War By Other Means: A Genealogy of "Improvement"
From John Locke to Genetically Engineered Food Aid

by

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ABSTRACT

How can we think of power in the form of a seed? This thesis will trace the discourse of "improvement" from its seventeenth century use by John Locke to justify the appropriation of Aboriginal lands in North America to the inter-locked languages of improvement and development in the twenty-first century in the context of genetically engineered food aid. This paper also explores the nature of sovereignty in a biopolitical age, arguing that the improvement discourse is operationalized on the ground through a diffuse power that trades on claims of improving the *bios* as whole. The paper concludes with a discussion of the food sovereignty movement as a possible practical and epistemological break for farmers in the Global North and South from the hegemony of this war by other means.

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Acknowledgements

"The amount that we owe is all that we have."

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INTRODUCTION

This thesis is about the discourse of "improvement" and its historical and contemporary uses for justifying the appropriation of indigenous land. The structure of the discourse is disarmingly simple: through the application of science, technology or other innovations, a thing (including and especially nature) is said to be *improved* by this labour. This improvement is taken as self-evident betterment, even a natural right to pursue, and the economic benefits of such effort not only support this claim, but also justify the proprietary entitlement individuals earn for such contributions to humankind. The rationality of this claim has become so prevalent in the 'official stories' about the international world order, seen as so perspicuous and inevitable, that for so many it may overcome traditional and opposing conventions of ownership and consent.

This understanding of improvement emerges in the seventeenth century, articulated most famously by John Locke (1632-1704) in defense of the enclosure movement in England and colonization in America. In the seventeenth century, Locke argued that one improved the land by increasing the yields of agricultural production, entitling one to enclose and privately own this tilled earth. The measure of agricultural improvement consisted of higher yields or a more productive strain, which, in the context of American settlement, meant greater profits for a burgeoning export market. Today, Alfred Crosby reports, "North America's share alone" in world grain exports "is greater than the Middle East's share of petroleum exports" (Crosby, 1986, 306). This awesome ecological power did not originate with the massive penetration of capital into agriculture in the post-War era, but was rather conceived and anticipated as an integral technology of sovereignty nearly 300 hundred years earlier.

The structure of the argument of improvement does not fade away at the turn of the seventeenth century. On the contrary, it transforms and emerges throughout European and what Crosby calls "Neo-European" colonial narratives in the world over until today. One instance of this emergence that I will bring to light in this thesis is the case of genetically engineered (GE) food aid sent to Africa in 2002 where it was rejected

due to its biotech content. I want to study the crucial, yet overlooked, aspects of this *field of power*.[1] The contemporary discourse of improvement operates analogously as a development discourse, in that the structure of argument is not only similar, but that important insights may spring from a genealogical study of these historical periods. Historically, a central justification for colonization and imperialism has rested on the argument that the progress of society and civilization demands particular improvements and innovations in food production, based on productivity and value on world markets, for the benefit of all humankind. 'Improvement' has survived and persisted throughout trends in teleological articulations of this Eurocentric process, described as "civilizing" then "developing," and now "democratization."

But the discourse of improvement also works in another way: convergent to the juridical "right to food" claims used in the development discourse to force GE food aid on Southern Africans are the controls over "life itself" in the biopolitical discourses (and technologies of control) that surround, direct, and manage GE food aid cases. Claims of improvement are not restricted here to just plants, or civilizations, but extend to the total *bios*, governing the norms of improvement at the biological level of populations. For example, through a new American early warning detection system for famines, statistics are gathered on an on-going basis assessing the threat of food crisis around the world. However, these assessments are also defining famine, and reducing the complex issue of "food crises" to the bare emergency biological needs of populations around the world, rather than addressing chronic malnutrition and the social and political issues of entitlement that thinkers such as Amartya Sen (1981) have suggested are the true causes of famine. I argue in this thesis that Foucault's notion of biopolitical power can help us to understand how the discourse of improvement circulates not just through the "official story" told by U.S. officials and corporate media, but also through intermediaries, biological technologies of control, the use of statistics, and conceptual interventions into nature.

A central purpose of my thesis is to enable the underpinning discourse of improvement to be recognized and examined by opponents of GE food aid "dumping," the act of exporting crops at below market prices in order to keep domestic surplus from driving down market value. Claims of sovereignty exercised by opponents and

proponents of food aid are in conflict here. The relocation, or migration, of food on a global scale requires imagining the way localities are entwined globally, raising important questions of how we can be responsible for the impacts that these global processes implicate and imbricate us within.[2] As such, I want to introduce the international peasant solidarity *food sovereignty* movement as an example of the kind of resistance that responds to the particular kinds of threats that these biopolitical and discursive narratives of improvement pose to peasant agriculture and global cultural and ecological diversity. I will conclude this thesis with a discussion of the food sovereignty movement.

While cases of GE food aid have been recorded in Central and Eastern Europe, Latin America, Africa, and Asia, including Georgia, Sri Lanka, the Philippines, India, Ecuador, Bosnia and Burundi, I will be focusing on the case of GE aid to Africa in 2002 when Zimbabwe, Malawi, Zambia, Mozambique, and other countries in Southern Africa rejected GE food aid from the US. What is remarkable about this particular case of GE food aid is the wealth of controversy this incident produced compared to the way that most of these incidents of undesired GE "contaminated" food aid are ignored in the mainstream media; the public discourse generated by this case provides a generous record of remarks. In my introduction, I want to lay out my approach to the case study at hand and to my research questions. This includes, of course, a brief study of the seventeenth century context of the discourse of improvement. I will present Locke's rationale for his innovative use of the concept in this period and the basic structure of his argument in justifying this theory of property.

1. An Approach to GE Food Aid

My own sense of how to approach the case study of GE food aid to Africa in 2002 was initially to sift through the greatest number of texts and multi-media files that pertained to the situation and ask, simply: why did the conflict unfold in these particular terms? Having excavated close to one hundred of such documents, I was suddenly struck by the symmetries between Locke's improvement discourse and the development

discourse of the twenty-first century, in particular that aspect of the aid discourse promoting the biotech agenda. This relationship proved a fruitful area of inquiry and became central to my examination into the case study at hand. However, it was unclear to me how to meaningfully generalize about the connections between seventeenth century and twenty-first century discourses of improvement without either participating in *presentist* arguments (reading the present into the past) or else exaggerating the continuities and causation between historical moments.

Foucault's description of discourse analysis offers a critical way of addressing these concerns. Taken together with his Nietzschean-influenced genealogical method, this mixture -- a "genealogy of a discourse analysis," as we might call it for the present – opens up the case study to questions of power in ways that other approaches cannot. Jennifer Clapp (2004), for example, wrote a paper to call attention to the ways that agricultural biotechnology has changed the political economy of food aid. In her paper, she uses the 2002 GE food aid shipment to Africa to exemplify her argument that strong economic and scientific motivations behind GE food aid have politicized what administrators still consider to be neutral, developmental aid. Clapp has written an important essay seeking to denaturalize GE food aid, and she does this in part by positioning the public statements of different agents – African leaders, US State Department representatives, EU trade spokespeople -- in relation to each other. However, when she claims that GE food aid politicizes the development regime, the project of development itself is rendered non-political, or invisible in the power relations she attempts to describe.

Rather, I am proposing that a genealogy of a discourse analysis, which I will explain in a moment, can help convey the dense field of relations between corporate interests, government agents, aid recipients, NGOs, and the structural foundations of the development regime in which these actors are all embedded. The development regime though is not a foundation in the sense of being an intractable base, but rather demonstrates the way ideas can hold us captive to particular relations of power. So what does it mean to do a discourse analysis of a case of GE food aid? What can one expect to learn from tracing a language of improvement across three centuries? How can one bring together these approaches to social and political phenomenon?

In Foucault's later writings on discourse,[3] drawing on Nietzsche, he argues that, "power and knowledge directly imply one another.... [such] that there is no power relation without the correlative constitution of a field of knowledge, nor any knowledge that does not presuppose and constitute at the same time power relations" (1977, 27). Discourse analysis is a means of approaching these relations of power: "it is in discourse that power and knowledge are joined together" (1979, 100-1). The ways that power and knowledge meet in discourse must, however, be approached *perspectivally*, so that each site of convergence is excavated specially using tools generally associated with anthropologists, historians or ethnographers: examining official, informal, and seditious documents and archives, conducting interviews with participants, gathering video, audio and internet files, and also learning how to examine the unsaid in architecture, environment and institutions. Discourse analysis is a form of radical empiricism that seeks not *the* truth, but as Foucault describes the similar concept of *dispositif*, as "a grid of interpretation," where the object of study and the researcher him- or herself are usefully exposed in the process of bringing new insights into the relationship between power/knowledge (Howarth, 2000).

Within this grid of interpretation the overlap between discourse analysis and genealogy becomes more evident. As David Howarth writes in *Discourses* (2000), "The function of the *dispositif* is to enable the genealogist to account for the emergence of practices and institutions, and to place these elements in a broader and critical perspective" (79). Thus, for example, GE food aid may be seen as a specific paradigm of improvement discourse, which can be contextualized and criticized (as historically contingent) when located within the broader logics of colonialism, biopower, and capitalism. Foucault himself does not systematically explore the boundaries between discursive and non-discursive elements in his examination of social and political phenomenon (Howarth, 2000). Despite this, he offers a series of signposts as to how to reconcile his archaeological and genealogical methods. As Howarth writes, Foucault endeavors "to articulate the two methods in a new approach he calls 'problematization'" (2000, 50).

In "Polemics, Politics, and Problematizations: An Interview with Michel Foucault," Foucault tells Paul Rabinow, that, "It is true that my attitude isn't a result of the form of critique that claims to be a methodical examination in order to reject all possible solutions except for the one valid one. It is more on the order of 'problematization' – which is to say, the development of a domain of acts, practices and thoughts that seem to me to pose problems for politics" (1984b, 384). An example of this method can be seen in *Discipline and Punish* (1977) where Foucault attempts to uncover the "lowly origins" and "play of dominations" that produced the phenomenon of his subject matter, seeking to examine "its contingent historical and political emergence" (Howarth, 2000, 72-73).

But how are we to discern or uncover these contingent historical and political emergences, or the 'lowly origins' of production without sliding into relativism (gesturing too wildly towards the discontinuities of history) on the one hand or generality (sweeping phenomena together too broadly) on the other? The question of the philosophical ethos of *generality* in historico-critical investigations is most pertinent to my thesis. In his explication of this theme, Foucault writes that Western societies have their generalities, "in the sense that they have continued to recur up to our time" (1984a, 49). But he qualifies this generality, cautioning that he does not "mean to suggest that it has to be retraced in its metahistorical continuity over time, nor that its variations have to be pursued" (1984a, 49). Rather,

> What must be grasped is the extent to which what we know of [generality], the forms of power that are exercised in it, and the experience that we have in it of ourselves constitute nothing but determined historical figures, through a certain form of problematization that defines objects, rules of action, modes of relation to oneself. The study of [modes of] problematization (that is, of what is neither an anthropological constant nor a chronological variation) is thus the way to analyze questions of general import in their historically unique form" (1984a, 49).

Thus, to do a genealogy of a discourse analysis is to problematize the conditions under which we both undertake research and put ourselves in relation to history. We can make

generalities about Western society, but must recognize the historical contingency of each emergence, each family resemblance, within the form, as well as the contingency of our own mode of problematization and its effect on our understanding of the subject matter.

For example, John Locke's conceptualization of improvement cannot be understood apart from the modes of problematization in the seventeenth century, assumed by not only English subjects, but also prevalent in seminal debates all of Europe. According to James Tully, Locke's own political thought "consists in work on and solutions to four problems that every major European political thinker faced in the seventeenth century. These are: the theoretical nature of government and political power, the relation of religion to politics, the practical art of governing, and the types of knowledge involved in religion and political theory and practice" (1993, 9). Tully goes on to explicate the kinds of problems that the problem of government further posed, including European colonial exploits and conflict over "the conquest, domination and exploitation of non-European populations and resources" (1993, 10). In question were the intersections between "the types of knowledge involved in religion and political theory and practice" and the imperial context shaping European thought. The way in which respective political thinkers responded to these political questions would be distinct, but nonetheless their work would bear the mark of the general concerns of the age. One way these variations can be grasped is through the study of particular discourses.

Since my project takes great stake in the currency of language, I may also say a few words here concerning the importance of discourse in the seventeenth century. It is well known that England in the seventeenth century was a place of revolution and radical change, perhaps less so the extent to which the use of language to gain sides was vital. Andrew Barnaby writes that the Act of Pardon, Indemnity, and Oblivion of 1660,[4] which threatened with fines public expressions of political factionalism, "merely codified what had already come to be understood: that the forces of revolution were as much rhetorical as military and political" (2000, 332).

The epigraph above taken from Locke indicates how "the problem of signification" was being recognized as a central issue of public civil order (Barnaby, 2000, 336). Defining fundamental terms such as liberty, equality, freedom and property,

became crucial to political engagement, and this charge was underlined by novel philosophical reflection on the right way of knowing the world. Thinkers such as Locke believed that if one could only make the words *mean* the things they signified, much of the petty "wrangling" between competing political interests would surely diminish or be readily dismissed. Barbara Arneil suggests that there was, too, a colonial imperative to weighing in on this war of words: "Given the overwhelming opposition in England to Shaftesbury's plans for the new world, there was a strong motivation for all these believers in colonization to take pen to paper" (1994, 592). Knowledge was validated to the extent that convincing language could be harnessed and pointed towards the writers' ideals.

The discourse of improvement in the twenty-first century has its own modes of problematization. From Walter Benjamin's *Illuminations* (1968) to Guy Debord's *Society of the Spectacle* (1983) to Baudrillard's *For a Critique of the Political Economy of the Sign* (1981), theorists have been grappling with what they see as the usurpation of human communication by the rituals of consumerism. Language, images, media, and ideology are thought to induce the more pressing social relations of capitalism and subjectification than worker-producer dynamics. However, improvement in the twenty-first century relies on both first (productionist) and second order (symbolic) capitalism, if I may refer to the political economy of signs and commodities in this way. The U.S. tried to hegemonize the discourse surrounding protest against Southern African aid, however the discursive and biopolitical means by which different agents meant to accomplish the task is corollary to the awesome production and distribution power of US agricultural commodities. The language or linguistic system of improvement is a means by which to understand the social systems and relations of power that influence, interpolate and construct food aid within international relations. Genealogically tracing back to the seventeenth century the emergence of this discourse of improvement I hope to get across the force of such discursive and non-discursive convergence.

Since the discourse of improvement is not a closed system of language or power, I mean to show how it poses problems for politics and show how these problems are resolved in part by the global food sovereignty movement. Opening up my localized case study of southern Africa to include broader peasant resistant movements, I consider the

global character of this case study and GE food aid more generally. Practitioners of the food sovereignty movement are struggling to find ways to re-assert epistemological and ontological forms of life better suited to their communities than industrial agricultural models. To paraphrase the radical critiques of development put forth by Arturo Escobar, food sovereigntists must not be limited in their discourse to *anti*-improvement activism, but must be *post*-improvement in order to overcome the traps laid in the discursive and genealogical brambles of the language and incumbent social systems. Food sovereignty, I want to argue, represents an oppositional politics to the imperial logic of global agribusiness. I approach this argument by showing how this oppositional form of sovereignty must mean something fundamentally different than conventional forms of Western political and social organization and how integral these worldview differences have been to indigenous resistance since the seventeenth century.

Taken all together, then, my thesis entailed reading through 78 documents from sources as diverse as the US State Department to reports issued by an left-wing African on-line news source; it also involved seeking information on technologies of control that involve the biological processes of life itself; I also engage with discursive analysis of political economy, covering key documents of development that seem relevant to a discussion and examination of improvement arguments in the case. David Howarth writes that his understanding of discourse analysis not only involves the study of language and linguistic systems, but may also serve as a tool for analysis of ontological and epistemological assumptions operating within social and political phenomenon and it is my hope to discover the same.

CHAPTER 1

Locke and the Seventeenth Century Discourse of Improvement

> This, I think, I may at least say, that we should have a great many fewer Disputes in the World, if Words were taken from what they are, the Signs of our *Ideas* only, and not for the Things themselves… And if Men would tell, what *Ideas* they make their Words stand for, there could not be half that Obscurity or Wrangling, in search or support of Truth, that there is.
>
> John Locke, *An Essay Concerning Human Understanding*

1. Introduction

In this chapter, I will survey the discourse of improvement in the seventeenth century through the work of John Locke. In order to understand the particular meaning of this emergence, I contextualize Locke's use of the term by looking at the influence of natural rights theory on Locke and by describing his theory of "state of nature." Then I outline each of the provisos Locke used to justify overcoming the consent of Aboriginal peoples in taking their lands, and the role that improvement plays in these arguments. I conclude by summarizing the legacy of this improvement argument from the seventeenth century until today within the history of ideas.

2. The Structure of Locke's Argument

It is the late seventeenth century and John Locke is beset by a problem. Plaguing his Christian consciousness is the question: how does one justify the colonization of Aboriginals in America when they are clearly self-governing peoples? Unlike Hobbes, Locke believed that living in a 'state of nature' (as Aboriginals were seen to be) could still indicate meaningful social and political bonds, despite being realized on an individual and *ad hoc* basis compared to civil legal codes. Thus, colonization in the

name of self-preservation alone was an insufficient argument for Locke to appropriate property. Since there existed a common ground of social convention upon which to negotiate difference, one could not simply presume alienation from these other nations. Obtaining consent in nation-to-nation negotiations was critical for Locke as an advocate of popular sovereignty, but appropriating land was essential to the settlement project in which Locke was invested. To massage his conscience and convince his countrymen, Locke had to invent an argument that could discursively overcome the hurdles of Aboriginal resistance to the theft of their land.

Central to Locke's arguments for overcoming conventional provisos of consent is a labour theory of value. For what entitles one to enclose land is the act of *improving* it through mixing one's labour (or employing the labour of another on one's land) with the earth. This entitlement is supported in religious terms, articulated as a natural right, responsive to God's intentions for the order of things, but also subjectified so that Man's improvement is taken as the rational extension of God's will. The bequest of the earth as common dominion, or common law, is understood as natural law (Tully, 1993). It is important to look briefly here at how Locke's understanding of natural law, his own involvement in America, and the 'state of nature' prefigure his improvement argument.

Locke's religious justification of enclosure comes from Jesuit Francisco Suarez's (1547-1617) qualification of exclusive rights. Suarez proposes that the individuation of property derives from inclusive, natural law: the difference between *dominion* and *proprietas* is between a right *in* the use of property, which might be exclusive, but that derives from the primitive concept of common belonging (Tully, 1993). For example, for Locke, the world may be given in common, but one may appropriate a piece of land for one's *use*, so long as this use does not infringe on others' abilities to enjoy the common dominion. The right *in* something, to land in this example, must be available to all; exclusion can thus always be self-limiting if it infringes on inclusive rights (Tully, 1993). Locke's theory of labour made a considerable contribution to the field of jurisprudence, to the historical development in the colonies, and to the widening class of merchants and industrialists post-1700, where it was a highly acceptable theory of natural right (Kelly, 1992). However, this is not to say that articulating a colonial defense was an easy task for Locke in seventeenth century England. There was great opposition in England to the

colonization of America. Arneil writes that, "colonization in America was seen by a minority as the solution to the economic crisis and by the majority as a contributing cause" (Arneil, 1994, 593). In the face of this opposition, Locke struggled to justify England's settlement of America, claiming it would be lead to achieving a cheap, stable supply of grain imports from the new world and the competitive advantage (to use Adam Smith's later term) of agricultural production as a means to further British territorial acquisition in the new world (Arneil, 1994).

Arneil's work contributes to and expands upon the scholarship dealing with Locke's activities in America and she argues, with others, that this context proves fundamental to his justification for private property enclosure. The historical record of Locke's colonial adventures in America summarizes the evidence for this case:

> There is considerable evidence of the extent to which colonial policy dominated Locke's life from 1668 to 1675. From the colonial records of Carolina one can see that most of the letters between the Lord Proprietors and the Council in Carolina were endorsed by Locke; some of the laws, including the Temporary Laws of 1674, were hand written and sent by him; and copious notes summarizing the activities were recorded in his own hand. In addition, he wrote during this time to senior officials in the colonies of the Bahamas and Carolina, including Joseph West, Peter Colleton, and Henry Woodwar. Finally, he was responsible, in conjunction with Shaftesbury, for penning the Fundamental Constitutions of Carolina (1994, 592).

Arneil concludes that, "by taking seriously Locke's references to America and its natives in the *Second Treatise*, it will become clear that embedded in his theory of property and conquest is a vigorous defense of England's colonial activities in the new world" (1994, 592).

Locke's colonial activities in America were thwarted not only by reservations expressed concerning the economic arguments for colonialism, but also by the Royal Commissions' 1665 conclusion that indigenous peoples formed sovereign nations, therefore nation to nation consent must be obtained from Aboriginals regarding questions of land and distribution of resources (Tully, 1995). Thus, "Since the Aboriginal peoples were unwilling to cede all the land the settlers desired to take, a justification was required for taking land and establishing European sovereignty without requiring the consent of

the Native peoples" (Tully, 1995, 71). Locke's natural rights argument for land appropriation, however, would seem to recognize indigenous sovereignty in that the argument subverts the need for Crown consent of land distribution. But the "use" that justifies appropriation – the improvement – is tied to a narrow understanding of technique, as we will see. A line must be drawn between European and Aboriginal uses and Locke supports this boundary with his notion of the 'state of nature.'

Locke's understanding of the state of nature is based on a presupposition of the existence of a divinely ordained moral law (Wootton, 1986). For Locke, we enter into social contract through divine providence. This argument is quite unlike Thomas Hobbes', who argued that our moral obligations to one another could be theorized in terms of secular, rational, self-interest. Hobbes can see no alternative to absolute sovereignty since civil society "has its origin in 'the mutuall fear [men] had of each other" (Hobbes quoted in Sims and Walker, 2003). But for Locke, the state of nature from which we enter into contract is no brutish place, but rather a social, even communal state of being; it is a place of freedom and equality (Goldie, 1993). It is disturbed by the instabilities of administering punishment on an individual and *ad hoc* basis, yet the state of nature remains governed by the Law of Nature, or the Law of Reason (Tully, 1995; Sims and Walker, 2003).

