I., Ruppel, O. C., Abdrabo, M. A., Essel, A., Lennard, C., Padgham, J., & Urquhart, P. (2014). Africa. In V. R. Barros, C. B. Field, D. J. Dokken, M. D. Mastrandrea, K. J. Mach, T. E. Bilir, M. Chatterjee, K. L. Ebi, Y. O. Estrada, R. C. Genova, B. Girma, E. S. Kissel, A. N. Levy, S. MacCracken, P. R. Mastrandrea & L. L. White (Eds.), *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (pp. 1199-1265). Cambridge, United Kingdom: Cambridge University Press.

- Norton, B. G. (2003). *Searching for Sustainability: Interdisciplinary Essays in the Philosophy of Conservation Biology*. New York: Cambridge University Press.
- Norton, B. G. (2005). *Sustainability: A Philosophy of Adaptive Ecosystem Management*. Chicago: University of Chicago Press.
- Nyasa Times. (2015, February 10, 2015). Britain Still Giving Malawi Aid through Non-Governmental System - High Commissioner. *Nyasa Times, Malawi*. Retrieved from <http://www.nyasatimes.com/2015/02/10/britain-still-giving-malawi-aid-through-non-governmental-system-high-commissioner/>
- OECD. (2010). History of the 0.7% ODA Target: Organisation for Economic Co-operation and Development.
- Olsson, L., Chadee, D. D., Hoegh-Guldberg, O., Oppenheimer, M., Porter, J. R., Pörtner, H.-O., . . . Tschakert, P. (2014). Cross-Chapter Box on Heat Stress and Heat Waves. In C. B. Field, V. R. Barros, D. J. Dokken, K. J. Mach, M. D. Mastrandrea, T. E. Bilir, M. Chatterjee, K. L. Ebi, Y. O. Estrada, R. C. Genova, B. Girma, E. S. Kissel, A. N. Levy, S. MacCracken, P. R. Mastrandrea & L. L. White (Eds.), *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (pp. pp. 109-111). Cambridge; New York: Cambridge University Press.
- Olsson, L., Opondo, M., Tschakert, P., Agrawal, A., Eriksen, S. H., Ma, S., . . . Zakieldein, S. A. (2014). Livelihoods and Poverty. In C. B. Field, V. R. Barros, D. J. Dokken, K. J. Mach, M. D. Mastrandrea, T. E. Bilir, M. Chatterjee, K. L. Ebi, Y. O. Estrada, R. C. Genova, B. Girma, E. S. Kissel, A. N. Levy, S. MacCracken, P. R. Mastrandrea & L. L. White (Eds.), *Climate Change 2014 - Impacts, Adaptation and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge: Cambridge University Press.
- Panos Institute. (2001). *Food for All. Can Hunger Be Halved?* London: The Panos Institute.
- Patel, R. (2009). Food Sovereignty. *Journal of Peasant Studies*, 36(3), 663-706.
- Patel, R., Balakrishnan, R., & Narayan, U. (2007). Transgressing Rights: La Via Campesina's Call for Food Sovereignty/Exploring Collaborations: Heterodox Economics and an Economic Social Rights Framework/Workers in the Informal Sector: Special

- Challenges for Economic Human Rights. *Feminist Economics*, 13(1), 87-116.
- Patel, R., Bezner Kerr, R., Shumba, L., & Dakishoni, L. (2014). Cook, Eat, Man, Woman: Understanding the New Alliance for Food Security and Nutrition, Nutritionism and Its Alternatives from Malawi. *The Journal Of Peasant Studies*, 42(1), 21-44.
- Paulson, S., & Gezon, L. L. (2005). *Political Ecology across Spaces, Scales, and Social Groups*. New Brunswick, NJ: Rutgers University Press.
- Pauw, K., & Thurlow, J. (2014). Malawi's Farm Input Subsidy Program. Where Do We Go from Here? : International Food Policy Research Institute (IFPRI).
- Pelletier, N., Arsenault, N., & Tyedmers, P. (2008). Scenario Modeling Potential Eco-Efficiency Gains from a Transition to Organic Agriculture: Life Cycle Perspectives on Canadian Canola, Corn, Soy, and Wheat Production. *Environmental Management*, 42(6), 989-1001.
- Perkins, J. H. (1997). *Geopolitics and the Green Revolution Wheat, Genes, and the Cold War*. New York: Oxford University Press.
- Peterman, A., Behrman, J. A., & Quisumbing, A. R. (2014). A Review of Empirical Evidence on Gender Differences in Nonland Agricultural Inputs, Technology, and Services in Developing Countries. In A. R. Quisumbing, R. Meinzen-Dick, T. L. Raney, A. Croppenstedt, J. A. Behrman & A. Peterman (Eds.), *Gender in Agriculture* (pp. 145-186): Springer Netherlands.
- Peters, P. E. (2006). Rural Income and Poverty in a Time of Radical Change in Malawi. *The Journal of Development Studies*, 42(2), 322-345.
- Peters, P. E., & Kambewa, D. (2007). Whose Security? Deepening Social Conflict over 'Customary' Land in the Shadow of Land Tenure Reform in Malawi. *The Journal of Modern African Studies*, 45(03), 447-472.
- Phillips, N., Lawrence, T. B., & Hardy, C. (2004). Discourse and Institutions. *Academy of management review*, 29(4), 635-652.
- Pierson, R. (2013). Fact Sheet: Landfill Methane. Environmental and Energy Study Institute. [http://www.eesi.org/files/FactSheet\\_Landfill-Methane\\_042613.pdf](http://www.eesi.org/files/FactSheet_Landfill-Methane_042613.pdf)
- Pinstrup-Andersen, P. (2009). Food Security: Definition and Measurement. *Food Security*, 1(1), 5-7.
- Polanyi, K. (1944). *The Great Transformation: The Political and Economic Origins of Our Time*: Beacon Press.
- Popkin, B. M. (2004). The Nutrition Transition: An Overview of World Patterns of Change. *Nutrition Reviews*, 62, S140-S143.

- Popkin, B. M. (2006). Global Nutrition Dynamics: The World Is Shifting Rapidly toward a Diet Linked with Noncommunicable Diseases. *The American Journal of Clinical Nutrition*, 84(2), 289-298.
- Powell, L. M., Slater, S., Mirtcheva, D., Bao, Y., & Chaloupka, F. J. (2007). Food Store Availability and Neighborhood Characteristics in the United States. *Preventive Medicine*, 44(3), 189-195.
- Pretty, J. (2008). Agricultural Sustainability: Concepts, Principles and Evidence. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 363(1491), 447-465.
- Pretty, J., Toulmin, C., & Williams, S. (2011). Sustainable Intensification in African Agriculture. *International Journal of Agricultural Sustainability*, 9(1), 5-24.
- Pritchard, B. (2012). Trading into Hunger? Trading out of Hunger? International Food Trade and the Debate on Food Security. In C. Rosin, P. Stock & H. Campbell (Eds.), *Food Systems Failure. The Global Food Crisis and the Future of Agriculture* (pp. 46-59). Oxon: Earthscan.
- Pronyk, P. M. (2012). Errors in a Paper on the Millennium Villages Project. *The Lancet*, 379(9830), 1946.
- Pronyk, P. M., Muniz, M., Nemser, B., Somers, M.-A., McClellan, L., Palm, C. A., . . . McArthur, J. W. (2012). The Effect of an Integrated Multisector Model for Achieving the Millennium Development Goals and Improving Child Survival in Rural Sub-Saharan Africa: A Non-Randomised Controlled Assessment. *The Lancet*, 379(9832), 2179-2188.
- Ramankutty, N., & Foley, J. A. (1998). Characterizing Patterns of Global Land Use: An Analysis of Global Croplands Data. *Global Biogeochemical Cycles*, 12(4), 667-685.
- Ranum, P., Peña-Rosas, J. P., & Garcia-Casal, M. N. (2014). Global Maize Production, Utilization, and Consumption. *Annals of the New York Academy of Sciences*, 1312(1), 105-112.
- Rayner, G., Hawkes, C., Lang, T., & Bello, W. (2006). Trade Liberalization and the Diet Transition: A Public Health Response. *Health promotion international*, 21 Suppl 1, 67-74.
- Reardon, T. (2007). Global Food Industry Consolidation and Rural Agroindustrialization in Developing Economies. In S. Hagglblade, P. B. R. Hazell & T. Reardon (Eds.), *Transforming the Rural Nonfarm Economy: Opportunities and Threats in the Developing World* (pp. 199-215). International Food Policy Research Institute.
- Rich, S. (2007). Africa's Village of Dreams. *Wilson Quarterly*, 31(2), 14-23.
- Rigg, J. (2006). Land, Farming, Livelihoods, and Poverty: Rethinking the Links in the Rural South. *World Development*, 34(1), 180-202.