Despite their differences, there exists a vital convergence between Locke and Hobbes' theories of the state of nature: namely, the notion that the state of nature is *within* us. Mark Goldie puts this idea in the following way: "As with Hobbes, though in a less menacing way, Locke's state of nature is immanent in our contemporary political condition, always lurking just beneath its surface" (1993, xxiv). This shared notion of immanence – an underpinning anarchic origin of society that exists both spatially and always already within us – marks the emergence of a particular innovation on arguments of self-preservation in the seventeenth century. For Hobbes, the struggle for self-preservation must lead to an alienation of sovereignty, but for Locke, this struggle leads to delegation of one's sovereignty. Of particular importance to us here, is that, "In Locke's system the 'right to self preservation' is best articulated in the individual's right to unlimited private property. Locke argues that the purpose of civil society is to preserve property" (Ansari, 2002, 12). Locke's argument, however, does not merely serve the

interests of arguing for legitimate, representative government in England. Rather, Locke also aims to justify colonization in America, which he believes will benefit the first cause, and will certainly benefit a mercantilist class.

So, how is Locke's theory of the state of nature a theory of progress? Surely it has none of the clearly defined features of the stages view of history that Adam Smith articulates about one hundred years later. The answer is that Locke sees the state of nature as both a universal and historical fact of human social organization (Goldie, 1993). The universal aspect of the state of nature is that all humans are within it (Goldie, 1993). In other words, the state of nature is not of a particular time and place, but rather an underpinning human condition upon which all forms of government are laid over.[5] Tully adjoins to Goldie's two characterizations of the state of nature one other aspect: an economic stage, in particular of hunters and gatherers. Locke saw that the Aboriginal peoples of America gathered nuts and fruit and that they fished and hunted wild prey, but he concluded that despite their ownership of the harvest, they had no entitlement to land. In the state of nature, no form of consent can secure land entitlement. For in this economic stage, if 'there is enough, and as good as left in common for others,' then by this rule alone people appropriated goods (Tully, 1995). In contrast, Europeans could own property because they "'have multiplied positive laws to determine Property,' for 'in Governments the Laws regulate the right of property, and the possession of land is determined by positive constitutions'" (Locke, quoted in Tully, 1995). Tully writes that in this primitive stage of accumulation: "[Amerindians] have individual property rights in the labour of their body and the work of their hands and, consequently, whatever they mix their labour with" (1995, 72).

Here we begin to see how and why the state of nature is such an instrumental foundation to Locke's ideas on property. Tully (1995) writes that there are two enormous conclusions that Locke draws from his state of nature argument: (1) imperial wars can be waged against Aboriginal peoples since living in a state of nature they have no governments to deal with, therefore "they violate the laws of nature" when they try to stop Europeans from settling and taking land (75); and (2) any person may appropriate uncultivated land without consent, since in the state of nature, there are no positive forms of ownership. This latter conclusion is instrumental to Locke's justification of

colonialism in America. We are in a better position now to survey Locke's theory of property and the discourse of improvement.

3. Locke's Improvement

I have summarized above some of the supportive elements to Locke's justification for appropriating land in America from Aboriginal peoples. There is the theological context, evident in natural rights discourse with which Locke is in dialogue, and in his theory of social contract, which is a divinely ordained order. Locke's political concerns for popular sovereignty and his position within the contemporary debates on colonial settlement also help to reveal significant aspects of the intellectual and historical development of his ideas on property. However, Locke must still overcome several ancient provisos of consent regarding inter-national relations with the natives. I have already mentioned one proviso for enclosing land: 'if there is 'as good left as that already possessed'; the second is, 'if the produce does not spoil' (Arneil, 1996, 143); the third is, 'long use and occupation'; and finally, 'what touches all should be agreed by all' (Tully, 1995). His argument for improvement is instrumental here and it underscores his private property doctrine.

The geographic context of Locke's remarks regarding the first proviso are important here, since the 'enough-as-good-as' proviso applies differently to England where a shortage of land prevails, compared to all the land in the new world that simply "lies in waste" (Arneil, 1996). In America, the stipulation becomes meaningless when it hinges upon a concept of 'vacant lands' that Locke articulates. Here is the passage where Locke famously expresses how the Europeans are entitled to appropriate Aboriginal land:

> Let him [a European] plant in some in-land, vacant places of *America*, we shall find that the *Possessions* he could make himself upon the *measures* we have given, would not be very large, nor, even to this day, prejudice the rest of Mankind, or give them reason to complain, or think themselves injured by the Man's Incroachment.

What Locke is doing here in this passage is making space for a jurisdictional transfer. 'Vacant lands' are defined and "designed to subvert [Aboriginal jurisdiction] and make Aboriginal rights unrecognizable" (Tully, 1995, 73). Locke's construction of America as a place of vacant lands figures into all of his arguments to overcome traditional forms of consent, as we shall see.

The second proviso, vis-à-vis spoilage, is an economic argument that places subsistence agriculturalists and hunter-gatherers on the low rungs of progress, but then also tries to limit indigenous peoples to these practices. The proviso states that people can appropriate the produce of the land without consent 'if the produce does not spoil'. As William Cronon explains: "In that original state, possession was directly related to the labor one spent in hunting and gathering: one could own whatever one could use before it spoiled" (1983, 78). Although indigenous peoples had sophisticated storing and preserving methods, Locke either ignores this or is ignorant of the fact, and uses this spoilage criterion as a means to exclude indigenous peoples from engaging in other forms of commerce. To transcend the proviso about spoilage for colonial settlers, Locke introduces the notion of money. If one could sell one's surplus, then the profit contributes an additional improvement to the goods amassed, and bypasses the spoilage proviso. Characterizing Locke's concept of money as "an odd hybrid between a simple medium of exchange that measured the value of commodities, and *capital*, the surplus whose accumulation was the motor of economic growth," Cronon concludes that, "It was capital – the ability to store wealth in the expectation that one could increase its quantity – that set European societies apart from precolonial Indian ones" (1983, 78). Locke appeals to God to break this ancient code: "Nothing was made by God for Man to spoil and destroy" (1983, 130).

Further, indigenous people *could* trade, too, as well as barter so as not to spoil what they had gathered. What Locke was getting at in terms of commerce was *world trade*. The kind of world trade that could ensure through agriculture that the colonies would remain "dependent on and out of competition with the mother country, particularly in manufacturing" (Arneil, 1994, 602). Since the English were the best planters, this would be their colonial competitive advantage. Other works besides the *Two Treatises* by Locke defending English colonialism include "For a Gerneall Naturalization" and

Some Considerations of the Consequences of the Lowering of Interest (Arneil, 1994). Arneil writes that, "both defend foreign trade as the source of England's future wealth"(1994, 596). She concludes that, "from Locke's unpublished and published notes and essays on trade and colonization it is clear that he believed that America was the key to England's economic success" (1994, 596). Only those with access to money and international trade routes appear able to benefit from such arrangements. Arneil encourages us to be willing to read Locke as using a circumscribed natural rights discourse in defense of private property, and thus as being a defender of colonialism.[6]

The next proviso is Aboriginal right to 'long use and occupation', which is deliberately subverted by Locke's definition of vacant land. As Tully writes: "Locke stipulates that 'vacant' land is any land that is 'uncultivated' or 'unimproved'" (1995, 73-74). A particular kind of labour is privileged here: European forms of agricultural production, such as "cultivating, tilling, improving and subduing" the land (Tully, 1995, 73-74). As such, one does not need to obtain consent in the state of nature to appropriate uncultivated land, since entitlement is not derived from the negotiation with sovereign nations of America, but rather obtained through the 'improvement' of vacant earth.

But surely, even on 'vacant lands' Aboriginals would have a say in regards to the common dominion? To the contrary, since for Locke, "he who appropriates land to himself by his labour, does not lessen but increase the common stock of mankind" (37, 133), this newfound bounty legitimates bypassing another form of ancient constitutionalism: *quod omnes tangit ab omnibus comprobetur* (what touches all should be agreed by all" (Tully, 1995, 74). Comparing the Aboriginals in America to English agriculturalists, Locke writes: "...I ask whether in the wild woods and uncultivated waste of America left to nature, without any improvement, tillage or husbandry, a thousand acres [will] yield the needy and wretched inhabitants as many conveniences of life as ten acres of equally fertile land do in Devonshire where they are well cultivated?" (37, 133). Locke bypasses *q.o.t.* by claiming that the Aboriginals are *better off* than before through this superior system of European cultivation.

The sense in which the Aboriginals would be better off extends, however, beyond a superior form of agricultural cultivation. Locke links the concept of improvement together with civilization; civilization in turn extends from engaging in European

commerce. Aboriginals are then doubly indebted to colonial powers for increasing the yields of the earth and with the surplus *providing for the comforts of life*. As Locke writes in a famous passage from the *Two Treatises*:

> There can be no clearer demonstration of anything, than several nations of the Americans are of this, who are rich in land, and poor in all the comforts of life; whom nature having furnished as liberally as any other people, with the materials of plenty, i.e. a fruitful soil, apt to produce in abundance, what might serve for food raiment, and delight; yet for want of improving it by labour, have not one hundredth part of the conveniences we enjoy: and a king of a large and fruitful territory there feeds, lodges, and is clad worse than a day labourer in England (41, 135).

To improve nature is to profit from nature. By adopting "a settler agrarian style of life" and joining "the rest of mankind in the use of money and commerce," establishing "laws of liberty," and recognizing "the Christian God to be the first principle of understanding," property is rightfully appropriated without the consent of the sovereign governing Aboriginal nations of the new world (Arneil, 1996, 167). The obligation of the Aboriginal peoples to their colonial 'improvers' marks a vastly influential moment in the history of North American colonization: "It is difficult to overestimate the influence of this economic argument in the justification of planting European constitutional systems of private property and commerce around the world and in justifying the coercive assimilation of Aboriginal and other peoples" (Tully, 1995, 75). Further, the argument not only justifies land appropriation, but it *indebts* Aboriginals to the colonizers. Mixing one's labour means accepting the invitation offered by god in the state of nature to join in the civil society of "divinely-sanctioned industry" (Sims and Walker, 2003, 82). Thus, Locke claims, "that the Amerindians will be obliged to the English for increasing the amount of products which the soil will yield" (Arneil, 1996, 152).

4. Conclusion

Between these years in the seventeenth century and the twenty-first century today, many important political philosophers have affected great shifts in the story of improvement. In the eighteenth century, Adam Smith articulated, building upon Locke's improvement argument and Hobbes' concept of the state of nature, the most developed stages, or progress, view of history in *The Wealth of Nations* than any of his predecessors had. In Germany, the subjectification of 'improvement' follows Kant's answer to *What is Enlightenment?*: "Enlightenment is the exodus of humanity by its own efforts from the state of guilty immaturity." Kant continues: "Laziness and cowardice are the reasons why the greater part of humanity remains pleasurably in this state of immaturity." Enrique Dussel interrogates Kant's characterization of such culpable states: "Today we would ask him: An African in Africa or a slave in the United States in the eighteenth century; an Indian in Mexico or a Latin American *mestizo*: Should all of these subjects be considered to reside in a state of guilty immaturity?" (Dussel, 1993, 5).

Hegel responded to the question in his *Lectures on the Philosophy of History,* where he showed how World History is the process towards enlightenment, the self-realization of God, Reason, and Freedom (Dussel, 1993). The unenlightened are the pre-moderns, the *undeveloped*: "In Hegelian ontology, "development" (*Entwicklung*) is what determines the very movement of the 'concept' (*Begriff*) until its culmination in the 'Idea'" (Dussel, 1993, 5). His views on Africa are so racist they should seem comical to readers today, but they reflect the spatialization of world history – East to West – with Latin America and Africa absent from the movement:

> Africa… does not have history as such. Consequently we abandon Africa, to never mention it again. It is not part of the historical world; it does not evidence historical movement or development… What we understand properly as Africa is something isolated and without history, still mired in the natural Spirit, and therefore can only be located at the entrance gate of Universal History (*Lectures*, 231-34).

Nineteenth century theorist Karl Marx is now widely acknowledged as an heir to this Enlightenment idea of progress and development, particularly in its Hegelian articulation.

The categories of "left" or "right" are at worse irrelevant, and ineffective at best, at reading the story of improvement through history. Tully reinforces this view, where he writes that both socialists and capitalists "take the superiority of 'improvement' to Amerindian ways of using the land for granted. And, if we wish to think intelligently about the ecological destruction 400 years of 'improvement' has wrought, one way to begin is to study these early, specious justifications and the alternatives to them" (1993, 129). Thus, I want to suggest that a possible victory for overcoming the bewitchment of this imperial story is to understand the relations of power that constitute particular emergences of the discourse. The idea is to move from an anti-improvement framework to something that looks more like post-improvement by problematizing the discourse.

CHAPTER 2

21st Century Improvement: Discourses Of Development in the Case of GE Food Aid To Africa In 2002

> We are not blinded by the moral reparation of national independence; nor are we fed by it. The wealth of the imperial countries is our wealth too… So when we hear the head of a European state declare with his hand on his heart that he must come to the aid of the poor underdeveloped peoples, we do not tremble with gratitude. Quite the contrary; we say to ourselves: "It's a just reparation that will be paid to us." … This help should be the ratification of a double realization: the realization by the colonized peoples that it is *their due*, and the realization by the capitalist powers that in fact *they must pay*.
>
> Frantz Fanon, *The Wretched of the Earth*

Food is a weapon.

Earl Butz, American Secretary of Agriculture, 1974

1. Introduction

The central objective of this chapter is to identify the genealogical affinities, resemblances, and discontinuities between the seventeenth century Lockean notion of improvement and the discourse around GE food aid today. There are two inter-related claims that I want to make about the relationship between these discursive emergences: the first concerns the concept of property and the second concerns the concept of development as it relates to agricultural productivity and world trade.

In 2002 estimated numbers of Africans endangered by famine and drought were as high as 14 million in the region of Southern Africa. Most affected were Zimbabwe, Malawi, Zambia, Mozambique, Lesotho and Swaziland. The World Food Program (WFP) appealed to governments for support and the United States pledged 500,000 tons of food aid valued at $230 million (US) (Gollust, 2002). Then recipients discovered that the aid – mostly whole grain maize, plus soya and corn – had been genetically

engineered. Swaziland and Lesotho agreed first to accept the GE food aid. Mozambique, Malawi, and Zimbabwe insisted it be milled into flour and only Zambia rejected it in any form, although they allowed milled maize to be distributed to 130,000 refugees from Angola and Congo Kinshasa (DRC) (Carroll, 2002).

The case of GE food aid made headlines around the world, not simply because the starvation crisis attracted the sympathies of the world community, but also because of the scandal that ensued when African countries refused the aid upon learning of its GE content. The US responded furiously, official spokespeople from the state department issued press releases, trade representatives put pressure on the EU to lift their own moratorium, and so on. In the words of the State Department spokesman of the time, Phil Reeker: "Now is not the time to turn away safe and desperately-needed food" (Gollust, 2002). James Morris, UN Special Envoy on the humanitarian crisis in southern Africa, warned that Zambia would "have to accept" donations of some food with biotech content, dubbing the famine in Africa "the most serious humanitarian crisis in the world" (afrol, 2002).

Many stories began to fly around immediately about the refused aid. The US retaliated swiftly, blaming the EU on two separate counts of undue influence: first off, for creating a world-wide panic over GE foods by banning them; and second off, for causing Africans' starvation due to their fear of losing lucrative European export markets. African governments were also accused of lacking objective, scientific evidence that could hold up against American food and safety standards. Report after report featured officials pointing out that Americans "eat the stuff every day" and that *they're* fine. US authorities also claimed that the US did not have the capacity to segregate the grain. Finally, the despotism of African leaders was offered as another explanation for the forced starvation of their peoples.

This recounting is what I will refer to as the "official story" of the food aid case. This official story is important, but I will formally respond to these charges in the next chapter. Suffice it to say for now that these charges prove largely erroneous and that the speciousness of the claims are largely covered up by powerful social norms of improvement, which is the "back story" I will be relating in this chapter.

Improvement is a hegemonic term, not in the sense that the governing use it exclusively over the governed, but rather in the Gramscian sense of muddying class lines through its unexamined and ubiquitous use. Historian Andrew Weaver writes in *The Great Land Rush* (2003) that legislators, officials and administrators used the use of improvement as rationale or rhetoric for land appropriation during the settlement of America, but so did squatters, ranchers, and other settlers (the latter group often using the loaded term to disregard the rules of the former, sometimes to good effect). However, consistent features of the discourse are certain: for one thing, "humanity's empire over nature was a cultural touchstone that made appeals to improvement irrepressible" (2003, 86) and contradicted "untamed," "wild," and "inefficient" Aboriginal uses of land. And, for another, the British/American obsession with land title led to "changes in land tenure [that] are part of a global socioeconomic transformation" that embodied and imposed legal doctrines; an emphasis on speed; Eurocentric assessments of first peoples; sly practices by private land hunters and government favouritism; and the application of military force (Weaver, 2003, 134).

Weaver's own story about the role of improvement in British imperialism takes as its starting point Alfred Crosby's theory that the successful colonization efforts of the British Empire were enabled and facilitated by the ecological happenstance of plant adaptability. The cultivation of foreign markets through commodity trading and speculative capital, and the spiraling growth of colonial city centres were also instrumental to the rise of American agrarian power that have "dominated the international trade in foodstuffs, not by brute productivity but by combing technology and intensive cultivation" (2003, 4). Although the details are quite outside the scope of this thesis, Weaver traces how the initial land grabs from indigenous peoples were justified, organized, and rationalized by British settler colonies based on the cultural force of ideas of improvement, of which Locke played a catalytic role.

It would seem remiss not to begin this genealogy by mentioning here what may appear as obvious disparities between case studies. We have moved from studying the indigenous peoples of America in the seventeenth century to the indigenous peoples of Africa in the twenty-first. However, symbolically and materially speaking, Africa is the new America: it holds the hopes and dreams, attempts and failures of a neo-colonial

market. As Tamara Herman drolly puts it, "Lots of foreign men in suits have been visiting Africa lately" (2001, 24). And as evidenced by the G8 Summit, 2005 was to be the Year of Africa, ushered in with the breathy excitement of discovery.[7] In the beginning, all the world was Africa indeed, and the captains of transnational capital, based out of the developed countries of the West, intend to be the authors of this "history-less" continent.

Another difference between case studies is the aspect of famine in Africa. Famine did ensue for Aboriginals in America after a time, due to settler-fueled exploitation of resources for world trade markets and the expanding population of the colonies. However, "improvement" was not used in the sense of "improving the lives of the starving" in the seventeenth century. Improvement takes on a special meaning in the case of famine where it refers to that particular kind of progress connected to capitalism. In Mike Davis' book, *Late Victorian Holocausts* (2001), he prefaces the term "famine" with the stern caution of power relations embedded in that term: "We must acknowledge that famine is part of a continuum with the silent violence of malnutrition that precedes and conditions it, and with the mortality shadow of debilitation and disease that follows it" (21).[1] Davis names *modernity* as the cause of death. While the natural disaster of El Nino in the Victorian age resulted in great droughts and floods sweeping through tropical lands, Davis insists that, "Millions died, not outside the 'modern world system,' but in the very process of being forcibly incorporated into its economic and political structures. They died in the golden age of Liberal Capitalism; indeed, many were murdered… by the theological application of the sacred principles of Smith, Bentham and Mill" (2001, 9). Davis believes that the only person to have understood this relationship between the history of capitalist modernity and the late Victoria Holocaust was Karl Polyani, in his work *The Great Transformation* (1944). As Polyani understood: "The actual source of famines in the last fifty years was the free marketing of grain combined with local failure of incomes" (1994, 160). Davis sites the commodification of agriculture as central to the loss of local support mechanisms for native communities to endure climatic change.

The background causes to this 2002 African famine lie outside of the popular media's frame. Where, for instance, was the discussion on why these particular nations were so hard hit by drought? Dr. Egziabher reports on some of these structural

particularities. In an interview with Adam Bradbury of Greenpeace, he submits that, "Malawi had enough stored food and if its stored food were in place it could have weathered the drought now. But apparently what happened was the World Bank insisted it had to sell it and pay its debt. Paying up the debt was more important than ensuring the food for the population. Therefore it sold the food and this year it's hit by this major drought" (2002). He also explains that maize is a foreign plant to Africa, unable to weather drought or harsh conditions. Colonial masters had made African farmers plant maize and the vulnerability of the plant has compromised food security throughout the region (Bradbury, 2002).

Structural adjustment programs of the International Monetary Fund (IMF) and the World Bank (WB), the economic and social fall-out from colonial regimes, the failure of free market capitalism, a rampant HIV/AIDS epidemic… What are the discursive tools that naturalize famine and omit these background pictures? My first approach to answering this question is to discover the relationship between labour, improvement, and property within the discourse of improvement that spans the centuries.

2. Locke, Property, and Biotechnology

In order to politicize the structural causes of hunger we must understand the relationship between Locke's concept of property in the seventeenth century and the concept of intellectual property in the twenty-first century. Although it is the structure of the improvement argument that has significant affinities across the centuries, there is an important continuity I would like to examine regarding the nature of *what* must be improved upon: the terms of property.

Underpinning what Davis refers to as the Golden Age of Liberal Capitalism we have an expansion of forms of commodification from material, to intangible, to intellectual property. James Boyle (2003) has written an influential essay on the "Second Enclosures," arguing that the enclosure of the "intangible commons of the mind," or intellectual property, constitutes a second fencing-off and privatization of "commons."[8] The first enclosure movement began in the fifteenth century in north-west England and

was largely completed by 1750, facilitated by private agreement between manorial lords and their tenants, though the process of enclosure in central and southern England reached its peak only in the eighteenth and nineteenth centuries and was mainly facilitated through Acts of Parliament. Enclosure is the economic and physical system of land appropriation from communal regulation of arable land, open pastures, meadows and uncultivated land that is gradually replaced by a system of private land management. But it also signified the transformation of society, as scholars such as Karl Polyani (1944) have chronicled.

However, I believe that the Second Enclosure is more rightfully, historically speaking, the colonization of the world by European imperial powers, when the technologies of property privatization were exported to almost eighty-five percent of the earth's surface under the British Empire. While it is true perhaps that metaphorically speaking, the first enclosure involved land while the second enclosure ("Boyle's") involve immaterial property, a historical interpretation of the concept of enclosure could prove more useful in understanding this metaphorical relationship between enclosures. The Third Enclosure, then, I believe is the expansion of intellectual property as Boyle describes it. So the question here, in some sense, is how does "improvement" function in the Third Enclosure?