- Rittel, H. J., & Webber, M. (1973). Dilemmas in a General Theory of Planning. *Policy Sciences*, 4(2), 155-169.
- Robbins, P. (2012). *Political Ecology: A Critical Introduction*: John Wiley & Sons Ltd.
- Roberts, P. (2008). *The End of Food*. Boston: Houghton Mifflin Company.
- Rosenau, P. M. (1992). *Post-Modernism and the Social Sciences: Insights, Inroads, and Intrusions*. Princeton: Princeton University Press.
- Rosin, C., Stock, P., & Campbell, H. (2013). *Food Systems Failure: The Global Food Crisis and the Future of Agriculture*: Taylor & Francis.
- Roulston, K. (2009). *Reflective Interviewing: A Guide to Theory and Practice*. London: Sage Publications.
- Ruane, J. (2012). *An FAO E-Mail Conference on Agricultural Innovation Systems and Family Farming: The Moderator's Summary*. Paper presented at the Ensuring the full participation of family farmers in agricultural innovation systems: Key issues and case studies, online.
- Rudel, T. K. (2013). The National Determinants of Deforestation in Sub-Saharan Africa. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 368(1625).
- Röling, N. (2009). Pathways for Impact: Scientists' Different Perspectives on Agricultural Innovation. *International Journal of Agricultural Sustainability*, 7(2), 83-94.
- Sachs, J. (2005). *The End of Poverty: How We Can Make It Happen in Our Lifetime*. New York: Penguin Press.
- Sachs, J. (2006, May 07, 2006). Foreign Aid Skeptics Thrive on Pessimism. *Los Angeles Times*. Retrieved from <http://articles.latimes.com/2006/may/07/opinion/op-sachs7>
- Sachs, J., & McArthur, J. W. (2005). The Millennium Project: A Plan for Meeting the Millennium Development Goals. *Lancet*, 365(9456), 347-353.
- Sachs, W. (1993). *Global Ecology: A New Arena of Political Conflict*. London: Zed Books.
- Sanchez, P. (2010). Tripling Crop Yields in Tropical Africa. *Nature Geosci*, 3(5), 299-300.
- Sanchez, P., Palm, C., Sachs, S. E., Sachs, J., Denning, G., Flor, R., . . . Zamba, C. (2007). The African Millennium Villages. *Proceedings of the National Academy of Sciences of the United States of America*, 104(43), 16775-16780.
- Sayer, A. (1992). *Method in Social Science: A Realist Approach*: Routledge.
- Sayer, A. (2000). *Realism and Social Science*. London: Sage Publications.
- Sayer, A. (2004). Why Critical Realism? In S. Fleetwood & S. Ackroyd (Eds.), *Critical Realist Applications in Organisation and Management Studies*. London: Routledge.