Farmers for centuries have been saving and selecting seeds that promise an improved variety. High yields, pest resistance, desired flavour and aesthetics, and other culturally desired features or traits of resilience have motivated farmers towards these ends. This endeavor to improve seeds through selection has resulted in the cultivation of thousands of varieties of plants that include our major world foodstuffs. We can trace in the language of improvement, however, an etymological link of agricultural improvement to profit beginning with the Middle English 'improwen,' which meant *to enclose land for cultivation.* The word derived from the Anglo-Norman emprouwer: *to turn to profit* (American Heritage Dictionary, 2000).

Despite being tied increasingly to the market society, seed selection continued to be controlled by farmers themselves and took place in the domain of the farming community. However, when seed selection became professionalized, corporatized and privatized in Canada and the US in the twentieth century, a more extreme profit-oriented

understanding of improvement emerged. Devlin Kuyek (2004) offers an historical account of the commodification of the seed in the North American context. He writes that at the beginning of the twentieth century, "the site of [seed] variety 'improvement' shifted from the farm to the research station, as the free seed programmes that sent out a diversity of varieties for farmers to select from were gradually replaced by centralized and regulated seed research and production systems focused on releasing 'elite' varieties developed by scientists" (Kuyek, 2004, 2).

The transition from hybrids to GE technology, though fundamentally based upon discovery and innovation in the field of biology, emerged in large part through economic incentive. Generic competition and declining producer revenues pinched pesticide companies' profits; they reacted by snapping up seed companies and turning their investments towards biotechnology (Kuyek, 2004). In order to maintain financial solvency and to increase profits, agribusiness expanded into new genetic markets. It is no coincidence that by the year 2000, just five corporations (Astra-Zeneca, DuPont, Monsanto, Novartis, and Aventis) accounted for virtually 100 per cent of the market in transgenic seeds and that these same five corporations also accounted for 60 per cent of the global pesticide market and 23 per cent of the commercial seed market (RAFI, 1999).

The commodification of the seed was based on a particular theory of improvement. This point is best illustrated by a dispute that erupted at the 1983 Food and Agriculture Organization (FAO) 22nd biennial conference when states were deliberating the terms of the International Undertaking on Plant Genetic Resources [Resolution 8/83]. The concept that seeds, or *plant germplasm*, are the "common heritage of humankind" was officially adopted into the agreement. However, advanced capitalist countries insisted on a distinction between "elite" and other varieties of seeds, lest they lose their patents. As well, the enlarged definition of our "common heritage" would have challenged the commodity form of seeds. The Third World bloc eventually won their case, but as a result, many advanced capitalist countries, including the US, refused to sign the convention. The arguments mobilized in support of discrimination between elite and non-elite varieties are of inestimable value to us here as justifications of "improvement."

That same year, the transnational seed company Pioneer Hi-Bred sponsored a conference where the problem was posed: "What is it about the germplasm in

commercial varieties as opposed to the germplasm in land races that justifies classification of the former as a commodity and the latter as a free good?" (Kloppenburg, 2004, 184). Dr. J. T. Williams rose to the challenge and responded, among several other justifications, by distinguishing between "raw" and "improved" varieties of seed. The equation works like so: if one mixes one's labour in profitable ways, one is entitled to reap the benefits of the product's market value. The past and on-going labour of indigenous peoples around the world is rendered utterly valueless by this logic. The upshot for seed companies is that plant germplasm can be mined in the "bio-rich" South, leaving "as the common – and costless – heritage of mankind and return[ing] as a commodity – private property with exchange-value" (Kloppenburg, 2004, 169). The greatest obstacle to this ambitious plan was the capacity of companies to create markets for "value-added" seeds. Peasants cannot generally afford to buy these seeds back. Market creation was a central aim of the Green Revolution, and the Gene Revolution has extended this goal.

What Crosby has called the "Columbian Exchange" (1972) – the global swapping of plant germplasm between the New World and the Old[9] – ultimately meant that every single species of economic significance in America has benefited from introgression of foreign genes. According to Jack Kloppenburg, over a period of about four hundred years, the world has seen a "global and unprecedentedly rapid movement of plant germplasm, a process that has been shaped in important ways by an ascendant capitalism committed to the creation of new social forms of agricultural production worldwide" (2004, 153). The most recent social forms shaped by agricultural production were facilitated by capital overcoming two major obstacles, social and technological.

In the first case, family labour limited the generalization of wage labour. However, I would like to focus here on the second. In addition to a range of natural factors such as climate and seasonal change, the seed itself provides resistance to capital because it possesses the "dual character" of being both the means of production, and as a grain, the product (Kloppenburg, 2004). This dual character was overcome in two ways: hybrid seeds (and then GE seeds) overcame the first barrier since hybrid (and GE) seed cannot be saved and replanted – "it has use-value and exchange-value only as a grain, not as seed" (Kloppenburg, 2004, 11) – and through property rights to privately develop plant

varieties – "the seed can be rendered as commodity by legislative fiat as well as by biological manipulation" (Kloppenburg, 2004, 11).

Although the genetic improvement of seeds in North America moved from fields into corporate labs and test plots, the transition has been facilitated by changes taking place in *courtrooms* across the continent. Intellectual property regimes have undergirded the explosion of biotechnology in agriculture; much in the way owners of material, immobile forms of property, such as land, are protected by the state. Just as Locke proposed that enclosure would enable and encourage an agricultural surplus, the privatization of the seed by agribusiness (this "Third Enclosure") is also promised to improve the yields of agricultural production. Monsanto, for example, on their website reports that, "According to Ismail Serageldin of the World Bank, 'Biotechnology will be a crucial part of expanding agricultural productivity in the 21st century. If safely deployed, it could be a tremendous help in meeting the challenge of feeding an additional three billion human beings, 95% of them in the poor developing countries, on the same amount of land and water currently available.'" These promises for improvement entitle state-aided agribusiness to the profits of "genetic enclosure."

We can perhaps go so far as to say that "improvement" (in the context I have been genealogically plotting it) is at the foundation of common law. Andrew Wender's work (2005) traces the history of the sanctification of property in modern western legal thought and society; he begins this account with Hegel, Kant, and Locke and moves through to biotechnology and the patenting of human genes and cells. Wender's argument is that Blackstone takes Locke's principle of the centrality of property to civil society to the next level by embedding within common law the "classical conception of itself as both the living, juridical embodiment of the fundamental principles of nature, and a legal tradition that bespeaks England's divinely elected role as a universal model for the right ordering of justice" (138). In his most famous passage, Blackstone "implies that the just operation of the common law is guided, above all, by the law's responsibility for safeguarding the rights of individuals to wield absolute authority over the property that they hold" (138):

> THERE is nothing which so generally strikes the imagination, and engages the affections of mankind, as the right of property; or that sole and despotic dominion

> which one man claims and exercises over the external things of the world, in total exclusion of the right of any other individual in the universe (1773, 2).

Wender writes that Pocock also maintains that what constitutes common law began expanding in the eighteenth century with the emergence of the market society. This expansion refers to the substantial change that the establishment of the Bank of England and other financial institutions fashioned to the concept of property. "Thus," writes Wender, "as the eighteenth century unfolded, the basic distinction existing in the common law between real property and movable, personal property became even more important" and this sanctification of property led eventually to the "reification of intangible entities as material property" (143).

The word "sanctification" is crucial here for Wender. It is a phrase borrowed from Harold Berman, and refers to the religious roots of modern western legal theory. Just like "the language and ideas of improvers and reformers of the 1650s evoke Locke's emphasis on the industrious and the rational as the true beneficiaries of God's endowment of the world" (Arneil, 161), the language and discourse of the genetic improvers and reformers of the twenty-first century invokes a belief system centred upon *science* and *industry* as the true beneficiaries of nature's endowment to the world: (profitable labour: capital) lays its claim by promising the increased stock of mankind's resources.

This promise will sound familiar to those familiar with Locke's justifications for the expropriation of indigenous land in the seventeenth century. What entitles corporations to own "codes of life" or the genetic sequences of plants and animals is that the form of labour – validated by scientific method (and instituted by property law) – is privileged over thousands of years of collective, public improvement undertaken by farmers. This privilege arises from two main arguments made to justify the violation of farmers' consent to own the seeds they have innovated upon for centuries: (1) it is for the benefit of mankind, by increasing yields and thus, (2) making otherwise unproductive or "vacant" lands bloom.

Further, in fulfilling these provisos, *private property saves lives* (Boyle, 2003b). In the First, Second, and Third Enclosure movements, enclosure's defenders have argued that increased agricultural production is sorely needed to relieve societies whose

populations have been depleted by mass deaths, or increased by drastic population growth. The idea that private property saves lives is a claim made directly in the case of GE food aid to Africa: GE food aid saves lives. However, the appropriation of land through GE food aid happens in fact *indirectly*. The proprietary nature of GE seeds means that manufacturers need markets to profit from their patented goods; an aspect of the marketing program for GE seeds is to leverage GE seeds onto the two-thirds world. If transnational agribusiness, particularly with the help of the US government, can leverage this technology into these countries – past biosafety protocols, legal frameworks and citizens' decision-making powers – then (their hope is that) the door to industrial agriculture will be propped open for business. Industrial agriculture is most efficient as monoculture and operates most effectively with greater economies of scale. The displacement of subsistence farming through the introduction of industrial agriculture is often due to the expansive nature of industrial agriculture, but also to the prohibitive cost of inputs, such as pesticides, tractors, and seeds, required for this type of farming. Introducing new markets for inputs as well as guaranteeing a cheap supply of outputs, or food, that can be sold dear to the highest paying markets in the world, accomplishes the indirect appropriation of lands.

This is not to say, for example, that the mere presence of GE seeds in Africa constitutes a slippery slope toward a whole-hearted embrace of industrial technology. However, if the presence of GE seeds were seen to be *unavoidable*, due to its presence in the country through food aid shipments, then state-aided corporations would be bolstered by the hope that the grounds for refusal of GE technology are weakened and the demands for GE-free aid, and subsequently GE-free production, are rendered irrelevant. The important point here is that private property saves lives (or "GM food will feed the world") only *if* and *because* someone can profit financially from this gesture.

Placed in a broader context of changing imperial relations, GE food aid may provide a theoretical answer to the question: "under which general circumstances can a given economic commodity be turned into a political weapon?" (Wallerstein,1976, 277). Could one argue that property, as a technology of occupation, is an example of such an economic commodity cum political weapon? One thing seems clear, is that economic goods increasingly provide an alternative control mechanism to state military occupation

or that the armory is at least hidden behind the veil of capitalism. "Food power" is a symptom of a generally global situation (Wallerstein, 1976). George Caffentzis does relate this new imperialism to property, where he writes that, "One of the key elements of neoliberal policies is to turn communal land given over to subsistence into 'private' property at whatever cost. This 'Great Transformation' or 'New Enclosure' has been essential for all previous cycles of capitalist development and, if there was to be growth and consistent profitability in Africa, communalism and subsistence agriculture must be ended with prejudice" (2002, 7). We shall see in the following sections and chapters how subsistence agriculture poses significant challenges to the global circulation of capital.

3. Sovereignty and Improvement

But improvement is not just about property rights; it is also fundamentally about sovereignty. Crucial to Locke's argument for land entitlement is the case he makes for how property rights can confer new forms of sovereignty. This is an argument that undermines the authority of the Crown and ultimately forms the basis for the American Revolution (Pangle, 1988). In the First Treatise, Locke rejected John Filmer's justification of the Divine Right of Kings theory, which asserted that God chose some people to rule on earth in his will. Rather, for Locke, legitimate authority derived from the consent of the people, an idea that had a tremendous influence on the Founding Fathers. Property and liberty were natural rights that the government's purpose was to protect. When a government did not protect those rights, the citizen had the right and maybe even the obligation to overthrow the government. Once taking root in North America, entrenched in the Declaration of Independence by Thomas Jefferson, the philosophy was taken up in other places in the world as a justification for revolution.

I will explore the subject of sovereignty from a different angle in the next chapter, however, the relationship between sovereignty claims and property rights is important to discuss here for the following reason. Improvement discourse is part of the technology of occupation because it operates to justify the privatization of land. However, this privatization of land is always subject to the "arrogation of power to make the rules"

(Weaver, 2003, 139). According to Weaver, "Sovereignty became one culture's mechanism for perfecting the conquest of another culture" (2003, 139). But has not sovereignty changed as a result of the introduction of different forms of property?

Thomas Grey (1980), citing divisions of labour and function in addition to changing economies of scale, argues that property as "thing-ownership" – taking something material into one's possession, making it solely one's own – is in fact, dead. However, the general population still holds to property as thing-ownership, as Grey readily admits. Correlatively, most people therefore still hold to conventional notions of *sovereignty*, which have been historically tied to the state's protection of citizens' rights to material possessions. The right of the state to negotiate and enforce private property laws is often seen as intrinsic and impartial to the operations of government. Thus it is the *value* invested by people in goods – irrespective of the materiality or immateriality of these goods – that entitles people to own property and thus, entitles the state to publicly enforce and police its private borders. Whether this value is invested in things or codes is largely irrelevant for the sake of profit.

However, while the general public may still hold to thing-ownership, there is also clearly an emerging recognition around debates on genetic engineering and patents that the state is not a neutral entity. The nature of propriety of immaterial forms belies the ways private property is unjust, immoral or distinct. The implications of the death of property is that thing-ownership is what has been qualified until now as having intrinsic worth deserving of protection. This worth is merited in part by the mixing, or toil, of human labour earns one the right to the thing. Capitalism today, Grey argues, is thus "more commonly defended… on the basis of its capacity to produce material well-being and its tendency to protect personal liberty" (78). Intellectual property must defend itself in these terms, but Grey believes that this defense will betray the true nature of the state: "Given this conceptual shift, the neutrality of the state as enforcer of private law evaporates; state protection of property rights is more easily seen as the use of collective force on behalf of the haves against the have-nots" (79).

Keith Aoki (1996) describes this relationship between property and sovereignty:

> Our ideas about property and our ideas about the private sovereignty of property-owning individuals that can be asserted against the state are closely related. Property creates a border, a boundary into which public actors (i.e. the state) may not cross without justification. This private sovereignty also includes a property owners' territoriality based expectation of noninterference from others (private nonowners). It has been and continues to be an attractive vision of individual autonomy and liberty, but nonetheless a vision with certain recurrent problems that begin to become clear in the twentieth century (1318).

Public entrusted enforcement of private property in turn justifies violence since the "delegation of public power of the state to private property owning individuals as against other private individuals," is based on "a sovereignty backed up by the right to invoke the state's coercive power via the legal system against those who violate owners' expectations of noninterference with their property" (Aoki, 1996, 1318). State violence is thus premised on socially constructed and historically contingent notions of territoriality, even when this territoriality becomes an immaterial, liminal space.

Proprietary claims are contingent upon staking some kind of sovereignty claim. Thus, GE food aid – technology based on intellectual property claims – must be policed in two senses: against the competing sovereignty claims of farmers who also claim ownership over the patented seeds, and their political sovereignty claims that challenge the violence of economic imperialism, the forced imposition of GE seeds.

4. World Trade, Development, and Progress

Discourses are adapted considerably and modified over time, so I cannot claim direct links between Locke and twenty-first century development discourse, but rather striking similarities in their historical emergences and problematizations. Adam Smith, the physiocrats, socialist thinkers, W.W. Rostow, and other influential characters in this story bear significant roles in the determination of "improvement" as a seminal discourse of modern western tradition. Even during Locke's time, both proponents and opponents to enclosure traded in the discourse of improvement, and Locke himself articulated his particularly synergetic form of the improvement argument amidst a dense and complicated ground of debate.

However, a remarkable resilience seems to persist in the structure of argument and to chime with arguments made today to overcome the consent of indigenous peoples worldwide to the confiscation of their lands. Improvement is a discourse that is intricately and inextricably tied to ideas of world trade, colonialism, and private enterprise, but that also has been associated with advancement towards civil maturity and popular sovereignty.

Today, while indigenous peoples may have access to international trade markets and land title, agricultural improvements are now imposed in the service of free market enterprise. Traditional forms of consent are now violated by the myth of global free trade. This trade continues to be dominated by elites. In *The German Ideology*, Marx and Engels warn that the "ruling ideas are nothing more than the ideal expression of the dominant material relations, the dominant material relations grasped as ideas" (1845, 67). If there exists a remarkable resemblance between improvement discourses of the seventeenth century and the discourses of development of the twenty-first, then perhaps this can be attributed in part to the fact that global elites have pursued a remarkably consistent colonial course: the dominant material relations persist. Development, I want to argue, while replacing the "civilizing" missions of the eighteenth, nineteenth, and early twentieth centuries, is a new expression of an old form of imperialism.

What might help to explain these genealogical affinities is a theory put forth by Dussel about the nature of development. Dussel, unlike many theorists who date the beginning of modernity in the seventeenth and eighteenth centuries, believes that the 'birth' of modernity occurred in 1492 with "a very particular myth of sacrificial violence" that "also marks the origin of a process of concealment or misrecognition of the non-Europeans" (Dussel, 1993, 66). Though his examples are of late eighteenth century thinkers, Dussel sees the emergence of development discourses as an ontological shift prefigured by colonial contact:

> The myth of origin that is hidden in the emancipatory 'concept' of modernity, and that continues to underlie philosophical reflection and many other theoretical positions in European and North American thought, has to do above all with the connection of Eurocentrism with the concomitant 'fallacy of developmentalism.' The fallacy of developmentalism consists in thinking that the path of Europe's modern development must be followed unilaterally by every other culture.

> Development is taken here as an ontological, and not as simply a sociological or economic, category. It is the 'necessary movement of Being for Hegel, its inevitable 'development'" (Dussel, 1993, 5).

Vincent Tucker's understanding of the religious roots of modernity supports this ontological shift that Dussel identifies. He writes in *Cultural Perspective on Development* (1999) that for Locke and other Enlightenment thinkers this idea of 'advancement' was an attempt to establish limits on existing political powers by asserting that there were natural rights and fundamental laws of governance that not even kings could overstep without becoming tyrants. Development itself is thus a discourse imbued with an organicist or genealogically divine metaphor, posited as the inevitable direction that the rational-religious mind takes towards making economic gains.

Tucker writes that although the emergence of development discourse after the Second World War represented significant diversity among theoretical positions, "The underlying assumptions were so taken for granted that they escaped scrutiny" (1999, 7). They were rooted in a stages view of history – where human civilizations moved from savage to European, the latter of which was "elevated to the status of universals" (1999, 7). The wording of American food aid policy very much embodies these basic assumptions, explicitly connecting progress to a particular economic, therefore social and political, regime. The United States Department of Agriculture (USDA) website states the following criteria for their "Food for Progress" program: "Commodities are eligible to developing countries and emerging democracies that have made commitments to introduce or expand free enterprise elements in their agricultural economies" (USDA). To qualify for humanitarian assistance (for state "progress"), then, countries must restructure their economies to be more compliant with the needs of transnational corporations and global markets.

Even the "Food for Peace" (P.L. 480) program, in addition to fulfilling humanitarian purposes, states its objectives are to: (1) Promote economic development, particularly in agricultural production; (2) Develop and expand markets for U.S. agricultural commodities; and (3) Promote the foreign policy of the United States (U.S. State Department, 1975, 2). Most of the food assistance donated to sub-Saharan Africa from 1966 to 1982 was under P.L. 480 legislation (of which I will get into greater detail

in the following section). A study done as early as 1982 on the impacts of P.L. 480 on Africa conclude that, "P.L. 480 to Black Africa seems to be very closely associated with the access or potential access of the United States to markets and raw materials. Hence, the relative independence of a nation from its former colonial power is positively associated with the access or potential access of the U.S. to its markets. Hence, the relative independence of a nation from its former colonial power is positively related to the level of food aid" (Vengroff, 1982, 43). The author concludes that, "The search for raw materials and markets seems to be a dominant factor" (43). It is interesting to note that the more complete the transition to post-colonialism, the more significant the target for neo-colonial interventions.

While perhaps to some, GE food aid to Africa in 2002 seems to be a clear-cut case of humanitarian aid (i.e. "no-strings-attached"), food assistance is generally tied to a particular development agenda. In a speech given by the Director of USAID, Andrew Natsios outlines the tenets of just governance, which include "maintain[ing] policies and institutions that support market-led growth" (2005). He declares that humanitarian aid for far too long has been divorced from *development* and therefore from the achievement of further stability in "fragile" regions such as Africa. Biotech is a central feature of this development agenda, as we will see in Chapter 3.

More specifically, the transition from subsistence agriculture to export-oriented crop production is the aim of the "humanitarian" agricultural development agenda that Natsios alludes to and which Food For Progress legislation explicitly refers to. Whereas the British meant to keep the Amerindians restricted to subsistence agriculture and economic systems based on hunting and gathering to prohibit competition with British world trade, the opposite holds true today between America and Africa. In the twenty-first century, subsistence agriculture is precisely what poses a threat to the system of world trade, since it generates no capital for input and output manufacturers like giant seed, fertilizer and retail merchants, which are constantly looking to expand their markets.

However, mere access to markets does not mean that colonial masters no longer dictate the terms of indigenous peoples' commerce. Given the vast structural inequalities of the world market system, and the structural adjustment programs imposed by the

World Bank and the International Monetary Fund that create vast domestic inequalities, Southern Africans are bound to the rules of a volatile game of monopoly. For those in the world who *admittedly* cannot compete in the world market, the recipe is development, the ends: *neo-liberal globalization*.

There is one last point I would like to make here about the relationship between development and improvement discourses as they relate to US food assistance to Africa. This point pertains to neo-liberalism and the entrenchment of property in the international legal order in the seventeenth century and onward. I read neo-liberalism here as a process, rather than as a definitive ideology or set of doctrines, as a discursive tool. As geographers Peck and Tickell write: "More often than not, the practice of neoliberalism has little to do with laissez-faire deregulation – letting markets do their work 'underseen' by an absentee state – but instead is associated with extensive deconstruction and reconstruction of institutions, often in the name of or in the image of 'markets'" (2003). An important feature of this process is the international legal framework that protects the rights of capital around the world. Legal theorist Edward Keene writes against convention that the origins of international relations are fundamentally related to colonialism of the non-European world and that, "The principle thrust of European activity in the world beyond Europe was the acquisition of wealth through the *control* of trade; not simply trade itself, but the manipulation and monopolization of trade with East and West" (2002, 118). Beyond Europe, international order was intended to promote civilization: the fundamental norm governing relations between European states and non-European peoples was that the latter were backward and that some of the sovereign prerogatives of indigenous rulers ought to be held by more advanced Europeans in order to introduce the economic, political and judicial benefits of civilized life" (2002, 147). Trade was seen as the answer to civilizing the indigenous masses.

During colonial times, there were two main ways to establish trade: the first was through the establishment of colonies by settlers from the mother country, or the alternative was to insert the European power into indigenous networks of political authority and commerce. Keene writes that, "The British, who managed to establish themselves as the European colonial power *par excellence*, were adept at both" (2002, 118). Over time, these "haphazard activities began to take on a regular pattern, and it

becomes possible to identify certain norms, rules and institutions in the conduct of international relations in the extra-European world, which shaped expectations of appropriate or legitimate behavior and actively worked to sustain this particular pattern of order" (2002, 119). Included among these "haphazard activities" of manipulation and monopolization are private property regimes – in fact, they are central.

Private property rights became established over time in the form of these institutions, norms, and conventions of international relations, even transferring from the jurisdictional domain of imperial masters to national elites as in the case of the US, but always remaining an integral part of international relations. I have already mentioned Thomas Jefferson's role in this normalization and nationalization of private property relations. One has only to read his famous 1774 pamphlet, 'A Summary View of the Rights of British America' where he claims land appropriation as a right given to man by nature, to get a sense of how this transfer occurred. Jefferson uses the "modern law of nations" to justify availing themselves of the British monarchy, which also conveniently provides a rationale for the mistreatment of the Aboriginal first peoples. Locke is one such architect of the modern law of nations, and he explicitly made part of modern international law the protection of individuals' property rights. In the *Second Treatise*, Locke's mobilization and subjectification of natural rights theory (through his improvement argument) can be read as a defense of colonialism, invoking the right of imperialist commerce over the first peoples of a land.

Although the modern law of nation states is generally understood as the ultimate authority on the protection and enforcement of private property regimes, Keene submits that these principles are in fact constitutive of international law as well. He writes that, "By the time of the first Hague conference of 1899, the principle that individuals' private property rights should be respected was regarded as so self-evident that there was no need to work out a formal convention to that effect" (2002, 104). Moreover, "private international lawyers believed that it constituted, to all extents and purposes a 'common law' for the civilized world" (2002, 104).

Hugo Grotius (1583-1645) is the central figure in Keene's story about international relations, however Richard Waswo (1997) takes us back to Rome. Though there were contestations over Spanish colonialism, Waswo maintains that a particular

"founding legend" persevered as the only possible excuse for its justification. Las Casas and Vitoria were the champions of indigene populations, but despite believing that indigenous peoples were under no obligation to accept the Christian god, and therefore could pursue their own traditions and beliefs, there was one world order even more universal than Christianity that could be evoked: Roman law. Vitoria read into Roman law the universal principle that obliges all to welcome harmless visitors: "From such precedents [of sovereignty]... Vitoria deduces the universal right to travel, visit, settle, trade, and mine. If any of these is refused, when asked nicely, then it may be fought for, since defense of one's rights is the only justification for war" (1997, 138).[10] From this law of nature and "natural sociability and fellowship" comes "our right to settle their territories and carry on trade" (1997, 138). Restrictions to free trade amount to a call for war.

These points raise a whole host of other issues, which I do not have the space to deal with here. For example, one could ask then about the nature of the relationship between discourses of self-preservation and improvement, and in doing so, raise important questions regarding the legacy of Hobbes and Locke in their respective interpretations of sovereignty. One could then further try to contextualize these discourses in light of the development of capitalism.

However, the small point I would like to make is that the legal framework for what we think of as neo-liberal politics was in place long before the 1970s and 1980s roll-backs and rolling-outs commenced. Embedded within the international legal order remain the residues of improvement in the form of private property protections for those pursuing commerce abroad. Neo-liberalism with its emphasis and insistence on markets and rights to create markets and supply markets is protected by international law codified since the seventeenth century through a variety of modern institutions, norms, and forms.

The imposition of private property regimes onto the so-called New World injected European power into indigenous networks of political authority and commerce such that in the modern age, this colonization has resulted in the blurring of the inside with outside of the international order. This would presumably have a considerable impact of the subjectification of the modern subject, for, "Embodied in a multiplicity of practices, institutions and structures, [development] has had a profound effect on the Third World:

social relations, ways of thinking, visions of the future are all indelibly marked and shaped by this ubiquitous operator" (Mudimbe, 1998, 25).

Now to switch registers somewhat, I would like to work through the history of American food aid, that certainly could be told through a more discursive textual analysis, but which will not be for the time being, to provide us with the background material relations of this field of power. The following section is meant to explicate how food aid became such a central feature of the U.S. colonial project.

5. A Brief Introduction to American Food Aid

Critics of the post-war international food order have recognized American food aid as playing a central role in shaping global food politics. Food aid is widely recognized as critical to the rise of American political and economic hegemony (Susan George (1976); Harriet Friedmann (1982); Anuradha Mittal (2002)). US food aid since World War II has played a significant "invisible" hand in structuring the new agrarian order, including a pivotal role in the current debt crisis of the two-thirds world. Under New Deal price supports, American farmers were at the time producing far more agricultural commodities than the market could carry without collapsing. By 1954, the Marshall Plan had successfully revamped Europe as a trading partner while ensuring the disposal of surplus American grains. But it had also exhausted the hard currency left in European countries. America needed new markets for agricultural and other products, which meant getting U.S. dollars into foreign hands.

The Public Law of 480 – "Food for Peace" or "P.L. 480" – was introduced as an aid to market development and as a crucial resource in the cultivation of Cold War political allies. On 10 July 1954, President Eisenhower signed into law the Agricultural Trade Development and Assistance Act, stating at this time that this Act would "lay the basis for a permanent expansion of our exports of agricultural products, with lasting benefits to ourselves and peoples in other lands" (1965, 173). In 1950, the developing world accounted for 10 percent of wheat imports; by 1980, they accounted for 57 percent (McMichael, 2000). This boost in imports is directly attributed to U.S. aid promoting a

Western diet and Western imperial programs around the world, undercutting local food programs. The programs worked through commodity credits distributed through four titles of aid. Most of the food aid was distributed through Title 1 as a "loan" to be repaid in foreign monies in exchange for the purchase of cheap American agricultural commodities, or in some cases, arms and other American goods.

The U.S. Congress then struck on a use for the large deposits of foreign currency amassing in the form of payment for food aid "loans." Congress modified P.L. 480 to include legislation mandating that 25 percent of local currency accepted for food should be loaned at very low interest rates to U.S. corporations investing in those countries. Four hundred and nineteen subsidiaries of American firms were established in thirty-one countries (George, 1976). The rise of the transnational agribusiness had begun. The Columbian experience provides a good example of how the joint forces of U.S. government food aid and subsidized corporations worked together to secure economic hegemony. In Columbia, dumping between 1951 and 1971 harmed local farmers when the government imported millions of tons of wheat at fixed prices well below local production costs, undercutting domestic wheat. Columbia's wheat production dropped 69 percent while imports increased 800 percent. Four hundred thousand, five-hundred and fifty acres were pushed out of wheat production and replaced, in the valley of Sabana de Bogota, by cattle grazing for export hamburger markets (Lappe, et al, 1977). This expropriation of land was funded by money from Title 1 aid and subsidiaries of U.S. corporations, like Ralston Purina, Quaker Oats and Abbot Labs (Lappe, et al, 1977). This American 'food power' is not necessarily any less effective than military controls in subduing or colonizing a nation: 'Food is a weapon' the American Secretary of Agriculture, Earl Butz stated in 1974, referring to OPEC's use of oil as a political weapon. The US had found a weapon of its own.

By the late 1970s, the U.S.'s well established regime was curling at the corners as foreign corporations from Europe, Japan and some newly industrialized countries, challenged the U.S.'s control of international markets and cut into domestic markets. This competition for markets and the growing power of transnational corporations provided the context for GATT talks on the liberalization of agriculture and trade in agricultural commodities, which until this point, were kept out of the GATT. What

sparked the careening dumbwaiters, once seeming so firm in U.S. control as it levered other countries into desired positions, was a unique combination of circumstances in international political and economic affairs that culminated in the early seventies. These included rapid economic growth of middle-income developing countries fueled in part by huge increases in international borrowings; détente with the Soviet Union and its associated Eastern European countries; normalization of relations with China; world-wide shocks generated by the two price hikes by the Organization of Petroleum Exporting Countries (OPEC); and a steady decline in the real value of the U.S. dollar over most of the decade, partly due to massive economic loss due to funding the Vietnam war. This was coupled by the fact that the international monetary system was also becoming increasingly unstable with the advent of financial globalization: floating exchange rates, offshore money management and financial speculation all subjected the value of cash and commodities to a gambling game of the international elites.

Understanding this period of international monetary history is critical if one is to get a grasp of the debt crisis because a massive seizure of capital was moving across the world at record speeds, doing record damage. As U.S. farm exports rapidly doubled because of imports to the Soviet Union - netting gigantic profits for America's weakened economy - petro-dollars were being recycled through Western banks and loaned out to the two-thirds world. The primary strategy recommended to these countries to enable their "progress," was to gear their economies for export to the global market. The U.S. changed their domestic farm policy, removing production constraints and encouraging farmers toward commercial exports. This made agricultural commodities cheap for corporations to buy and sell to other countries at low prices. While encouraging membership in the "free market," the U.S. made sure to keep one step ahead of its own game. This new domestic subsidy program has had a huge impact on the world economy, destabililzing family farmers worldwide, especially in the developing world, China, Soviet Union and Eastern Europe.

There was another process at work during the "debt crisis": the gradual phasing out of tropical imports from the Global South to the States. The massive amounts of non-commercial grain U.S. aid threw into circulation masked the downswing in agricultural imports from the developing world to the West. When industrial uses of rubber, fibers

and some vegetable oils expanding dramatically in the twentieth century as diets of processed foods expanded, tropical exports underwrote development projects. But, when American agro-industrial complex began synthesizing sugar (corn syrup) and oils (soya oils) as alternatives to sugar and tropical oils, dependence on the developing world tapered off. Thirty years after the Second World War, the former European colonies of the "third world" were politically independent, but were still structured as dependent export economies, making unviable their post-colonial independence. Because aid agendas are set according to the political and economic interests of changing U.S. administrations, food aid has many faces: it can be a bargaining chip in peace negotiations (the Middle East Accords), a way to gain military favours (Pakistan), support for staunchly capitalist regimes (El Salvador, Costa Rica), long-term support for an ally (Israel) (Charlton, 1997). It may also take the form of domestic agricultural subsidies, and is often a means to develop commercial markets (Charlton, 1997). Although many argue that the U.S. food aid regime has reformed considerably since the 1980s due to widespread criticism against the politically motivated nature of distribution, the U.S. government's biotech agenda of recent years proves otherwise. Times have changed and economic hegemony occurs on new fronts, such as Intellectual Property, as we have seen.

Funded by Congress, the United States Agency for International Development (USAID) has played a central role in pushing the U.S.'s biotech agenda around the world. A GRAIN briefing on USAID and food aid reports, that "these USAID programmes are part of a multi-pronged strategy to advance US interests with GM crops. Increasingly the US government uses multilateral and bilateral free trade agreements and high-level diplomatic pressure to push countries towards the adoption of many key bits of corporate-friendly regulations related to GM crops. And this external pressure has been effectively complemented by lobbying and funding from national and regional USAID biotech networks" (GRAIN, 2005). With the entrance of USAID into biotechnology prospecting, however, the expansion of U.S. markets is no longer a sufficient program to gain political and economic control.

Biotechnology requires complex "packages" of compliance, including biosafety protocols, technology centres and research capacity, and an active and willing local

population to accept this new food regime along with the concurrent restructuring of the local agricultural economy. The new global economy demands flexibility and substitution; it requires new technologies of control that undermine legal frameworks or conventions. The new economy must go beyond state apparatuses into a fabricated grassroots made up of local elites (GRAIN, 2005). These changes signal the emergence of a new food regime and genetically modified food aid is just one small aspect of a much broader, more expansive imperial program of agrarian displacement, which I will outline in my two final chapters.

The U.S. food aid programs have been under intense scrutiny from the start. Although today, food aid accounts for a substantially smaller amount of U.S. agricultural exports, the U.S. is still the world's largest food aid donor.[11] The Food for Peace program drew criticism for what became increasingly obvious contradictions of the program. Food aid, in the form of agricultural commodity credits, created local farmer disincentives, flooding the market with grains and produce below the cost of what local markets could afford to produce the food. This "food dumping" displaced markets and led, in many regions throughout the world, to the migration of farmers from the country to the city, often creating slums and deep pockets of violence and poverty. But, as Jennifer Clapp reports, "Since the 1980s food aid policies in the US have been reformed significantly, with the overt political goals removed from the P.L. 480. In the European Union, food aid policies since the 1990s have been focused on giving aid" in the form of cash, in response to studies that indicate "that cash spent on local purchases of food in aid recipient regions boosts the local economies and allows for much more flexibility in terms of sourcing culturally appropriate foods" (2004, 5). For these reasons, some people are claiming that the food aid regime has been "depoliticized."

The U.S., however, still gives all of its aid in kind. Over half of total food aid supplies in the world, in fact, come from the U.S., and since it is the largest grower of GE foods in the world, a high percentage of food aid distributed around the world is GE, too. USAID admits that it is safe to assume that 30 percent of the 500,000 tons of maize it exports is genetically modified (Walsh, 2000). The U.S. is also the main contributor to the United Nations' World Food Program (WFP). Recently, the WFP admitted that since 1996 it has been distributing GE food aid to 86 countries around the world. But the WFP

claims that they were "under no obligation to alert authorities and have made no attempt to distinguish between GM [genetically modified] and conventional cereals since 1996, when GM crops first became part of US grain stocks destined for aid" (Pearce, 2002). Amid controversies in 2002, The WFP spokesman Trevor Rowe made a telling statement: "We think the starving would rather eat GM grain than dirt" (Pearce, 2002).

To indigenous farmers around the world, imperial policies did not begin in the postwar era, nor did they start with Green Revolution, and nor will they end with the "Gene Revolution." The discovery of GE contamination of food aid supplies has only intensified the struggle between rich countries and the two-thirds world. And while critical thought should help us "recognize the pervasive character and functioning of development as a paradigm of self-definition" and imposed institutions and norms, (Mudimbe, 1998, 25) a transformation and dismantling of these discourse must also mean addressing the structures of domination that help to power these ideals. As Mudimbe writes in his study on Africanism: "It may be said that what is at stake is the transformation of the political, economic and institutional regime of truth production that has defined the era of development" (1998, 28). Let us begin this arduous task with one step towards understanding the technologies of this truth production, such as biopower.

CHAPTER 3

A Trial by Biopower: Foucault, Sovereignty, and the Seed

> [An] excess of biopower appears when it becomes technologically and politically possible for man not only to manage life but to make it proliferate, to create living matter, to build the monster, and, ultimately, to build viruses that cannot be controlled and that are universally destructive. This formidable extension of biopower… will put it beyond all human sovereignty
>
> Michel Foucault, *Society Must Be Defended*

1. Introduction

In this chapter, I attempt to track the development, and continued use, of biopower to undermine the juridical regulation of GE seeds through an exhibit of the forms of biopower operating within this practical system. While juridical "right to food" claims and "food security" rhetoric has preoccupied the global civil society for decades (as witnessed by the 1974 World Food Conference, the World Food Summit of 1996 and the Food Summit + 5 in 2002), these attempts to address global famine and hunger are consistently undermined by unequal relations of power in the global political economy, but also due to the control of "life itself" in the biopolitical discourses (and technologies of control) that surround, direct, and manage GE food aid cases. As I stated in my introduction, claims of improvement by the governing are not restricted here to just plants, or civilizations, but extend to the total *bios*, governing the norms of improvement at the biological level of populations. Foucault's notion of biopolitical power can help us to understand how the discourse of improvement works on the ground in the sense of how it overcomes the forms of sovereignty and property rights enshrined and established by seventeenth and eighteenth century thinkers. Biopower smoothes the rough edges of social control by advancing norms through more diffuse channels of power. The question I pursue in this chapter is how living in a society of biopolitical control further legitimates the power of the governing and the imperial discourses of improvement.

In reference to nuclear proliferation Foucault writes that this technology presents the paradox of an "excess of biopower": since the power itself cannot be controlled once released, it puts it beyond all human sovereignty. I want to look at the global food sovereignty movement, which rejects GE seeds, as a means to explore whether or not GE technology constitutes an excess of biopower to this form of sovereignty. This inquiry is of a theoretical nature and I want only to survey the implications of biopower to the food sovereignty movement as a starting point to a further, deeper inquiry into the food sovereignty movement as a whole – a course I will take up in my final chapter.

Contemplating the symbolic and material impacts of "genetic contamination," I find the concept of an excess of biopower worrisome, but revealing; if we reconceptualize the operation of power shaping our world we must be prepared to call our forms of resistance into question, as well. I want to be careful here not to impose Foucault's understanding of biopower onto the case at hand, but rather just to look for the ways it might help to problematize and clarify power relations both repressive and resistant, operating in this case study. In this chapter, I will define biopower and survey how it both undermines and shapes legal rules and norms. Racism plays an important role in this story, but so do intermediaries, statistics, and conceptual interventions into nature. I argue that sovereignty must be understood in the context of biopolitical control and empirically track the technologies of this control.

2. Biopower

While the previous chapter focused on the language of improvement in the discursive system of GE food aid to Africa in 2002, this chapter takes a closer look at the technologies of power that underpin the field of possibilities for governance of and resistance to GE food aid. There is a sense in which this chapter extends the logic of the last chapter to ask: how can we empirically investigate the ways in which GE food aid legitimates the authority and power of the governing, and in what kinds of global ways does improvement operate to these ends? Raising the question of sovereignty is instrumental to this task, and although until now I have taken a rather sidelong glance at

the concept, over the next two chapters I would like to try to get at the contested meanings it holds in the case of GE food aid to Africa. In order to violate traditional forms of consent of sovereign nations, we must grasp something of the nature of sovereignty and its respective significance to the agents represented in the case study.

In the epigram above, Foucault writes of an "excess of biopower" that would put it beyond "all human sovereignty." Does Foucault intend to refer solely to the biological capacity of technology to over-power human control, such as in the example of nuclear proliferation? To understand his intentions, we must read this quotation in the context in which it was written and in the broader development of his theory of biopower. He first introduces the concept of biopower in a lecture in 1976, published in *Society Must Be Defended* (1997) from which the epigram was taken. The lecture deals more broadly with the role of racism in the rise of the modern nation state, but is prefaced by a lengthy digression into two superimposed forms of power that emerged in the seventeenth and eighteenth centuries: disciplinary power and biopower. These forms of power help account for how racism operates in society. (I will return to the question of racism below, as it represents an important feature of the emergence of biopower and subsequently, to the case of GE food aid to Africa).

In *History of Sexuality* (1979), Foucault elaborates his ideas on biopower that he began working through in SMBD. Here we get a lengthier description of Foucault's account of the transformation of power in the late seventeenth century. The common story about the great power shift in the seventeenth century is read through Hobbes and Pufendorf, who perceived and attributed political change to "new rights" transferred to the sovereign. Foucault recognizes significant changes in the exercise of sovereignty, however he attributes the real shift in power to technological developments that in fact *undermined* "deductive" forms of control (power based on the deprivation of goods) and a hierarchical organization of power. Foucault asserts that it was rather two emergent technologies – disciplinary power and biopower – that produced and governed social norms.

A crucial distinction between two forms of power that emerged is that disciplinary power acts on the *individual* body, whereas biopower acts on the population *as a whole*. Disciplinary power acts to optimize and extort the body into a machine to be integrated

into systems of efficient and economic controls, such as the factory, the school, and the army. This form of power can be thoughts of as the "disciplinary technology of labour" (Foucault, 1997, 242), individualizing and controlling the body to make it useful and docile for capital. The individual body is the object of surveillance; it is trained, used, and punished. Biopower, on the other hand, is a regulatory power that works on man-as-species, the *population*, through regulation that replaces the body with biological processes. To comprehend biopower, we must become accustomed to understanding power as a "domain of intervention," rather than as a centralized force. Biopower is measured in statistical terms, it acts upon the population on a whole as a shapeless regulatory power, for example, compiling birth and death rates, statistics on health and welfare, and other demographic data. In fact, according to Foucault, we must think of biopower as a "multiple-body" deriving its "domains of intervention, knowledge and power" in terms of "the birth rate, the mortality rate, the various biological disabilities, and the effects of the environment" (Foucault, 1997, 245).

For example, while the factory makes men obedient to assembly line movements and tightly coordinated time shifts, information circulated by the State on recommended hygiene and dental care is meant to shape the population *as a whole* towards desired national ends. This latter adjustment is more complicated than disciplinary power "because it implied complex systems of coordination and centralization" (Foucault, 1997, 250) (as we shall see in this chapter). Biopower is aleatory in nature, as well. It is contingent and accidental, serial, undetectable and in-pertinent save for when noticed on a mass scale (Foucault, 1997, 246). This form of control must be understood to proliferate where conventional forms of sovereignty cannot; its purpose is not to modify phenomenon or individuals, "but essentially, to intervene at the level at which these general phenomena are determined, to intervene at the level of their generality" (Foucault, 1997, 246). In this sense, autonomy comes to mean, for example, taking care of ourselves, but within regimes of normality already produced by various agencies.

Absolute authority to determine who got to live and who had to die once distinguished sovereign power. However, these powers were gradually constrained, and by the seventeenth and eighteenth centuries, the right to "let live" and "make die" transformed into "make live" and "let die." Biopower gave biological powers to the

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state, controlling the population by fostering life or disallowing life to the point of death. Based on an explosion of techniques for achieving the subjugation of bodies and control of populations, the sovereign exposed citizens to death, but also organized, modified and commodified their lives. This fostering of life was evoked in the name of everyone, democratizing survival, while ironically using "survival" to justify unprecedented death and war. Foucault attributes this *biohistory* in part to agricultural developments in the eighteenth century. With the improvement of agricultural techniques "a relative control over life averted some of the imminent risks of death" (1979, 264) and "life itself" entered into the sphere of political techniques.