- Schmidhuber, J., & Tubiello, F. N. (2007). Global Food Security under Climate Change. *Proceedings of the National Academy of Sciences of the United States of America*(50), 19703.
- Scoones, I., & Thompson, J. (1994). *Beyond Farmer First: Rural People's Knowledge, Agricultural Research and Extension Practice*. London: Intermediate Technology.
- Scoones, I., & Thompson, J. (2009). *Farmer First Revisited: Innovation for Agricultural Research and Development*. Rugby, UK: Practical Action Publications.
- Sen, A. K. (1982). *Poverty and Famines: An Essay on Entitlement and Deprivation*. Oxford; New York: Clarendon Press ; Oxford University Press.
- Sen, A. K. (2009). *Development as Freedom*. Oxford: Oxford University Press.
- Shakespeare, W. (Writer). (1623). As You Like It. First Folio.
- SIWI. (2012). Thematic Scope: Water and Food Security. Stockholm International Water Institute.
- SIWI (Producer). (2013, August 18, 2014). Waste. Retrieved from <http://www.siw.org/news/film-waste/>
- Smale, M. (1995). "Maize Is Life": Malawi's Delayed Green Revolution. *World Development*, 23(5), 819-831.
- Smith, D. M., & Cummins, S. (2009). Obese Cities: How Our Environment Shapes Overweight. *Geography Compass*, 3(1), 518-535.
- Smith, P., Bustamante, M., Ahammad, H., Clark, H., Dong, H., Elsiddig, E. A., . . . Tubiello, F. (2014). Agriculture, Forestry and Other Land Use (AFOLU). In O. Edenhofer, R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel & J. C. Minx (Eds.), *Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (pp. 112). Cambridge: Cambridge University Press.
- Snapp, S. S., Blackie, M. J., Gilbert, R. A., Bezner-Kerr, R., & Kanyama-Phiri, G. Y. (2010). Biodiversity Can Support a Greener Revolution in Africa. *Proceedings of the National Academy of Sciences*, 107(48), 20840-20845.
- SOAS. (2008). Evaluation of the 2006/7 Agricultural Input Subsidy Programme, Malawi. Final Report Undertaken for the Malawi Ministry of Agriculture and Food Security: School of Oriental and African Studies (SOAS), London, together with Wadonda Consult, Michigan State University (MSU), Overseas Development Institute (ODI).

- Sobal, J., Kettel Khan, L., & Bisogni, C. (1998). A Conceptual Model of the Food and Nutrition System. *Social Science & Medicine*, 47(7), 853-863.
- Stamp, P. (1989). *Technology, Gender, and Power in Africa*. Ottawa: International Development Research Centre.
- Steen, K. (2011). *Time to Farm: A Qualitative Inquiry into the Dynamics of the Gender Regime of Land and Labour Rights in Subsistence Farming: An Example from the Chiweshe Communal Area, Zimbabwe*. Lund University, Sweden.
- Stein, H. (2011). World Bank Agricultural Policies, Poverty and Income Inequality in Sub-Saharan Africa. *Cambridge Journal of Regions, Economy and Society*, 4(1), 79-90.
- Stewart, W. M., Dibb, D. W., Johnston, A. E., & Smyth, T. J. (2005). The Contribution of Commercial Fertilizer Nutrients to Food Production. *Agronomy Journal*, 97(1), 1-6.
- Stock, P., & Carolan, M. (2012). A Utopian Perspective on Global Food Security. In C. Rosin, P. Stock & H. Camppbell (Eds.), *Food Systems Failure: The Global Food Crisis and the Future of Agriculture* (pp. 114-128). Oxon: Earthscan.
- Stone, D. (2004). Transfer Agents and Global Networks in the 'Transnationalization' of Policy. *Journal of European Public Policy*, 11(3), 545-566.
- Stones, R. (2009). Power and Structuration Theory. In S. Clegg & M. Haugaard (Eds.), *The Sage Handbook of Power* (pp. 89-107). London: Sage Publications.
- Strange, M. (1988). *Family Farming: A New Economic Vision*. Lincoln; San Francisco: University of Nebraska Press; Insitute for Food and Development Policy.
- Swyngedouw, E. (2010). *Post-Democratic Cities. For Whom and for What?* Paper presented at the Regional Studies Association Annual Conference, Budapest.
- Swyngedouw, E. (2013). Apocalypse Now! Fear and Doomsday Pleasures. *Capitalism Nature Socialism*, 24(1), 9-18.
- Teddle, C., & Yu, F. (2007). Mixed Methods Sampling: A Typology with Examples. *Journal of Mixed Methods Research*, 1(1), 77-100.
- Thompson, B., & Amoroso, L. (2011). *Combating Micronutrient Deficiencies: Food-Based Approaches*. Rome; Wallingford; Cambridge: Food and Agriculture Organization of the United Nations ; CABI.
- Thompson, J., & Scoones, I. (1994). Challenging the Populist Perspective: Rural People's Knowledge, Agricultural Research, and Extension Practice. *Agriculture and Human Values*, 11(2-3), 58-76.