Many scholars note that by the late eighteenth century the great public ritualization of death (such as public hangings) began to fade. Why was this so? In contrast, death became something to be hidden away. Foucault responds to this phenomenon: "Now that power is decreasingly the power of the right to take life, and increasingly the right to make live, or once power begins to intervene mainly at this level in order to improve life by eliminating accidents, the random element, and deficiencies, death becomes, insofar as it is the end of life, the term, the limits, or the end of power too. Death is outside the power relationship" (1997, 248). This seems to be what Foucault means when he writes that biological processes replace the body in the biopolitical sphere. Chillingly, through this generalization, "Power no longer recognizes death."

Foucault points out two main consequences of biohistory: (1) a proliferation of political technologies ensued, investing the whole space of existence; (2) a growing importance assumed on practice by the action of the norm at the expense of the juridical system of law. These consequences intertwined and over-lapped as the proliferation of new technologies developed in tandem with economic changes that increasingly shaped the law. Wealth was no longer only created through goods and trade, but through labour and productivity, which required micro-mechanisms of control. Foucault writes: "The law always refers to the sword" (1977, 266). But the threat of death was no longer enough in this new field of sovereignty and power. Biopower gains control by "distributing the living in the domain of value and utility… Such a power has to qualify, measure, appraise, and hierarchize rather than display itself in its murderous splendor; it does not have to draw the line that separates the enemies of the sovereign from his

obedient subject; it effects distributions around the norm" (1977, 266). In other words, the value of life became increasingly constituted by norms, rather than by sovereign rights. The law as a result operated more and more as a norm, prescribed by biopower.

Disciplinary power and biopower are "linked together by a whole intermediary cluster of relations" that converge around "the norm" (1979, 261; 1997, 253). The normalizing society is the intersection between disciplinary power and biopower: they "cover the surface between… the body and the population, taking control of life in general" (1977, 253). But herein lies the paradox. Taking control of life in general is compromised by the introduction of certain technologies of control, such as nuclear arms. Foucault writes that, "the power that is being exercised in this atomic power is exercised in such a way that it is capable of suppressing life itself" (1997, 253). Therefore, the sovereign suppresses itself, "insofar as it is the power that guarantees life" (1997, 253). There are several options, as far as Foucault can see: the first is if it is the sovereign that uses the atomic bomb, then it cannot be power, for since the nineteenth century, the sovereign's power is to guarantee life. Or, on the opposite extreme, perhaps the situation is not of a sovereign managing an excess of biopower, but a biopower that is in excess of sovereign right. In other words, sovereignty and biopower can in some circumstances become radically incompatible. This chapter seeks to study the ways that GE food aid may prove to pose such a paradox.

3. Biopower and Right

Foucault's critical move in identifying the transition of power to biopower is recognized by Michael Hardt and Antonio Negri in *Empire* (2000). However, writing in the 21st century, Hardt and Negri have a different perspective on the function and form of biopower today. In particular, they describe the impact of immaterial labour on private property regimes to illustrate the new position of *law* within the field of biopolitics (2004).

Hardt and Negri write that immobile forms of private property such as land, and material objects such as cars and cell-phones, have always been in need of police

protection. However, with the introduction of immaterial forms of private property such as reproducible software, virus-vulnerable computer programs, and genetic sequences for biological weapons, a new more vigilant form of police protection was required, as these forms are exceedingly vulnerable to theft and represent grave security threats to sovereign power. This police protection has meant greater surveillance powers, an expansion of private security forces, and sophisticated tracking devices. But despite this expanded police control, Hardt and Negri maintain that police force remains secondary to a more primary force of big government: Right.

Here we must ask: why Right *now*, just when it seems as though the biopolitical machine controls all juridical forms of sovereignty and control? Naomi Klein, commenting on GE food aid, succinctly summarizes this enormous biopolitical power to shape the law: "The real strategy is to introduce so much genetic pollution that meeting the consumer demand for GM-free food is seen as not possible. The idea, quite simply, is to pollute faster than countries can legislate – then change the laws to fit the contamination" (2001). Hardt and Negri maintain that juridical Right is an essential protection, where to Klein it appears as an afterthought, and perhaps to Foucault, as a norm that can and will be changed. To answer the question of why Right now, Hardt and Negri give us a picture of what private property means today.

Hardt and Negri believe that property relations have been radicalized by legal decisions in the US to allow the patenting of life forms. Up until this point, there existed only a generalized ownership of goods and other life forms. For example, one could own 20 Holsteins, or a cat, or Rover the dog, but these forms of ownership differ from what Hardt and Negri call *bioproperty*. The illustrated difference between generalized and patented forms of ownership lies in lab mice: whereas once science labs conducted experiments on mice they bought and owned, now DuPont can own an entire *type* of mouse.[12] This is the moment when biopower folds into juridical power: law becomes essential for its protection, for intellectual or immaterial property require a sovereign authority to legitimize the ongoing construction of biopolitical norms.

There is also some sense in which intellectual property rights (IPR) regimes not only construct labour in particular ways to privilege Western researchers, but that within these discourses even the concept of "biological resources" is subverted to service this

bias. As I have already alluded to in my second chapter, much is made internationally of the "common genetic heritage of humankind" in terms of the global diversity of plants and seeds. However, "materials 'improved' by plant breeders or molecular biologists are not 'resources' in this sense" (Cleveland, et al, 1997). These resources may be privatized because they have been *taken out* of the common domain through the application of a particular form of labour. This relationship between labour and biological resources is taken for granted as shared principles in IPR and "from this viewpoint intellectual property rights as currently defined and used by industrial countries are taken as valid for all peoples and all times" (Cleveland, et al, 1997, 481). Disagreements concerning IPR between the First and Third Worlds have played out in multilateral negotiations, including the General Agreement on Tariffs and Trade (GATT), World Trade Organization (WTO), and the Convention on Biological Diversity (CBD). Though there is disagreement among groups in the West, "at the same time, conventional economists, agronomists, and intellectual property lawyers often consider intellectual property rights protection of innovation critical for economic growth and the lack of industrial intellectual property rights a major impediment to 'development' of Third World economies" (Cleveland, et al, 1997, 482). Again, the development of Third World economies is determined by valuing particular modes of production and notions of progress over all others.

4. Racism and the Social Body

In SMBD, Foucault theorizes that with the rise of biopower, the sovereign needs a special justification for killing. Vital to biopower's emergence and capacity to control is *social-racism*, an evolutionary biology that differentiates between *subrace* and *superrace*, thus giving the sovereign conditions of biological impurities to "let die" for the good of the entire social body. He uses Nazi Germany as a prime example of how biopower is inscribed in the workings of all states, but believes that, "Nazism alone took the play between the sovereign right to kill and the mechanisms of biopower to this paroxysmal point" (260). However, the biopolitical Nazi state is defined in such a way that can be

generalized to incorporate the functioning of many modern states today: "The Nazi State makes the field of the life it manages, protects, guarantees and cultivates in biological terms absolutely coextensive with the sovereign right to kill anyone, meaning not only other people, but also its own people" (260).

One cannot help but think of Zygmunt Bauman's references to law in *Modernity and the Holocaust* (1989). Bauman writes that the underpinning imperialist politics of juridical authority may in fact be the very condition of modernity. Theorizing on the gnawingly unpleasant complicity of Jews in their own destruction during the Holocaust, Bauman writes that, "the proper frame of reference and comparison seems to be provided by the 'normal' exercise of power in the running of modern society, rather than by the blood-soaked history of spectacular genocidal violence" (119). As evidence of his troublesome theory, he reports of a disillusioned man after World War II: "Not yet fully recovered from the shattering truth of the Holocaust, Dwight Macdonald warned in 1945, we must now fear the person who obeys the law more than the one who breaks it" (1989, 151).

Social racism in the GE food aid case is complicated in that the US authorities were eager to send over food aid to help starving Africans and none of its "own" people were at risk. However, Africans were "let to live" only under the restrictive diet the US forced upon them in the form of GE food aid. The discourse in which this "force" was embedded, as I hope I have demonstrated effectively in the previous chapter, was articulated in part by relying on a particular view of history and progress to convince Africans and the world that GE food aid was part of a natural, inevitable progression toward this diet. Particularly telling in this "official story" were representations of Africans as, firstly, unable to make decisions for themselves, and secondly, as superstitious or non-scientific when taking the matter into consideration and rejecting it (of course, those Africans supporting the GE aid were worthy of another sort of recognition).

For example, Dan Glickman, US secretary of agriculture from 1995 to 2001, made a telling statement during a speech proclaiming GE food to be the solution to world hunger. He stated that, "Many of the opponents [of GE food], frankly, can afford the luxury of their opposition; they don't have to worry about food insecurity since they live

in prosperous, agriculturally abundant societies" (Food First, 2000). These words reflect the "patronizing and dismissive view" of US authorities to the voices of the two-thirds world, since his target of opposition are not even the Africans (or other people from the two-thirds world) themselves, but rather to the wealthy and powerful of the advanced capitalist world. Andrew Natsios (USAID) referring to environmental activists at the time of the African GE aid crisis, stated that, "They can play these games with Europeans who have full stomachs, but it is revolting and despicable to them do so when the lives of Africans are at stake" (Greenpeace, 2002). Finally, Deputy Spokesman Philip Recker "insisted that there was no scientific evidence of safety problems with genetically modified corn" implying that the African rejection of aid was based on irrational or superstitious claims (AFP, 2002). Given the legacy of depictions and representations of Africans prevalent in the western world as backwards, violent, and uncivilized nations, even a hint towards these claims is sufficient to push people to come to these conclusions.

Social racism has evolved from discrimination against peoples made because of the colour of their skin to a cultural hierarchy of civilization, where those who reject market liberalization are considered "outside" of history, or living in a state of nature.

It is difficult not to think about the genocide in Rwanda, or of Sudan today, or of the US and Canadian-backed oppression in Haiti occurring as I write, without being reminded of the great violence of racism that still determines Western geopolitical intervention, or non-intervention, in global conflict. Stephen Lewis was appointed by the Organization of African Unity to the Panel of Eminent Personalities to Investigate the Genocide in Rwanda. The 'Rwanda Report' was issued in June of 2000. It charged that the United States, France and Belgium, as well as the Roman Catholic and Anglican churches, actively prevented peacekeepers from moving in to stop the genocide in Rwanda. In an interview about Rwanda with *Democracy Now!* Radio, Lewis made the following statement: "It was absolutely classic, the lack of intervention. And it flowed in significant measure from the American prior involvement in Somalia, but it also flowed from an international community that just wrote Rwanda off in an act of extraordinary racism" (*Democracy Now!* 2004).

While the Africans in the case study I am presenting were not ignored, they were noticed for all of the wrong reasons: as part of an effort to further the American biotech political agenda.

5. The Story

I have already outlined many of the details regarding the case of GE food aid to Africa in 2002. What I would like to present here in this section, however, is a side of the story that has yet to be brought to light in this thesis. Let me begin by saying that, keeping in mind that southern Africans are no more a monolithic group than are Americans, conflicts did arise in Africa over whether or not the aid should be accepted. For example, it is true that elites in Zambia stood to lose their valuable export organic livestock market to Europe with the contamination of grain stocks by GE seeds. And while many hungry people would surely have eaten the seeds had they been set in front of them, what must first be clarified, among other accusations, is the extent of influence European moratoriums played on African sensibilities.

African biosafety protocols in fact predated Europe's de facto moratorium. Draft protocols of the "African proposal,"[13] a continental draft paper of recommended precautions, are in fact tighter than the Cartegena Protocol, an international treaty signed in 1996 towards regulations on the safe handling and transport of genetically modified organisms (GMOs). Brian Tokar reports that, "African nations, along with others concerned about how future imports of GMOs might threaten the integrity of indigenous plant and animal species, forged an international consensus requiring countries seeking to export intact, viable GMOs… to obtain the consent of the importing country" (2004, 59). Those African groups who support biotech such as South African Regional Biosafety Program (SARB) are funded by USAID. According to a GRAIN report, "USAID states that SARB's 'specific objective is laying the regulatory foundation to support field testing of genetically engineered products in four [South African] countries by 2003'" (2005, 13). Another USAID-affiliated program, The Program for Biosafety Systems (PBS) "brings together the bulk of groups and people involved in USAID's

biotechnology policy work" and now "manages USAID's biotech collaboration with CORAF (*le Conseil Ouest et Centre Africain pour la Recherche et le Développment Agricoles*), the Association for Strengthening Research in East and Central Africa (ASARECA) and the Common Market for Eastern and Southern Africa " (GRAIN, 2005, 13).

African governments were also accused of lacking objective, scientific research that could hold up against American food standards. Report after report featured officials pointing out that Americans "eat the stuff every day" and that *they're* fine. Africans, such as Dr. Tewolde Behran Egziabher, Head of Ethiopian Government's Environmental Protection Authority, stated that there is a substantial difference between Americans consuming processed GE corn in their daily diets and African recipients making up one hundred percent of their diet with GE maize seeds themselves (Bradbury, 2002). The effects would be largely unknown. The second point concerns not the nature of scientific research on GE foods, but the extent to which contradictory research has been systematically censored or discredited by corporations, universities and governments.[14] The separation between politics and the lab has proved to be remarkably porous.

Finally, the despotism of African leaders offered another explanation for the forced starvation of their peoples.[15] Instead of verifying or denying whether southern African countries' governments zealously denied their populations food, I want to refer to the ways Zambia and Zimbabwe's particular decisions to reject the aid were made. In an essay called, "GMOs and the Food Crisis in Zambia," Mwananyanda Mbikusita Lewanika introduces the public meetings, interactive television and radio programs, and newspaper articles that led to a national consultation where Zambians of all walks of life – scientists, government ministers, farmers, NGOs, university professors and students – met for several days to debate genetically engineered foods. An overwhelming number of people opposed GE foods and recommendations were made to the government to reject the aid (2004).

In Zimbabwe, a citizens' jury, Izwi neTarisiro, brought together farmers from seven of the country's eight provinces to jury special witnesses who came to share their vision for smallholder agriculture in the country. Farmers raised a number of concerns on the economic, environmental and social safety of GM crops. They were worried about

cross-pollination, the contamination of wild relatives, pest resistance, the impacts on friendly insects, seed cost, intellectual property rights, biopiracy and many more issues. Rusike, reports that, "Farmers raised the issue of food sovereignty as they recognized that 'Zimbabwe has not yet been capable of producing any GM crop seed and as such it would have to rely on external big companies.' A particular concern in the Zimbabwean context was how sanctions might affect the seed supply" (Rusike, 2003, 6).

In the American Western media, there were also stories told by actors situating themselves between the American and African positions, actors with moral currency precisely because they appeared to occupy an in-between position. When campaigners from international, western-based non-governmental organizations spoke out on the case of GE seeds to Africa, many scientists, corporations and governments applauded these actors' will to abandon ideological concerns in the face of dire crisis (Prakash, et al, 2002). Greenpeace's Annette Cotter told the Wall Street Journal that, "When it comes to famine, telling anybody not to eat GM food in this situation is a position we absolutely can't take" (Prakash, et al, 2002). Juan Lopez of Friends of the Earth (FOE) said, "We're not saying no to GM [genetically modified] foods in the middle of a famine." The language is interesting here: whom does Lopez represent when he claims that "we" cannot say no to GM in a time of famine? Who is it that FOE can't say "no" to – the southern Africans, the biotech corporations, or the American government? Why in a time of acute famine is it less imperative for Greenpeace to listen to the southern Africans and their demands? Perhaps during a famine, one cannot leave the decision up to the Africans themselves. They could really botch this one up for "we." We, it appears, as in "our organization," as in: our paying members and ideological partners.

Writing about rural struggles in colonial and postcolonial Mozambique, Bowen astutely describes the NGO "problem:"

> The proliferation of NGOs in Mozambique, as elsewhere in Africa, initiated a debate about their role in promoting (or hindering) development. On the one hand, some people are highly critical of international NGOs, denouncing them as an important instrument of the 'new imperialism of low-intensity management at grassroots level.' In the most comprehensive study of NGOs in Mozambique, Hanlon argued that the influx of NGOs in the 1980s played a uniformly suspect role in undermining the credibility of the Mozambican government by insisting

> that foreign representatives control the entire operations. While manifesting the 'human face' of structural adjustment, through food aid and other programs, aid agencies like World Vision and CARE pursued their own policy agenda of undermining the state and hastening the pace of market-driven privatization (2000, 196-197).

Bowen, however, continues: "On the other hand, some perceive NGOs as contributing to economic development, promoting a democratic culture, and strengthening civil society in Africa. In Mozambique, former NGO personnel have argued that these organizations must be seen as diverse entities with different objectives and manifold operations" (2000, 197). The paradox of relief workers is also expressed by critics' assertions that where neo-liberal institutions and NGOs coalesce, the face of the west's regional policies in Africa is revealed. This coalescing is historically tied to the rise of a two-tiered neo-liberal system of social welfare. Fall-out over the first tier, structural adjustment programs, has been caught by an over-stretched non-governmental sector that has become the largest channel for aid and resources on the continent of Africa. In this way, NGOs are transformed from independent bodies to vehicles of donor policy (Duffield, 1984). However, it is still helpful to differentiate between those NGOs who are critical of this role they play for donors, and those who are not.

Confirming this pressure on NGOs, Fred Pearce, writes in the *New Science* that, "independent groups are being caught up in the row" (2002). He quotes anti-GM campaigner Patrick Mulvany of the Intermediate Technology Development Group in Britain, who says, regarding the issue of GE found in food aid: "Most turn a blind eye to GM cereals in their food aid." Further, Pearce finds that no independent groups have formal policies banning GM cereals. To where then, can these southern Africans appeal for international support?

6. Law and the State

There are at least six international institutions and arrangements that are meant to regulate food aid,[16] but which reveal instead "a fragmented aid delivery system in need of policy coherence" (Clay, et al, 2000). To give an example of such an arrangement, the

Food Aid Convention (FAC) recognizes that food aid should be culturally acceptable, bought from the most cost-effective source available, and, if possible, purchased locally so that regional markets don't suffer. Designed to address the problems of international food aid, such as "dumping" (the disposal of agricultural commodities at below-market prices), most European countries abide by donating money so that food can be purchased locally in recipient countries (Greenpeace, 2002). But this convention is largely ignored by the United States, a signatory to the deal, that insists on offloading tons of cheap seed and food.[17]

Bilateral food aid introduces another jungle of institutional frameworks, operating through agriculture or foreign affairs ministers, with aid agencies interlocuting and then interacting with international NGOs. An example of these donor complexities is that the EU has 16 separate food aid programs. (Clay, et al, 2002). Every year, two million tons of GE food aid is sent directly to developing countries by foreign assistance agencies such as the United States Agency for International Development (USAID) (Afrol, 2002), which acts more like a PR agency for biotech around the world than an aid agency. Since 1961, USAID has been the principle donor of food aid, exerting tremendous influence on the WFP, since most of this food is channeled through the UN organization. But USAID is also one of the main funding agencies for other private, biotech promotion projects around the world, such as the International Service for the Acquisition of Agribiotech Applications (ISAAA), which I will get to below, and the African Agricultural Technology Foundation (AATF), both of which work to normalize, promote, and implement legal infrastructure for biotech in the developing world.[18]

The most important international organization for food aid however must be the United Nations World Food Program. Here we must ask what kind of legal jurisdiction this body is subject to. In 2002, officials from the WFP were forced to admit that they had been distributing GE seeds for the past seven years without disclosing this fact to the 83 recipient countries of WFP donations. Some of the countries discovered to be the recipients of such aid include India, Ecuador, and Guatemala (GRAIN, 2001).[19] It is now known that the WFP donates about a million and a half tons of transgenic crops, most of it likely donated by the United States, their most valuable contributor (GRAIN, 2001).

James Morris, executive director of the WFP, defended its actions of donating the GE aid to Africa and abroad by stating that, "In doing so, we observe the food safety guidelines of the Codex Alimentarius, the principle UN body dealing with food safety" (2002). Codex Alimentarius Commission ("Codex") is jointly administered by the Food and Agriculture Organization and the World Health Organization. Codex is the "primary referent for the World Trade Organization (WTO) on its *Sanitary and Phytosanitary Agreement* and its rulings are applied worldwide to make uniform international standards (Choundry, 2004). An example of such standards would be allowing "50 times more DDT [toxic pesticide ***d**ichloro-**d**iphenyl-**t**richloroethane*] to be used or left in residual amounts on peaches or bananas than US Environmental Protection Agency (EPA) Standards" (Choundry, 2004, 49).

The Codex panel is usually comprised of two trade diplomats and a lawyer, who lack scientific expertise to legislate on evidence submitted. Examples of Northern delegations to Codex have included Coca-Cola executives, as well, as businessmen from Cargill, Pepsi and Nestle (Choundry, 2004). Michael Jakeman is troubled by how the Codex panel can appropriately deal with requisite scientific evidence. Article 13.1 of the DSU permits the panels to seek information or advice from any individual or body, it deems appropriate.[20] However, "the SPS agreement does not clarify what the influence of these sources is and it is therefore a contentious issue. These problems, concerning procedural inconsistencies of the Panels to restrict themselves to their intended role, along with poor procedures for choosing non-biased scientific experts, and the hurried conditions of these procedures, all exacerbate a lack of fairness and due process" (Jakeman, 2004).

Since 2002, Codex has adopted "Principles and Guidelines Derived From Biotechnology," which advocates the use of the Precautionary Principle, a cautious process upon which to judge the safety of biotech. However, back in 2002, James Morris, WFP Executive Director, must have had Codex in his pocket when he made an urgent appeal to the world in the Herald Tribune on behalf of the lives of the southern Africans: "Never, in nearly 40 years of operations, has the World Food Program confirmed a blockade of its food aid in peace. We will try our best to save lives, working with recipient country governments, a wide spectrum of donors and our partner

nongovernmental organizations. But we urge the political leaders in Southern Africa to weigh the scientific facts. The fate of millions of hungry people lies in their hands" (Morris, 2002). Certainly, some of the responsibility must lie in the hands of the US, who had non-GE seed to donate, and to the WFP, who are surely well aware that "since 1996 most developing countries have made it very clear in negotiations on international biosafety rules for GM trade, that they want to be told in advance about GM imports" (GRAIN, 2002).

Coincidentally, The World Summit on Sustainable Development (WSSD) was convening at around the time of the famine in South Africa. According to participants, the US used the humanitarian crisis in southern Africa as a platform to get moral approval of biotechnology. American delegates presented press releases on three US-backed reports from the World Trade Organization/World Health Organization, World Food Programme, and the UN Economic Commission for Africa released around the time of the Summit. The PR spin for each indicated that they promoted GE foods (Mulvany, 2002). The US also introduced the World Summit for Sustainable Development Initiative to End Hunger in Africa, a proposal to initiate more public-private partnerships in order to "empower African farmers in countries whose governments are committed to agricultural growth and poverty reduction by increasing their access to new technologies and markets" (McConnell, 2002). Although at times it seems as though the biopolitical state has downloaded all of its responsibilities for governance onto the corporations, who have become the true captains of biopolitics, these examples hopefully illustrate some of the partnerships between states and corporations in pursuit of biopolitical control, and the way that they work together to shape the norms of GE food aid.