- Thompson, J., & Scoones, I. (2009). Addressing the Dynamics of Agri-Food Systems: An Emerging Agenda for Social Science Research. *Environmental Science & Policy*, 12(4), 386-397.
- Thompson, P. B. (2010). The Agrarian Vision Sustainability and Environmental Ethics. from <http://public.eblib.com/EBLPublic/PublicView.do?ptiID=792271>
- Tilman, D., Cassman, K. G., Matson, P. A., Naylor, R., & Polasky, S. (2002). Agricultural Sustainability and Intensive Production Practices. *Nature*, 418(6898), 671-677.
- Tittonell, P., & Giller, K. E. (2013). When Yield Gaps Are Poverty Traps: The Paradigm of Ecological Intensification in African Smallholder Agriculture. *Field Crops Research*, 143, 76-90.
- Tsing, A. L. (2005). *Friction: An Ethnography of Global Connection*. Princeton, NJ: Princeton University Press.
- Turner, B. L., & Robbins, P. (2008). Land-Change Science and Political Ecology: Similarities, Differences, and Implications for Sustainability Science. *Annual Review of Environment and Resources*, 33(1), 295-316.
- UN-Habitat. (n.d.). United Nations Human Settlements Programme. *United Nations - Malawi*. Retrieved August 6, 2013, from <http://www.unmalawi.org/agencies/unhabitat.html>
- UNDAC. (2015). Assessment Report. Floods, Malawi: United Nations Disaster Assessment and Coordination (UNDAC).
- United Nations. (2014). The Millennium Development Goals Report 2014 (pp. 59). New York: The United Nations.
- Walker, P. A. (2005). Political Ecology: Where Is the Ecology? *Progress in Human Geography*, 29(1), 73-82.
- Wallerstein, I. (1977). Rural Economy in Modern World-Society. *Studies in Comparative International Development (SCID)*, 12(1), 29-40.
- van der Ploeg, J. D. (1990). *Labor, Markets and Agricultural Production*.
- van der Ploeg, J. D. (2008). *The New Peasantries: Struggles for Autonomy and Sustainability in an Era of Empire and Globalization*. London; Sterling, VA: Earthscan.
- van der Ploeg, J. D. (2010). The Food Crisis, Industrialized Farming and the Imperial Regime. *Journal of Agrarian Change*, 10(1), 98-106.
- Vanhaute, E. (2008). The End of Peasantries? Rethinking the Role of Peasantries in a World-Historical View. *Review Fernand Braudel Center*, 31(1), 39-59.
- Wanjala, B. M., & Muradian, R. (2013). Can Big Push Interventions Take Small-Scale Farmers out of Poverty? Insights from the Sauri Millennium Village in Kenya. *World Development*, 45(0), 147-160.