My focus for the next sections is to ask whether GE seeds are an example of an excess of biopower. If so, what are the technologies of this control, and do they put biopower beyond all human sovereignty? I will then survey these applications of biopower to GE food aid attempting to assess the implications to the food sovereignty movement.

7. Biopower and GE Food Aid

There seem to be at least two distinct ways that GE food aid can be seen as an excess of biopower that puts it beyond all human sovereignty. I find two corresponding responses that stand out as possible remedies for this excess. But in order to understand this "excess" that GE food aid poses, it is necessary to briefly survey the technologies of biopower as they operate in this practical system. In a few paragraphs, I would like to present biopower in a food aid seed.

The sheer capacity of the US to send hundreds of thousands of tons of GE seeds over to Africa seems the obvious place to begin this discussion. This capacity gives the US power over the naked, biological survival of those populations in danger of starvation on the African continent; food and hunger are at stake. I want to look at the ways that this hunger is used to control populations. There are four aspects of this control that I will be focusing on: (1) the American political economy of mass agricultural overproduction and the need for surplus disposal; (2) the reliance on statistics and technologies to define the "crisis"; (3) the intermediary roles played by the WFP and NGOs to facilitate the distribution of the food aid; and (4) the intervention into "nature." These aspects of the aid delivery are each central or emblematic of the field of power relations that constitute GE food aid.

In the first case, the form of control is not biopolitical. Rather, I see this as a structure of domination underlying the field of power: the political economy of the industrial agricultural industry in America. I believe that the capitalization of agriculture limits the field of power relations for all agents in the practical system of GE food aid. Transnational corporations who, not coincidentally, amassed huge sums of money originally through American food aid programs, such as Food For Peace, horizontally and vertically fence the industry. These same aid programs contributed massively to the debt that has been the cause of so much poverty and starvation in the developing world. Further, during what I am calling the Second Enclosures, between 1750 and 1990, 1.5 million to 2 billion acres of the world's most arable resources and productive pastures were newly exploited – surveyed, registered, secured – and drawn into financial capitalism (Weaver, 2003).

Biopolitical control is evident, however, in the management of populations through statistics to define and order the African food "crisis." I say "define" because in countries where chronic starvation and malnutrition, civil war, HIV/AIDS, and the ravages of left-over colonial agricultural administrations, the threat and realities of hunger and poverty hang *constantly* over the region. To differentiate between acute and chronic starvation levels is to shape in some way the definition of "crisis." An example of the statistics mobilized was the probable starvation levels that varied by the millions around the time of the famine. Zambia even accused the US of inflating numbers in order to justify the transport of GE seeds onto African land (Carroll, 2002). The U.S. Early Warning System (FEWS Network) that signaled the beginnings of severe food shortages in southern Africa in December 2001 is another example of demographic calculation that managed the "crisis."

What of the power of biopolitical norms to determine who is allowed to live and disallowed to die? I think we could say here that the southern Africans who *were* in need of famine relief were only *allowed* to live on certain terms. These terms seem clear: "Eat GE or eat dirt," to paraphrase a WFP official. Another way of understanding this control of bare life would be to say that the southern Africans who were in danger of starvation were only *allowed* to live in a particular way. That is, to accept the GE seeds meant accepting a particular *form of life* that could represent death to another livelihood – that of seed-saving and food sovereignty, which I will deal with further below. The biopolitical way to see the body in this case is as constituted as a biological process, rather than as a self-determining individual or population: one is reduced simply to the experience of hunger.

The third form of biopolitical control in the case of GE food aid involves the role of "intermediaries". Foucault writes that biopolitical power dissolves the friend/enemy divide once invoked to define and extol the powers of the sovereign; Hardt and Negri go further and write explicitly on the ways NGOs grease the biopolitical machine (2000). In the case at hand, we have seen how non- or intra-governmental groups are often financially dependent on those they are best positioned to critique. Some of this constraint can be attributed to the structures of domination that I mentioned in the first point. But as distributive responsibilities (resources, and to some extent, justice) are

downloaded from national governments onto NGOs and relief agencies, confusion ensues: who is friend to whom; who is the enemy? Everyone is implicated.

This friend/enemy line is also blurred by the threat of sanction, in that a forced consensus removes the coercion from public perception. U.S Health Secretary Tommy Thompson told Reuters the US will release $15 billion earmarked to fight HIV/AIDS, hinting that Zambia would have to re-think its decision if it wants access to those monies: "It was a wrong decision by the Zambian government. I hope they will rethink it. We are going to make more food available to AIDS patients and the government must decide" (Shacinda, 2003). In another case of "friendly fire," a free trade agreement with the Southern African Customs Union (SACU) negotiated in November 2002 (just past the height of the danger) includes the strategy to "eliminate… unjustified trade restrictions that affect new USA technologies" and "seek to eliminate SACU country practices that adversely affect USA exports of perishable or cyclical agricultural products" (Goodwin, 2002). The language seems to indicate GE technologies, or at the very least, to include biotechnology under this rubric. International GE food aid legislation need not be violated if biopower's lawyers can make the rules.

The increasing tendency of states to harness economic commodities as weapons of war is more generally constitutive of international "friendships" and rivalries. Peter Wallerstein argues (1976) that food is used as a political weapon by the US. He writes that, "economic commodities, just as military weapons, can be used to *punish* enemies and *reward* friends" (278). However, economic commodities can hold a kind of power that military weapons cannot necessarily. A power that might be described as biopolitical: "The economic weapon cannot achieve such direct killing [as military weapons]. Economic commodities are, however, necessary to maintain life and give life a material form. Thus, by denying access to food, life can be threatened. If 'effectively' applied, economic commodities can be as disastrous to human life as military weapons" (1976, 277).

USAID is a model organization for building such strategic friendships.[21] USAID is one of the supporters of the International Service for the Acquisition of Agri-biotech Applications (ISAAA). Though focused on Asia, ISAAA now has an AfriCenter at the regional office of the International Potato Center on the campus of the International

Livestock Research Institute in Kenya (Kuyek, 2000). Kuyek reports that, "through the formation and support of key local elites, ISAAA is helping carry out an agenda set by transnational corporations (TNCs), in the name of Asia's rural poor" (2000). One of the key ways that ISAAA works is through the creation of an advocacy elite, in the words of Kuyek, "to create the regulatory environment for the successful introduction of corporate biotechnology from the North. In the process, these experts are expected to dampen social concerns and public dissent emerging at the local, national or regional level" (2000). How is this done? Kuyek quotes ISAAA's own words: "By arranging for senior policymakers from developing countries to share views with business leaders of private corporations, ISAAA helps to generate the trust, confidence, and cooperation that will integrate developing countries into the agri-biotech revolution" (ISAAA, 1999, p.7).

The last point I want to make about biopower and GE food aid concerns the intervention of scientists "into nature." This has been one of the most important sites for the application of biopolitical theory: the capacity of scientists to control the production and reproduction of plant, animal, and plant populations through the manipulation of genetic materials. However, left unsaid in Foucault's work is a theory that proposes to deal with humans' relationships to nature or to objects within fields of power. I hope that Heidegger's work can deepen our understanding of what is at stake in the normalization of these relations that GE seeds portend. Until now I have looked more generally at the technologies of control implemented at a diffuse macro-level, designed to shape norms by which we understand and endorse the "improvement" of African's lives. I want now to examine the ways GE seeds, by virtue of their *techne*, or technology, shape the perception that the bios can be improved through this genetic micromanipulation and the impacts of such assumptions.

Heidegger distinguishes modern technology from older forms by describing the different ways we see the world through them. He compares *poesis*, which refers to a knowing that derives from being at-home with something, an opening, a craft, to another kind of ordering of things. This other kind of ordering which *sets upon* nature. This setting upon is expedited in two ways, the second of which I would like to bring to light here. At labs that produce GE seeds – sucking nuclei out of fish with needles and shooting them into tomatoes, for example – we find nature as *standing-in-reserve*

(*Bestand*) and this ordering, or setting upon, transforms everything, everywhere, including ourselves who do the ordering, into armies of resources, mere objects. This is the truly hegemonic aspect of the normalization of nature, for as Heidegger theorizes, the eclipse of *poesis* and other forms of knowing are what is here at stake.

Embedded within GE seeds, I want to argue, are the socialities and worldviews of a particular culture, or historical rationality.[22] By exporting these seeds as aid, this worldview of nature as standing-in-reserve is normalized, as resistance becomes tired or weak against the enormous forces of international economy and market relations. This normalization paves the way for legislation, and Africa is open for biotech business. GE seeds are, in effect, a "gateway" product: they are biologically (or biopolitically) symbolic and material at once: despite the transfer of seed possession from the US to Africa, the seeds can be planted and re-planted and will continue to bear the mark of the donors as they can be genetically identified and traced back to their patent-holding owners. This symbolism is a sign, or a colonial flag dug into the earth, that demarcates the territory beneath.

8. Excess of Biopower and the Threat to Food Sovereignty

Food is a key part of culture, and the neoliberal agenda is destroying the very basis of our lives and cultures. We do not accept the hunger and displacement. We demand food sovereignty, which means the right to produce our own food... The patenting of life forms, which gives private ownership and control over genetic resources and even human genes, is absolutely unacceptable. We will not cede the ownership of our common heritage and the basis of all of our lives to the transnational corporate sector. This is a peasant struggle for all of humankind (Via Campesina, 2000)

The control of nature, or attempt *to* control nature, is one of two points I want now to make about the potential excesses of biopower that GE food aid represents. The Gene Revolution's predecessor was the Green Revolution, of which the ecological fall-outs have been well documented, most famously by Rachel Carson in her book *Silent Spring*. Though it is still early to tell, there has been plenty of anecdotal and scientific evidence to cause alarm over what the ecological and health impacts of GE seeds will be on the earth and to animals (see endnote 18 for more examples). One thing is for certain,

ecological fall-outs will impact everyone on earth, regardless of who first designed and "made" the seeds.

However, there is a trap laid here into which we must be careful not to fall. To focus our critique on the potential ecological dangers of GE seed technology that is exported around the world is to participate in another form of biopower. Chaia Heller, whose work deals with the anti-GE campaigns in France, warns of the problems with the risk discourse approach to GE: "(T)he risk rationality that dominates discussions about GM foods is a product of *riskification*: the social production of beliefs, practices, and discourses that recast 'natural' and institution-driven dangers as a set of statistically calculable, insurable harms assumed necessary for social progress. Through riskification, actors come to regard categories of self, nature, and society as fields of potential liabilities and benefits to be understood through cost benefit analysis" (2001a, 25).

Heller proposes instead a different framework to understand what is at stake with biotechnology:

> Stepping outside the parameters of a 'risk rationality,' particular publics within French society have framed science questions within a 'rationality of sociality' that evaluates them in relation to potential impact on social fabrics, meanings, and quality of life (rather than potential risks and benefits) (2001a, 25).

Bringing to bear a way of being onto the problem of weighing the risks and benefits of GE foods allows these particular French publics to open up and thicken the discourse around risk to include more substantive questions of the public good in the debates. Heller wants to politicize the biotechnology debate: "A movement that challenges biotechnology is a movement that challenges a world. It provides a critique not only of a particular science practice, but of a *society* that constitutes and is constituted by that practice. But more than critique, it proposes a better world" (2001b, 418).

Too much of the biotech debate has been mired in questions about scientific risks and are lacking attention to these other aspects of the issue.

This leads me to the second instance of an excess of biopower: the eclipse of worldviews. We can see how the gradual normalization of treating drinking water has led to the wide consumption of bottled water, for example, which now makes sense to us

in a way that would not have at one time. We do not drink out of rivers, or even swim in many of them anymore. It would not be surprising to learn that resistance to GE foods is also weakening in the west after years of consumption and corporate persistence. All of the biopolitical statistics mobilized and plaguing us may eventually be too powerful to resist. Those who can afford to shop organic may seem to have the only possible victory, and yet even Green Capitalism may not prove a great challenge to seeing nature as everywhere standing-in-reserve.

This leads me to my two points about whether these excesses pose a threat to the food sovereignty movement. I will have to concede that both forms I've mentioned do pose possible threats, but I also want to assert some ideas on grounds for potential resistance to these excesses. The first point is on epistemology, the second relates to network power; both speak either directly or indirectly to the food sovereignty movement.

"Epistemological resistance" or "counter-hegemonic globalization" is the key to addressing the eclipse of worldviews. As de Souza Santos writes: "Science is doubly at the service of hegemonic globalization, whether by the way in which it promotes and legitimates it, or by the way in which it discredits, conceals or trivializes counter-hegemonic globalization... [The] alternative is grounded on two basic ideas. First, if the objectivity of science does not imply neutrality, science and technology may as well be put at the service of counter-hegemonic practices. . . Second, whatever the extent to which science is resorted to, counter-hegemonic practices are mainly practices of nonscientific knowledges, practical, often tacit knowledges that must be made credible to render such practices credible in turn" (2003). But, how can traditional knowledge compete with market logic? I will leave this question for now until the last chapter.

The second point I want to make about resistance to the excesses of biopower concerns network power. International food aid cannot be resisted in only one node in the network of biopolitical power that I have presented. Here I would like to invoke James Tully's work on "democratic communicative action," where he argues that "social action will be critical and effective only if it is based on an understanding of, and relation to, the specific relations of communication and governance in which it is situated" (2004, 16). The networks of biopower that I have laid out – international conventions, non- and

intra-governmental institutions, the direct participatory decision-making processes of Zimbabweans and Zambians, consumer protest – indicate to me that "direct democratic communicative action is the fitting response to the compressed time and space of network communication and decision-making, as it too can be mobilized instantaneously and across the multi-jurisdictional global space of network effects" (2004, 18). What this democratic communicative action means concretely for the food sovereignty movement is already illustrated to some extent by the structure of the organization.

The food sovereignty movement is both a local and global movement that is constituted by tight social clusters and global networks, but that has no national borders. *Via Campesina*, an international coalition of small farmers and peasant groups, first articulated the demand for food sovereignty in the Bangalore Declaration (2000). Many more small farmers, educators, activists, and citizens independently either identify directly with the movement, or can be shown by their practices and discourse to align with the cause. Food sovereignty demands the right of people to define their own food and agriculture policies, to protect and regulate domestic agricultural production and trade, to decide the way food should be produced, what should be grown locally and what should be imported. It is my hope that the excesses of biopower posed by GE food aid can be met with this virulent form of outward resistance. In the next chapter, I would like to explore the means by which people around the world are trying to make this happen.

CHAPTER 4

Food Sovereignty as Resistance to GE Food Aid in the Age of Biopolitics

We destroyed the old world of the farmer without anything of value to take its place – all exchange value is now commercial – when you privatize everything, when you mandate the destruction of farming…When you enforce market fundamentalism on unwilling millions, that's when farmers die…

P. Sainath, *When Farmers Die*

Capital no longer has any interest in being the owner of land. Now they want to make bio-diversity, water, and seeds their private property. And the result is that they use bio-technology as a way of increasing the exploitation of peasants and a way of increasing the productivity per acre. If this agrarian model of capital is consolidated, millions of peasants throughout the world will be dislocated...

Via Campesina Bulletin

1. Introduction

It is a seed, a leaf, a flower, a fruit, and then a seed again. We all live dependent on this process, some more directly than others. Dependent not only in being fed, clothed, and sheltered by plants, but dependent on plants as carriers of our stories. Did you know that the dandelion is named for its jagged leaves, which resemble a lion's teeth? Did you know that the Iroquois tell that Falling Woman landed on earth with the seeds of corn, squash and beans beneath her fingernails? In Nigeria they call their farmers "little gods." In the highlands of Guatemala, the Mayas call the corn "our mother" and before they plant it, they have to go to the field to give thanks and ask permission from the land. In South Africa, land is considered a gift from God and from the ancestors. Cultural practices relating to food production and consumption have been central to preserving and transmitting to future generations local ecological knowledge, social institutions, ethnic identity, and spiritual teachings.

Food practices of indigenous peoples worldwide evince an extraordinary body of knowledge passed down orally over generations, and these practices have been increasingly threatened by a widespread transition from locally produced and prepared food to the consumption of marketed, globally sourced, refined, and processed foods. Indigenous food practices are tied inextricably to sustaining ecological health, often through food taboos, prohibitions, and spiritual teachings that impart a respect for the integrity of the earth and its lifeforms. These complex forms of knowledge and socialities represent a worldview that integrates and informs community organization based on direct dependence on the natural world.

Food sovereignty is a global peasant movement united in a struggle against neo-liberalism and the destruction of local food systems. Recognizing the centrality of food to their cultural, ecological and economic survival, South Africa's Landless Peoples Movement is a member of *Via Campesina*, a global network of small-scale farmers that develops and promotes the concept of food sovereignty. Dr Tewolde Berhan Gebre Egziabher, Director General of the Environmental Protection Authority, Addis Ababa, Ethiopia, believes that US actions of sending GE food aid to Africa are intended to send a strong and aggressive message to them to desist from efforts to establish a Biosafety Protocol that would provide a legal basis on which to protect food sovereignty. Egziabher also suspects "that Africa is high on the agenda for the US' next push for GM acceptance." It is neither lost on him how the US' "official stories" are hurting Africans: "We resent the way that the stereotyped image of the hungry in developing countries has been used to force a style of agriculture that will only exacerbate problems of hunger and poverty" (Egziabher, 2003).

It is neither simply the imposition of GE food aid that is contested here and seen as a threat to food sovereignty, but the very idea of patents on life:

> We reject the patenting of living things, as has been made clear by our negotiations in the WTO. Otherwise, Article 34 of TRIPs [Trade Related Intellectual Property] would, in combination with the natural processes of cross pollination, not only contaminate our crops, but also turn our farmers into patent infringers. This would remove control of food production into the hands of multinational corporations, thereby wresting away food sovereignty into the hands

> of these companies. Besides paying royalties, we would lose food sovereignty (Egziabher, 2003).

But if GE food aid is a war by other means, the Biosafety Protocol is just one defensive weapon. Food sovereignty itself is another.

The conventional responses both to the world hunger crisis and to the corruption of politically motivated food aid has been the promotion of "food security," which is based on the ideal that no one on earth should have to go without food. However, 35 years after participants at the first world summit on hunger committed to halving the number of starving the world by the year 2015,[23] and nearly 10 since the follow-up summit, and the crisis has not abated.[24] Peter Rosset of *Food First* explains why the ideal of food security has failed to improve the lives of the hungry: "Food security means that every child, woman, and man must have the certainty of having enough to eat each day; but the concept says nothing about where that food comes from or how it is produced. Thus Washington is able to argue that importing cheap food from the US is a better way for poor countries to achieve food security than producing it themselves. But massive imports of cheap, subsidized food undercut local farmers, driving them off their land. They swell the ranks of the hungry, and their food security is placed in the hands of the cash economy just as they migrate to urban slums where they cannot find living wage jobs. To achieve *genuine* food security, people in rural areas must have access to productive land and receive prices for their crops that allow them to make a decent living" (2003). Rosset concludes that food sovereignty goes beyond the concept of *food security*, which has been stripped of real meaning.

The failures of the food security strategy are the reason why GE food aid must be met, not only with critiques of advanced capitalism and the development regime, but also with a reconstructive vision to the dominant narratives of improvement. The policies proven most effective for addressing world hunger have been those that emphasize the need for affected countries to develop their own agricultural sectors, which helps to decrease the dependency of foreign aid in the long run (Mittal, 2005). The recent report, *Food Aid or Food Sovereignty?* (2005) published by The Oakland Institute emphasizes, both at the national and international level, "the need for supporting small farmers through strong agricultural policies including land redistribution, support for the production of staple food rather than cash crops, protection of prices and markets, and the

management of national food stocks." Food sovereignty demands such attention to the analysis of hunger, which must not ignore the context of colonialism and neo-liberal policy.

In this chapter, I do not intend to focus on only Africa and African food sovereignty, but rather to broader the scope of my thesis here to include the global food sovereignty movement, of which Africa is only one part. Since the movement is precisely defined by its alliance of memberships, and since GE food aid affects countries around the globe, this seems to be an appropriate approach to understanding resistance to globally circulating discourses of improvement.

I want to look at the food sovereignty movement in the context of three dominant narratives of improvement. The first narrative is the Lockean/development discourse of improvement that seeks to justify overcoming of indigenous consent to land appropriation by arguing that plant productivity and world trade are the greater good for all of humankind. The second improvement narrative is the biopolitical story where the terms and technologies of improvement are controlled at the level of norms, exercising control over the population as a whole. The third narrative, which I want to introduce in this chapter, is that of *value-added* improvement, which is realized through the technologies of grades, standards, and certification, and which positions itself as a response to social movements' aforementioned criticisms of improvement.

I want to argue in this chapter that the food sovereignty movement contests the political centrality and borders of the state (and in some sense, the city) by articulating a new vision of citizenship and identity that focuses on a relationship – not to ethnic or national identity, nor just to one's own geographic location – but to food production practices. The food sovereignty movement embodies a form of sovereignty, both *immanent* within citizens (as rooted in the land and regional communities), and *global* (in relation to the international movement for food sovereignty). Perhaps this movement has opened up a new way of thinking about politics.

I would also like to point here that my interpretations and understanding of the food sovereignty movement are mine alone and that I do not claim to represent the movement in its remarkable diversity. I speak in the capacity of one engaged in sideline

participation, scholarly analysis, and personal correspondence with members, and through reading public documents.

To pursue an understanding of the relationship of the food sovereignty movement to the three narratives of improvement I have listed above, I propose to conduct my examination in the following way: in the first section, I will introduce the organizational structure and principles of the food sovereignty movement. In the second section, I will survey some features of the relationship between local autonomy and global sovereignty and the ways in which the language of improvement may be reclaimed through this political movement. I will also address some of the theoretical problems that may arise around issues of local autonomy and the ambivalence of "sovereignty" as an oppositional posture. In the next section, I will be re-visiting the relationship between biopolitical forms of control and the food sovereignty movement, again raising theoretical concerns about a movement that may not necessarily be able to stand outside of the power structures it seeks to critique. In the next section, I introduce the "third improvement" discourse, which is the "value-added" discourse, powered by ideals of "quality" and measured by grades, standards, certification, and traceability. Next I will survey the relationship between national and international food programs, and finally conclude with a discussion of "ruralism as a form of life": an ontological resistance to the archaeology of improvement.

2. The Food Sovereignty Movement

The concept of food sovereignty was developed by *Via Campesina* and brought to public debate during the World Food Summit in 1996. Presenting a peasant critique of neo-liberal policies, the concept of food sovereignty has become a major issue within the international agricultural debate, including within the United Nations bodies; it was the main theme of the NGO forum held in parallel to the FAO World Food Summit of June 2002. As well, the fourth international conference of *Via Campesina* took place in Sao

Paolo, Brazil, from 12 to 19 June 2004 under the slogan, "Organize the struggle, land, food, dignity and life."

Food sovereignty articulates a defense against the global interventions of neo-liberal agribusiness by privileging a way of life that is connected to the local environment and to practices of collective self-determination, such as seed saving and communal land ownership. Food sovereignty is seen, in contrast to the corporatization of the food system, as a political entitlement to land, seeds, and knowledge for those who engage food production and consumption as a whole social, ecological and spiritual *form of life*. As I wrote in the conclusion to my last chapter, food sovereignty proclaims the right of people to define their own food and agriculture policies, to protect and regulate domestic agricultural production and trade, to decide the way food should be produced, what should be grown locally and what should be imported. Crucially, it is also the recognition of women farmers' rights, who play a major role in agricultural production and in food. The proclamation for food sovereignty and the opposition to the patenting of seeds have been central to the small farmers' struggle all over the world for the past decade.

This is not to say that food sovereigntists are against trade, but rather they are against the free market system of monopoly capitalism. The National Farmers' Union, Canadian members of *Via Campesina*, put it this way:

> Because agricultural policy is defined more and more at the international level, farm leaders are forging alliances with like-minded organizations around the world. The *Vía Campesina* emerged in direct opposition to the globalization of an industrialized and liberalized model of agriculture promoted by the WTO and regional free trade agreements. By forming the *Vía Campesina*, progressive farm leaders gathered together to build an alternative model of agriculture. In that alternative model, agriculture is farmer-driven, is based on peasant and small-holder production, and plays an important social function while at the same time being economically viable, socially just and ecologically sustainable (2003).

The food sovereignty movement is both a local and global movement. It is constituted by regional, autonomous groups and global networks, but has no national borders. The Via Campesina website states that the food sovereignty movement is "an autonomous, pluralistic movement, independent from all political, economic, or other denomination. It is integrated by national and regional organizations whose autonomy is respected" (Via

Campesina website).[25] *Via Campesina* is organized in eight regions as follows: Europe, Northeast and Southeast Asia, South Asia, North America, the Caribbean, Central America, and South America and Africa. The group organizes through the network structure of an International Coordinating Commission (ICC) of 14—with two representatives (one man and one woman) of peasant and farm organizations from each of the seven Vía Campesina regions.[26] The means of collective self-determination within each region and sub-organization differ according to those particular groups' needs and philosophies of action. This is a movement that considers the means by which social change unfolds to be as important as the ends, and further, that the means are determinant of those ends.

A common opposition to neo-liberalism has united the peasants and small and middle-scale producers, agricultural workers, indigenous communities from around the world. During the 4th International Conference of Via Campesina, João Pedro Stédile, of the national leadership of Brazil's Landless Workers Movement (MST), began his speech about the tendencies of capital and the challenges of the peasant movement, stating that, "As the methods of exploitation are internationalized, they have also created a common enemy for all the peasant movements. And this makes our struggles and demands common as well. We have to think in a new agrarian model that does not only restrict itself to day-to-day demands" (*Via Campesina*, 2004). What would these new agrarian models look like?

One way to approach this question is by understanding the authority that legitimizes this form of sovereignty and how it differs with or is modifying relations to the state. This authority appears to be twofold: it is derived, first of all, by its collective determination – it demands that the world yield to a worldview valid on its own immanent terms, based on a practice, or form of life.[27] It is also a political arrangement that may ultimately call on more traditional kinds of political recognition, including state recognition, legal rights, and demands for institutional reform of multilateral and bilateral conventions and bodies. Of course, there are other competitors in the political contest against the state and multilateralism, including movements for corporate autonomy, imperial hegemony, and transcendental religions. I want to argue that the food sovereignty movement also positions itself against these other competitors, as well as

against the corruption of the state. Food sovereignty, unlike many of its competitors, has no claims of authority *over* people, but rather extends *from* the people.

The movement raises many questions, many of which can only be answered with time and further reflection and practice. As one commentator succinctly put it, food sovereigntists must "show what alternative rules and structures can look like. But it isn't enough to counterpose 'local autonomy' to global neoliberalism. Ecologically sane and socially just alternatives also require support & coordination beyond the local level, including economic linkages among produce/consumers and support from municipal, state, national, and transnational institutions. What kinds of linkages, structures, policies, institutions are needed to support local self-determination and sustainability?" One place to begin to try answering these questions is by locating the local and understanding how a movement can claim to be both locally autonomous and united in global sovereignty.

3. Local autonomy and Global Sovereignty

One concerned but sympathetic food activist put it best when she recently asked about the food sovereignty movement, "Sovereignty for whom? Over what? At what levels?" If the Lockean/development improvement discourse operates on the logic of "better for all humankind," then perhaps the food sovereignty movement can too. In this section I want to show the ways that small farmers and peasants in the food sovereignty movement can challenge the Lockean/development discourse of improvement with their own ideas of what constitutes as beneficial and economically secure to their well-being, and to the wider benefit of their allied communities and humankind.

The conception of sovereignty in "food sovereignty" differs in important ways from classic European formulations of sovereignty, where it signifies a higher authority, such as the law or God. Rather, food sovereignty is grounded in the everyday practices of people. So we can think of the language of sovereignty invoked here in some sense as being a defensive posture: it is a language that speaks in the dominant vocabulary in order to best communicate its refusal. But it is also a different language game, or a new grammar, of the concept of sovereignty.

However, despite efforts politicize the language of sovereignty in new ways, using this language defensively can have its disadvantages. Karena Shaw warns of the dangers of deploying claims of/for sovereignty as an oppositional tactic for indigenous peoples. She writes: "The discourse and practices of sovereignty as deployed by indigenous peoples continue to reproduce this architecture as articulated by Hobbes: they continue to rely on the production of shared ontologies, expressed as identities-in-difference, as the condition of possibility for claims to legitimate authority" (2004, 167). However, she submits that, "The problem for indigenous peoples is less sovereignty *per se*, than the refusal of those who have benefited from it to seriously engage it as a problem, rather than assuming it as a solution" (2004, 167). A sovereignty movement that is recognized by the world and those who have "benefited from" its suppression, such as food sovereignty, will only be meaningful then if it is understood as a challenge to colonialism and the politics of boundary-making.

Leaning heavily on Hobbes' understanding of the term and the ontological formulation of his conception, Shaw defines sovereignty as: "the discourses and practices through which political authority has been constituted and legitimated, particularly, at least since early modernity, in the form of the sovereign state" (2004, 166). Shaw concludes: "Sovereignty remains at best an ambivalent discourse for marginalized peoples, deeply embedded as it is in an ontology that assumes and reproduces their marginalization" (2004, 165).

The "local" runs us into similar theoretical problems of identifying particular communities as homogenous entities, or worse, defining "community" as such. Many theorists and activists today equate notions of community control and local autonomy with *democracy*. The political philosopher Iris Marion Young expresses a strong aversion to what she clearly sees as a misleading *conflation* between community and democracy, complaining that, "Whether expressed as a shared subjectivity or common consciousness, on the one hand, or as relations of mutuality and reciprocity, the ideal of community denies, devalues, or represses the ontological difference of subjects, and seeks to dissolve social inexhaustibility into the comfort of a self-enclosed whole" (Marion-Young, 230). In other words, it is difficult to talk about a unified community belonging until we understand or accept as problematic the kinds of inequalities and

contentious worldviews that people enter into these public discussions already embedded within.

Young is primarily concerned here with an urban ideal of community, however, the discussion is most relevant where she imagines these urban city councils linked up across space. She laments that, "[Community] implies a model of the good society as consisting of decentralized small units which is both unrealistic and politically undesirable, and which avoids the political question of just relations among such decentralized communities" (233). She continues: "The model of the good society as composed of decentralized, economically self-sufficient face-to-face communities does not purify politics, as its proponents think, but rather avoids politics" (223). Young worries that these meetings in themselves are meant to ensure democracy, but can avoid the questions of how to minimize domination and oppression in society.

Rather, for Young, "Politics must be conceived as a relationship of strangers who do not understand one another in a subjective and immediate sense, relating across time and distance" (234). But Young's description of politics is limited in significant measure for our purposes here. Her analysis is not intended to address the rural and the particular circumstances of a community *defined* by interest, rather than *divided* by interest. Common interests need not imply a homogenous society, either, but rather can form the basis for debate. The World Social Forum has undergone similar criticism, for being unable to positively identify common strategies, although participants are united in their opposition to neo-liberalism. Some have argued that a movement with one "no" and millions of "yes"es is a strength of the organization, rather than a liability. However, Young's critique of the local flags a critical issue for an examination of an alliance such as the food sovereignty movement, which is the caution to always politicize the relations of power between members.

Perhaps it would be more helpful here to ask, what does the local mean specifically to the food sovereignty movement? One answer is the seed. Seed saving is central to the food sovereignty movement. For example, in a small village close to Tangail in Bangladesh, a grassroots NGO called UBINIG "has as its main objective to promote 'Nayakrishi Andolon ', which literally means 'new agricultural movement'" (GRAIN, 2005). The 'Community Seed Wealth Centre' there, containing hundreds of

preserved seed varieties, is simply the "tip of the iceberg" according to local women: "Hundreds of communities in many different parts of the country use the seeds every season, keep them safe in their homesteads, and a sophisticated exchange and monitoring network of the villagers ensures that at any point in time thousands of different seed varieties are being grown and kept alive, somewhere" (GRAIN, 2005). Members of the international NGO GRAIN met in this town and took the opportunity to ask their hosts what they understood by food sovereignty: "One of the women pointed to the seed centre behind her, smiled, and simply said: 'this'."

Local autonomy is central to the food sovereignty movement, and seeds are in turn central to local autonomy. This plays out in terms of space, social customs, politics, ecology and also defines the kinds of global relationships and networks that farmers share around the world:

> The first space in which peasants identified the transformative power of food sovereignty was, of course, the local space. This is where the farmers have their roots, and where the seeds that they sow grow their roots. It is here where food sovereignty acquires its most central dimension. It is also at this level that strategies and actions are formulated and developed; from the fight against pesticides by the women in Paraguay, to the seed networks in France, Spain and Italy and from the peasant cooperatives ' initiatives in Uganda, to the rescuing of traditional medicine by the indigenous peoples of Chiapas. It is in the spaces where local communities are creating autonomy based on their own needs, beliefs and timelines that food sovereignty acquires real meaning. It also acquires a common understanding that allows peasant communities from different parts of the world to appreciate - and identify themselves with - each other's struggles (GRAIN, 2005).

Local space is "where the farmers have their roots, and where the seeds that they sow grow their roots" and it is the place from which global movements take root: in the diverse coalition of a multitude of local autonomies.

The food sovereignty movement is not unwilling to rely on the defenses of national sovereignties to wither attacks from international trade. However, this reliance must occur critically, and recognize the role of corporate capital in state sovereignty. For example, at the 4th *Via Campesina* conference, MST leader Stédile emphasized that it is necessary to think of a new role for the State. "Our movements must defend national

sovereignty and the role of this other State, which is the only power of the people that can make changes and help build a more egalitarian society. We have to unite to confront the international organizations and the agreements that they make, which represent the interests of capital" (*Via Campesina*, 2004). This cry for the strengthening of national sovereignty, when taken in the context of agrarian demands, is a fight to modify the state to protect against imperial hegemony and corporate autonomy, but also to transform the role of the state so that it is more accountable to the demands of people's movements.

There is also some sense in which food sovereignty represents a kind of ecological sovereignty, where the farmers speak for nature. The environment flows across and past community borders and property lines; like the food sovereigntists, the environment transcends national borders and therefore must be the shared responsible of networks of communities, which for example, a river may run through. Although there is much to be critical of in terms of the ecological damage wrought by agricultural landscapes, traditional versus conventional farming operates on a different set of practices and philosophies that are useful to outline here. Often referred to as Traditional Ecological Knowledge and Wisdom (TEKW), TEKW represents, "Practices of aboriginal people to maintain and enhance their lands, waters, and living resources [*sic*] derived from generations of experimentation and observation, leading to an understanding of complex ecosystems and physical principles" (Turner, et al, 1999, 1276). The earth is not considered to be merely the property of those currently tending to its guardianship, but rather it is to be managed with respect for the future generations (7 generations), as a common heritage (Turner, et al, 1999). Two central aspects of this ecological management and social practice are kin-centricity or "animistic" worldviews (Hunn 1999; Salmón 2000), and following that, a belief in and deep respect for the spiritual interconnectedness of all things" (Turner, et al, 1998).

Although there exist differences among nations, and between indigenous peoples within nations or tribes, a common position among indigenous people globally is often indicated where matters of ecological health are concerned. For example, a questionnaire was developed by the International Indian Treaty Council (IITC) to elicit responses from indigenous peoples around the world focused in part on the relationship between traditional cultural practices and food systems. There were 128 respondents from 28

countries or states around the world. Findings showed that despite massive heterogeneity among participants, a common position upheld by indigenous peoples was the essential connection between traditional subsistence foods and practices to the maintenance of their respective community's culture. Biotechnology (including genetically modified organisms, or GMOs) was cited as a current practice that results in negative impacts to their communities' traditional foods and food practices (IITC, 2003).

I want to mention briefly one other sense in which the concept of food sovereignty signals an immanent politics, or a way of conceiving the local that challenges global agribusiness. This feature lies in the concept of *time* inherent to farming communities and at odds with market logic. While family farming was slow to industrialize due to social and biological reasons -- family-based labour structure; regional and national public breeding programs; seasonal business cycle; climate; and spatial dispersion – first the hybrid, and now the GE seed helped capital overcome these barriers. By taking away farmers' ability to save seed and designing food systems on a factory model (of international proportions), corporations have externalized their business risks onto farmers, leaving the vagaries of the market up to them to negotiate, while they have the capacity to "shop the world," buying cheap and selling dear.

Unlike market swings, the biological vagaries of the farm are *seasonal*. Seasons, of course, are signified by particular weather conditions into which the year is traditionally divided. Market logic expands and compresses time such that time doesn't *mean* in the same way to farmers as it does to transnational corporations. For a transnational corporation like Cargill, tomatoes are always in season somewhere, but to a farmer, tomatoes grow when the conditions are right; they are part of an ecological rhythm of life. For transnational capital, the faster a product can be turned around, the more money can be made. In other words, time is essential for farmers in a different way because time is cyclical: agricultural time is about the *reproduction* of the means of production, not the production of surplus capital. Here we have an important modification to Marx's theory of capitalism – as markets expand *inward*, within seeds, one does not have to own the means of production if the reproductive technologies can be mastered and owned.

The seasonal concept of time is not just antithetical to market logic, however. Henri Lefebvre draws our attention to the ways that market logic is urban logic, and captures their concurrent development this way: "Agricultural production and the peasant's relationship with nature give rise only to a cyclical image of time, which has no sense (direction), or rather, no other sense (interpretation) than that of the Great Year and the Eternal Return. As the image of a time that advances toward a final outcome or a cosmos that is harmoniously arranged within a luminous space, the City imposes its mark on thought" (Lefebvre, 2003, 104).

4. Biopolitics of Improvement and Food Sovereignty

Reflecting on the meaning of biopower today, Foucault scholars Nikolas Rose and Paul Rabinow express disappointment regarding the current scholarship on sovereignty in the biopolitical age (2003). Focusing on the most widely known of these theorists, Hardt and Negri (*Empire*, 2000) and Georgio Agamben (*Homo Sacer*, 1998) they find that these theorists' tend to generalize biopower and its impacts on sovereign forms of control, rather than focus on specific substantive claims, thus rendering the concept "totalizing and misleading". They find that due to these generalizations of the "biopolitical nightmare," these thinkers' depictions of resistance end up ultimately taking transcendent forms, since the only solution to the vague, yet all-encompassing threat of biopolitical sovereignty must be met with an equally inclusive, therefore generic or unhelpful, tactic or belief system.

Hardt, Negri, and Agambens' transcendent or universalizing forms of resistance to "biopolitical sovereignty" move in precisely the opposite direction from where I want to place food sovereignty. I hope that in my previous chapter I have shown the limitations and potential for GE food aid as "biopolitical sovereignty" to outpace or usurp the food sovereignty movement. Now I want to look more closely at the particular forms of resistance food sovereignty offers and to explore in greater depth the forms of autonomy it may embody. The only way to avoid "totalizing and misleading" generalizations of food sovereignty is to attempt as best we can to lay out empirical data

that we come across, accepting each piece as a local sign of a particular aspect to the whole.

I want to begin by trying once again to get at the biopolitical nature of seed commodification. Bradley Bryan recently gave a talk at the University of Victoria, entitled "Bioethics and Legality," where he brought together the way we talk about the world with the way the world unfolds in space and time (2005). Bryan drew on the Wittgensteinian concept of aspectival knowledge, or the "as" structure of seeing and acting in the world, to describe how the two cannot be separated by representation. An example he gave to explain this point was the ritual of marriage: to say "I do" is in effect to act out a commitment. It enacts the meaning itself and is not simply a performative utterance. The politics of life itself is a whole way of seeing the world; our politics have the power to organize the very biological foundations of life. When we talk about the ownership of seeds, we are invoking a way of seeing the world that frames nature as standing in reserve for our consumption. If we describe seeds in terms of their genetic properties, we fail to take in how we are ordering the world through this language – a world of atomized particles floating around only to occasionally collide and react.

What is the danger of seeing the world in this way? I have already briefly sketched a Heideggerian critique of these dangers in the last chapter. However, there is another way we could frame the problem that I want to mention here. If we think of seeds in the way that Haraway thinks of dogs in the *Companion Species Manifesto*, we are forced to recognize ourselves in the lives of plants (2003). The technologies of seed selection, such as the legacy of breeding and training dogs, that have helped humans gain a degree of balance or security within the uncertainties of the natural world, connecting us beyond our lifetime to the knowledge of previous generations, are lost in monocultural production. In a sense, Haraway suggests that we see the world through our inextricable relationships to other things and people, such that the "self" and "other" blur. In this sense, by recognizing how humans are mutually constituted by their seeds, food sovereigntists can challenge those religious traditions that seek to justify usurping state sovereignty to control or shape agricultural policy, or to promote a technologically-driven food system.[28] Spiritual traditions that are connected to the earth not through doctrinal

readings of the good life, but through practice, answer to what works best for the community, not for an abstract ideal or arbitrary authority.

In my last chapter, I tried to show how food sovereignty could theoretically overcome some biopolitical challenges. But I want to address briefly here a series of problems that present themselves when we try to understand social and political practice as "immanent." For example, being an immanent form of sovereignty, how can food sovereignty be distinguished from the norms circulating through the social body, introduced at the level of generalities and therefore shaping subjectivities at a broad, social level? Could food sovereignty be an inadvertent inward turn -- the internalization by peasants of downloaded public responsibility for the rural economy -- rather than an oppositional social movement? The "Third Power," so to speak, of the agrarian world?

While it is easier to pinpoint uneven fields of world market operations, between transnational agribusiness and global peasantry, structures of domination may also be produced through power relations generated and perpetuated at multiple levels of society through our *freedoms.* This must always be a central concern as we try to approach critically the sources or particular articulations of political desires and demands. As Clarissa Hayward writes in *De-Facing Power* (2000), "Power relations approximate states of non-domination – that is, they promote participants' freedom – to the extent that they enable all participants to effectively take part in making and re-making their terms, and enable participants to act upon *all* key standards, ends, and other boundaries comprising them. Power relations approximate states of domination to the extent that they avoidably exclude some actors whom they position from the processes through which they are made and re-made, and/or impose patterned and enduring restrictions on the scope of 'action upon'" (166). Since we are always already within these relations of power, and biopolitical powers are exercised through the management of norms, it seems impossible to understand ourselves *outside* of power in a place that could be considered *oppositional.* Even the growing recognition of food sovereignty now being taken up at all levels of government internationally will surely (and paradoxically) compromise and circumscribe the movement when governments seek to institutionalize, subvert and co-opt the movement's demands.

But now we have a broader problem that my thesis raises or must confront, and that is the discrepancies between GE food aid as a project to violate the consent of indigenous peoples and GE food aid operating as a form of power that bypasses the need for consent by prefiguring indigenous responses' through structuring the field of possibilities for them in other ways, rendering the need for consent obsolete. Many thinkers have described this -- alternatively as a problem or as a cause for celebration -- as the death of the liberal subject. These are questions that will have to remain unanswered here, but are issues that require future consideration.

5. The Third Improvements

> This contamination of food aid has arisen because the US government has failed to ensure identification, labeling and segregation of GM varieties. Since the release of commercial GM seed varieties in 1995-96, plantings of GM corn and GM soya have risen to 40% and 80% respectively of the total US crop in 2003. As these grains and their derived oil are principal ingredients in US food aid shipments, the food aid pipeline from US farms to Africa has become increasingly contaminated.
>
> Patrick Mulvany, *The Dumping Ground*

> Added to [grades, standards, certification, and traceability] are an endless gamut of other quality measures and tests, in a process referred to by the industry as "decommoditisation."[29] These measures have expanded exponentially in number to provide for rapidly multiplying end-uses associated with a market that is fragmenting along a number of axes, including class, geography, and markets that seek special characteristics pertaining to just one portion of the grain's biochemical properties.
>
> Kevin Walsh, *The Commoditisation, "decommoditisation", and commodification of corn*

Harriet Friedmann theorizes that there is a new food regime coming into sight as a result of social movements demanding "food security" in response to the major world food crisis in the seventies (2004). These demands bifurcated in the directions of food sovereignty and trade liberalization leading to what she terms the *corporate-environmental* food regime, or the "third food regime." The corporate-environmental regime responded to social movements' demands, for example, for organic food, which

was desired by a new generation made increasingly aware and concerned about pesticides in the soil and toxins in the water. And the multinationals took heed of these calls and that is what they delivered to their customers. They got into the business of organic, while dumping the cheaper, uncertified foods on the global poor. The new political economy of food led to two differentiated ways of organizing the food regime, cut across class lines, both led by private capital, with the same firms often marketing products to both markets. Friedmann reflects that "a whole new set of questions arises about class and power in production and consumption; about how food is articulated to a range of agricultural, labour, cultural, gender, racial… and environmental issues; and about the rearticulation of private and public spheres at all levels of scale from municipalities and 'bioregions' to interstate global politics" (2004, 19).