- Ward, N. (1993). The Agricultural Treadmill and the Rural Environment in the Post-Productivist Era. *Sociologia Ruralis*, 33(3-4), 348-364.
- Watson, J. L., & Caldwell, M. L. (2005). *The Cultural Politics of Food and Eating: A Reader*. Malden, Mass.: Blackwell.
- Weis, A. J. (2007). *The Global Food Economy: The Battle for the Future of Farming*. London; New York: Zed Books.
- Weiss, G., & Wodak, R. (2003). *Critical Discourse Analysis: Theory and Interdisciplinarity*. Basingstoke; New York: Palgrave Macmillan.
- Veltmeyer, H. (2009). The World Bank on 'Agriculture for Development': A Failure of Imagination or the Power of Ideology? *The Journal Of Peasant Studies*, 36(2), 393-410.
- WFP. (2015a). Hunger. Retrieved March 17, 2015, from <https://www.wfp.org/hunger>
- WFP. (2015b). Who Are the Hungry? Retrieved March 16, 2015, from <http://www.wfp.org/hunger/who-are>
- White, N. (2014). The "White Gold of Jihad": Violence, Legitimation and Contestation in Anti-Poaching Strategies. *Journal of Political Ecology*, 21, 452-474.
- WHO. (2015). Obesity and Overweight *Fact Sheet*: World Health Organization.
- Via Campesina, L. (n.d.). What Is La Via Campesina? Retrieved March 30, 2015, from <http://viacampesina.org/en/index.php/organisation-mainmenu-44/what-is-la-via-campesina-mainmenu-45>
- Wilson, G. A. (2007). *Multifunctional Agriculture: A Transition Theory Perspective*. Cambridge, MA: CABI.
- Wilson, J. (2013). Model Villages in the Neoliberal Era: The Millennium Development Goals and the Colonization of Everyday Life. *The Journal Of Peasant Studies*, 1-19.
- Wilson, J. (2014a). Fantasy Machine: Philanthrocapitalism as an Ideological Formation. *Third World Quarterly*, 35(7), 1144-1161.
- Wilson, J. (2014b). The Shock of the Real: The Neoliberal Neurosis in the Life and Times of Jeffrey Sachs. *Antipode*, 46(1), 301-321.
- Wittman, H., Desmarais, A. A., & Wiebe, N. (2011). *Food Sovereignty: Reconnecting Food, Nature & Community*: Pambazuka Press.
- von Braun, J. (1992). *Improving Food Security of the Poor: Concept, Policy, and Programs*. Washington, D.C.: International Food Policy Research Institute.
- Wood, L. A., & Kroger, R. O. (2000). *Doing Discourse Analysis: Methods for Studying Action in Talk and Text*. Thousand Oaks, California: Sage Publications.

- Woods, J., Williams, A., Hughes, J. K., Black, M., & Murphy, R. (2010). Energy and the Food System. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 365(1554), 2991-3006.
- World Bank. (2007). World Development Report 2008: Agriculture for Development *World Development Report*. Washington DC: The World Bank.
- World Bank. (2011). World Development Report 2012: Gender Equality and Development *World Development Report*. Washington DC: The World Bank.
- World Bank. (2013a). Fact Sheet: The World Bank and Agriculture in Africa. Retrieved October 24, 2014, from <http://go.worldbank.org/GUJ8RVMRL0>
- World Bank. (2013b). Malawi Overview. Retrieved August 1, 2013, from <http://www.worldbank.org/en/country/malawi/overview>
- World Bank. (2014a). *Agriculture and Rural Development*. Retrieved from: <http://data.worldbank.org/topic/agriculture-and-rural-development>
- World Bank. (2014b). *Cereal Yield (Kg Per Hectare)*. Retrieved from: <http://data.worldbank.org/indicator/AG.YLD.CREL.KG/countries/1W-US-ZF?display=graph>
- World Bank. (2014c). *Employment in Agriculture (% of Total Employment)*. Retrieved from: <http://databank.worldbank.org/data/views/reports/tableview.aspx>
- World Bank. (2015). *Average Monthly Rainfall*. Retrieved from: [http://sdwebx.worldbank.org/climateportal/index.cfm?page=country\\_historical\\_climate&ThisRegion=Africa&ThisCCode=MWI](http://sdwebx.worldbank.org/climateportal/index.cfm?page=country_historical_climate&ThisRegion=Africa&ThisCCode=MWI)
- Vorley, B. (2003). Food, Inc.: Corporate Concentration from Farm to Consumer. London: UK Food Group.
- Yin, R. K. (2014). *Case Study Research: Design and Methods*: Sage Publications.



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The global food system consists of both material food and the relationships between people, nature and society. Recognizing the role of power in the global food system is a necessary starting point for addressing challenges that emerge from it.

Smallholder food insecurity in sub-Saharan Africa is persistent, despite years of effort to be rid of it and enough resources available in the aggregate to avoid it. How can this be? This thesis emphasizes the political nature of food and elaborates on the intricate role of power in shaping the structures and functions of the global food system. Drawing on a case study in Malawi, it builds the argument that an engagement with power at different levels of society is necessary for understanding and ultimately addressing the challenge of smallholder food insecurity.

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