What began as a social movement that challenged the industrial model of agricultural production – which had led to increasing hunger and ecological disaster – became a consumer movement demanding "quality" and "certification" for their food products. These labels differentiated citizens into a tier of consumers that could be easily serviced by corporations that responded with global niche marketing techniques. Shade-grown fair trade coffee from farmers earning a livable wage; orange juice fortified with calcium; pure dark chocolate made by women's co-ops in Kenya -- all brand-names disguised as eco-labels in the greening of agribusiness. Kuyek sums up the ironies of the unintended consequences of the social movements who ushered in the third food regime: "The new global agri-food order is controlled by a small number of increasingly integrated firms that seek to enhance their position in relation to other corporate players through ownership and control of technology, from seeds to supermarkets. In the world these corporations are building the 'market' doesn't exist – except in a limited manner on supermarket shelves, where few people possess the means to enjoy the luxury of exercising real choice" (2004, 45). Within the new *improved* "value-added" food production, perhaps the greatest value added is the profit accrued for agribusiness.

Friedmann defines international food regimes as "relatively bounded historical periods in which convergent expectations govern the behaviour of farmers, firms, and workers engaged in all aspects of food growing, manufacturing, services, distribution, and sales, as well as government agencies, citizens and consumers" (2005, 4). Times of

transition make these implicitly governing rules explicit and social movements bring to light and challenge food regimes ushering in the next (2005, 4). Canada's National Farmers' Union recognizes what "value-added" means to food sovereigntists, the other branch of this food regime. They state: "Our leaders point to salvation through value-added processing. And all the while, no one dares utter the notion that the farm and rural crisis is caused by a too-aggressive bleeding of rural wealth by agri-food giants. No one dares suggest that farmers are making too little because others are taking too much. The problem isn't too little value-added. The problem is too much value theft" (2004, 27).

The emerging discourse of "*value-added*" and the correlating discourses of certification, traceability, grades, and standards, operate as the new improvement discourse, reflecting new social relations in agricultural production. The language of improvement, rather than simply a discourse of productivity based on obtaining higher yields, is increasingly based around the ideal of "quality." This discourse is embedded at the centre of diffuse power relations to manipulate public consent and it persists in imperial forms of monopoly agribusiness production. Value-added discourse describes emerging *bioindustrial* or "life sciences" food, which is fortified by vitamins, pharmaceuticals, better labour standards, and organic production, for example. Kuyek summarizes this development:

> Pesticide companies realized early on that they could strengthen their position *vis-à-vis* the rest of the agro-food industry through the proprietary control of seeds and genetics (the primary elements in the agri-food chain), which they could transform with 'value-added' properties. The large agri-food processors and commodity traders, such as Cargill and ADM, were also moving towards 'product differentiation' or 'value differentiation' based on proprietary technology, as a means to escape form the price competition situation they faced with their downstream buyers. The newly refashioned Cargill Company now tellingly describes what it does as 'food system design' (2004, 57).

So though the US denied that they had any choice but to send GE seeds to Africa, seed segregation in fact does exist in the US. However, since these segregated seeds are destined for a special, higher-end non-GE market, the chances are unlikely that this grain will ever end up distributed as aid. The corporate food system is moving towards seed certification, complying with high-end consumer demands for segregated seeds. "Value-

added" productivity means that the *unimproved* food will need an even larger dumping ground, since the "value-added" market will be for an elite stratum of private capital. Hence, the cycle of GE dumping in the form of GE food aid continues and, unless vigorously challenged, will probably intensify in the future.

These new forms of improvement create an interesting paradox for those improvement discourses that surround GE foods, since GE becomes the uncertified, unlabeled, unregulated, lower-tier, *unimproved* food. But the issue at stake here is that private capital can now dominate two narratives of improvement: on the one hand, biotechnology must be justified as an improvement upon hybrid and landrace varieties of seed to justify its elite status and patent system; on the other hand, mounting resistance to biotechnology and conventional agriculture has created a market for improved quality food to be dominated and managed by agribusiness and affiliated industries.

But what does this new discourse of improvement mean for farmers? Each new shift in food regimes means changes to the social relations of production and the farmer is forced to adapt to the demands of the market, even if this means becoming increasingly marginalized in the food production process. On the consumer side, new perceptions of health, environment, and self have a central impact in agro-food restructuring. Goodman and Watts report, that "in so far as nutrients become the touchstone of consumer demand, technological competence similarly will be directed towards the common constituents of foods and agricultural raw materials at the molecular and sub-molecular level, reconfiguring agro-food interests around the new generic technical base of biotechnologies" (1994, 30). An entire bioindustry complex has been built around these expectations. Food manufacturers will be able to "target" more efficiently, pitch products more precisely; flexibility of mass production will be enhanced; its capacity to serve "niche" markets will expand; and a diversity within mass production will be exemplified.

The "privatization of standards," as many are calling this "third improvement," reconfigures rural space in significant ways in that farmers represent only one input of many along the value-added pipeline and shows the gaps in "food security" and environmental analysis. Goodman and Watts report that, "groups consuming high value-added products constitute the most dynamic market segments in the agro-food system and will be a powerful force in the restructuring process" (1994, 36). These well-placed

consumers are invariably urban and disconnected from the politics of the rural crisis. This reality creates fabulous opportunities for an almost endless "multiplicity of enterprises whose command over the discourse of organic or natural production allows them to occupy all manner of market niches" (Goodman and Watts, 1994, 31).

A prime example of the privatization of standards is EUREPGAP, which stands for the Euro-Retailer Produce Working Group and Good Agricultural Practices. It is a consortium of businesses, primarily retailers and agricultural producers, that have designed and established a new, private regulatory system to ensure food safety "but also establish criteria for safe environmental practices as well as animal welfare and labour standards. Labour requirements include, for instance, the provision of adequate housing where workers are housed on farms. Also, commitments to energy efficiency, the promotion of biodiversity and wildlife conservation are all elements of EUREPGAP certification" (McNair, 2004). These standards go far beyond mandatory European standards and are being increasingly adopted by producers in Canada and the United States. Amber McNair, food system researcher, sums up the operation: "What EUREPGAP offers…is a product certified through the whole length of supply chains from seed or egg through to supermarket shelves."

Formed in 1997, these private standards coincide "with the desire to protect the European farm sector from cheap, subsidized American imports," but also fly under the radar of the World Trade Organization, since they are not national standards (McNair, 2004). The EU currently pays the US millions of dollars a year for the right to refuse hormone-injected beef under WTO guidelines that bar higher national regulations that act as "trade barriers" to other countries. Just how powerful is EUREPGAP?

> All major European supermarkets and the biggest players in the enormous European food market belong to EUREPGAP as do restaurants including McDonalds of Germany. As of June 2004 certified growers were found in 50 countries with more than 18 000 growers, 724 247 hectares of production for fruits and vegetables. Since September alone, they have held auditor-training workshops across four continents in Kenya, Germany, Australia and California (www.eurep.org).

And what are the impacts on farmers around the world? Farmers in two-thirds world countries are finding it difficult to comply with dozens of requirements and stipulations to qualify for EUREPGAP recognition. This is particularly the case for small and medium-sized farm owners. For example, in Morocco, "The financial requirements are seen as the main limiting factor for implementation" (Aloui, et al, 2003).

EUREPGAP issues an important caution about the privatization of standards. Busch captures these dangers when he writes: "Who participates in setting the standards, the processes by which standards are set and what the consequences of setting the standards all have considerable impact on fundamental questions about who we are and how we shall live" (2000). A consumer-driven improvement discourse, rather than a food sovereigntist discourse can only redefine the terms of the debate within a limited course. It will take a movement that lets the farmers themselves have a voice to meaningfully subvert the dominant narratives of improvement.

6. The International

Understanding the food system regime and the potential for the food sovereignty movement to resist such GE food aid interventions, requires a deliberate way of thinking about foreign aid in a way that does not cancel out or neatly divide the domestic embedded within. Although it is commonplace to understand food aid as a foreign policy, the structure of the aid system depends on key national agricultural policies of donor countries.

The surplus GE grains that were shipped to Africa from the US were available for export for reasons that confuse the categories of national/international interests. The first reason for surplus US grains is the dramatic loss of markets American producers face due to Japanese and European moratoriums on GE foods. GE crops may have cost the US economy $12 billion from 1999-2001 alone, due to international protests against the technology. One report states: "Since 1997, the European Union (EU) has virtually 1.5 million metric tons in 1997 to les than 70,000 metric tons in 2000. US exports of soybeans to Europe fell from 11 million tons in 1998 to 6 million tons in 2000. An Iowa

State University economist calculated this to be the equivalent of losing a market for one out of every three bushels of soybeans grown in Iowa" (Passoff, 2001).

Nevertheless, production is increasing in the US, by 12 percent or 6 million hectares, in 2002. However, this GE production still only represents a small percentage of total agricultural production and over 99 percent of plantings were in only 4 countries. The US is responsible for nearly a third of all plantings (GRAIN, 2003). With GE acreage growing faster within the US, food aid has become a primary means for addressing the paradox of a decline in markets accompanying growth in plantings (Pasternak, 2004). Expanded trade was also a contributing factor to the 2002 US Farm Bill that provided a record $180 billion in subsidy payments to farmers, almost exclusively for commodity crops such as maize, corn, soy, cotton, wheat and rice, but farm analysts point out a high correlation between the acceptance of GE crop varieties and increased levels of assistance for farmers experiencing loss of markets (GRAIN, 2003).

The point I want to make here becomes clear perhaps when we look at the foreign operations bill introduced in 2001 by former US President Bill Clinton. The bill included substantial Development Assistance funds for the expansion and export of biotech products. The bill allocated $310 million for USAID work in Central and Eastern Europe and in developing countries for agriculture and rural development; $30 million was specifically designated for biotechnology research and development aimed at addressing the two-thirds world's environmental, humanitarian and health concerns (Food First, 2000). This foreign operations bill is as much about getting GE products "out there" as it is about maintaining a stable disposal mechanism so as not to flood the domestic market with agricultural commodities, bottoming out prices. Farmers in North America then become implicated in complex ways with the "dumping" of crops around the world.

In Canada and the US, farmers must increase yields to increase profits, flooding the market, and driving down prices in an effort to simply break even. Farm gate prices are so low because for Canadian producers, for example, "each link of the agri-food chain is dominated by fewer than ten (and often as few as two) multi-billion-dollar transnationals.[30] The single exception is the farm link, where nearly a billion of the world's farmers operate in an intensely competitive sector. The dominant transnationals

retain competition only as a fiction (when they apply the term to themselves) or as a prescription (to be administered to others—especially to farmers, workers, and small businesses)" (NFU, 2003, 19). The NFU asks: "Why would we destabilize and torment our farm families, ceaselessly pushing them toward ever-larger economies of scale, making them live in insecurity and worry, breaking farms and emptying communities, if, in the end, any efficiency gains will simply be pocketed by powerful transnationals?"

Friedmann believes that this blurring between the discourses of national and international interests can be mapped using a class- based analysis, economic to map the inter-relationship between nationally and internationally derived food policies. This seems right in the sense that those who are most oppressed by this global system have the greatest incentive to buck the model. However, for R.B.J. Walker, resistance may not coalesce just along class lines, but through a matrix of different actors. Walker maintains that divisions and categorizations, such as class, are policed by a specifically modern account of political space and suppresses proliferating autonomies, "through the resolution of three fundamental contradictions. It resolves, in brief, the relation between unity and diversity, between the internal and external and between space and time. It does so by drawing on the philosophical, theological and cultural practices of an historically specific civilization driven by the need to realize yet also control those moments of autonomy that emerged in the complex transitions of early-modern Europe" (1993, 154).

Arturo Escobar, a "post-development" scholar, seems to concur with Walker. He writes that, "The crisis in the regimes of representation of the Third World… calls for new theories and research strategies; the crisis is a real conjunctional moment in the reconstruction of the connection between truth and reality, between words and things, one that demands new practices of seeing, knowing and being" (1995, 223). What falls between the borders of inside and outside the state are norms that hold us captive. Escobar continues: "The nature of alternatives as a research question and a social practice can be most fruitfully gleaned from the specific manifestation of such alternatives in concrete local settings. The alternative is, in a sense, always there. From this perspective, there is not a surplus of meaning at the local level but meanings that have to be read with new senses, tools, and theories" (1995, 223).

Post-development theorists such as Escobar who deal with the archaeology of development and improvement in their work have much to contribute to this debate and re-imagining of a world where sovereignty means collective self-determination, ecological integrity, and on-going political forums.

7. Ruralism as a Form of Life[31]

The world has experienced unprecedented urban growth in recent decades. In 2000, about 47 percent of the world's population lived in urban areas, about 2.8 billion. There are 411 cities over 1 million. More developed nations are about 76 percent urban, while 40 percent of residents of less developed countries live in urban areas. However, urbanization is occurring rapidly in many less developed countries. It is expected that 60 percent of the world population will be urban by 2030, and that most urban growth will occur in less developed countries.

Population Reference Bureau

I would like to consider a diversity of spatial and temporal philosophies of action or oppositional practices to the problems with the food system as I have highlighted them in this paper, focusing now on resistance in North America. How could people, in Canada, for example, come together around these issues to make a difference to people in the rest of the world? Kuyek's thesis on the commodification of the seed system concludes by suggesting two kinds of coalitions for building a mass movement (2004). The first proposal is for a coalition between farmers, plant breeders and consumers to deal directly with the transformation to the food system from the bottom up. The second proposal recommends a convergence of all sectors facing threatened autonomy due to the expansion of intellectual property regimes. An example of the latter kind of convergence is the Forum on Privatization and the Public Domain. This organization brings together people from the health care industry, open-source software movement, farmers' unions, indigenous communities, library unions, and more, to work together to challenge the relentless encroachment of the private sector onto the public, and to re-think politics in terms of common spaces and a vital public domain.

On the theoretical side of things, the Forum poses a compelling and difficult question: what is the relationship between the commons, the public domains, and other forms of social collectivities? How can these social spaces together galvanize a new world, an alternative system to capitalism, or restructure capitalism and the state, or else open up possibilities of ecological and ethical living? Here, the project of historical and legal excavation of property rights regimes, liberalism, and neo-liberalism is important. The Forum wants to understand how "they get away with it" -- with convincing people that there are no other possibilities but the individualistic, instrumental, market-driven society. Then, on the more practical side, the Forum is a rather more straightforward project -- people mobilize against privatization and intellectual property rights by using utility arguments to argue for the public good: show the catastrophes of private-public partnership projects, the social club of power, the benefits of collective ownership, etc. – and these claims can be made in either individual or social terms: the end goal is public good through social economy.

Another way to focus campaigns would be to promote or highlight the relationship between democracy and supporting family farmers. The rhetoric and policy in Canada since the 60s has indicated though that rural life is simply a relic if it cannot catch up to urban demands. For example, the famous 1969 Federal Task Force on Agriculture report, Canadian Agriculture in the Seventies, delivered the news that, "[I]ndividual farm enterprises must continuously expand and improve efficiency in order to maintain or increase incomes. Unfortunately, many farmers have too small earnings to be able to save or to justify borrowing sufficient amounts to finance the required expansion. They fall further behind in the competitive race, even though they make some improvements in productivity. Those who fall behind tend to receive declining real and relative incomes and may either become part of the rural poor with economically 'unviable' farms or be forced out of agriculture altogether" (21). The NFU describes the disadvantages to us all if the rural agricultural economy is dismantled:

> Reducing the number of people living in rural Canada will increase the cost of utilities and other services for all those who remain. Displacing more farmers will mean the erosion of rural culture and the destruction of a rich and irreplaceable educational system: that of growing up on a family farm. Reducing the number of

> farmers will increase environmental degradation because fewer people will be left to care for the land and those who remain will be forced to operate in an increasingly industrial fashion, relying more heavily on chemical fertilizers and pesticides. As farmers enlarge their farms and become ever more imbedded into corporate, industrial food production, the transnationals that manufacture farm inputs will extract more and more of the wealth generated on those farms, with predictably negative results for local economies. And fewer farmers will mean reduced food security, as our food system becomes less resilient and adaptable and as it falls increasingly under the control of alien transnationals. Rural and urban citizens alike will suffer negative effects without any offsetting economic or social benefits.

There is a crucial difference here to be noted between large-scale business model farms, and the small family farmers who make up the membership of the NFU. Food Secure Canada is a "national alliance of civil society organizations and individuals working collaboratively to create food security in Canada and globally" (FoodSecure Canada, 2005). Food Secure recognize that, "food security includes many evolving concepts that require on-going discussion and development, particularly of rights and entitlements, and of social justice and respect for the sovereignty of Canadians in relation to the food system (e.g., aboriginal relations to traditional lands, farmers' maintenance of biodiversity through breeding and seed saving, workers' authority in relation to their working conditions and remuneration)" (FoodSecure Canada, 2005). The National Family Farm Coalition in the US recently held a meeting to discuss what the food sovereignty movement could mean to them, and how they could push beyond the rhetoric of global solidarity and begin to make a difference.

In terms of the global divide between farmers, an Indian journalist who recently gave a talk at the University of Wisconsin, Madison, called, "When Farmers Die" on the epidemic of farmer suicides around the world, ended his speech with the rousing remark that, "This is not a question of Indian farmers versus Wisconsin farmers, it's a question of ALL farmers against corporations" (2005). Global solidarity between farmers is being facilitated, for example, through organizations like InterPares, based in Ottawa, who organize farmer-exchanges, where farmers from the Prairies travel to Bangladesh, and Bangladeshi farmers travel to Canada to learn from one another and build social bonds. However, since the paradigm of subsistence farming in North America barely exists, if at

all, such differences in struggles may matter in the kinds of demands food sovereigntists make around the world.

The divide between urban and rural food movements may also pose problems for coalitions. The key to making such a coalition work seems to lie in pulling apart the conceptual boundaries between consumption and production in new and interesting ways, without decentralizing or obscuring labour nor depoliticizing consumption. Organic production is a fine example of such a balance that must be struck. While Friedmann (2003) suggests that a feature of the third food regime is that it has led to conventionalization and cooptation of the organic movement, Jason Found finds that there is room for resistance in the play between dominant forces and those on the ground, and a means to make issues of food production intrinsic to people's habits of consumption. He calls this the "double-edged tendency" of organic conventionalization: "the dominant mode of production itself is forced to change to some degree, and marginal alternatives reinvent themselves, possibly in spaces that act as impediments to infiltration" (2005). So while consumers are often limited to label-shopping, which reveals the class lines along which consumer activism falls, it can also have unintended positive effect on production for food sovereigntist farmers and the environment as a whole.

Urban agriculture movements hold some promise, as well, in that they promote a kind of internal urban ruralism that helps people to identify with farmers, and to experience growing their own food and sharing with others garden spaces. Programs such as Community-Supported Agriculture (CSAs), where urban consumers pre-pay for a season of fresh local food to help support the farmers' season, can also help to promote awareness in cities about farmer issues. Much great educational work has also been done in the area of food system analysis in schools through NGOs and food security organizations that draw heavily on anti-poverty research, such as FoodShare in Toronto.

There are obviously profound ethical and practical issues at stake here, as well. How are farmers used in an ideological program of power, national or otherwise? What about migrant labourers? Are they the doubly-marginalized in the global apartheid – in the already vastly unequal struggle between global farmers against transnational corporations? How can GE food aid become a relevant campaign issue to rally around

for all citizens? What about depopulation of rural areas, urbanization, and farmer suicides? We must value "ruralism" as a form of life, entitled to survive alongside other distinct societies in Canada. This is not to promote an 'essentialist' notion of rural life, but rather to see boundaries as porous, and therefore to see these forms of life as interculturally valuable. "Cultural affirmation" of rural life is a vital component of this valuing (Apffel-Marglin, 1998).

For Gustavo Estava, *comida* signifies a richness of human experience; it is about a way of life that celebrates community, the commons, and creating new commons in rural and urban settlements. He writes that re-embedding food in agricultural systems is not about eating healthier food or growing organic or stewardship of the land, even though these things are part of it. Rather, the movement for regenerative agriculture and food sovereignty is about people. And the answers to re-embedding food in community do not lie in a food sovereignty movement "out there." Esteva believes that, "Every postmodern group, looking for sustainable agriculture and enduring living, has to rediscover in their own cultures and pasts its own ideal of *comida*" (1994, 12).

We must also understand that this project to re-embed food in community means calling into question Western notions of private property and entitlement, to which only individuals (including corporations) have rights whereas collectivities do not. However, ownership need not be restricted to individuals, nor just to a commodity relation. For example, anthropologist Michael Asch understands property can mean *jurisdiction*, as it pertains to *sovereignty* and *dominion* (1997). This definition politicizes the authority by which laws are made within a territory, denaturalizing the powerful interests that police the borders of property, and opening up the terms of possession to social groups.

Indigenous claims to sovereignty also mean foregrounding the abuses of dominant modes of sovereignty. Shaw writes that, "Insofar as we seem to be living through a period characterized by the rearticulation of political possibility through and in relation to discourses and practices of sovereignty, this renders the struggles of indigenous people in, through, and against these discourses as vital for thinking about the future of politics. In particular, the struggles of indigenous peoples provide a critical lens on sovereignty, revealing and politicizing the violences that have been its conditions of possibility" (166). If the food sovereignty movement is to also be a global movement of local autonomies,

we must begin to ask these questions. But this time, hopefully with the farmers sitting at the table.

8. Conclusion

This thesis is a story of the seed. It is a story about the role agriculture has played as a technology of colonial occupation. First of all, in the British Empire and the colonization of America, and now as a technique of the U.S. in securing and maintaining a hegemonic position through control of world trade in agricultural commodities and inputs. The seed is a fruit, a flower, and a seed again and this cycle underpins life on earth. This cycle is also a central storyline for millions of people around the world in the sense that their lives are directly dependent on this ongoing transformation is part of their lives the way water is in the lives of fish.

However, since the seventeenth century a narrative of improvement – to land, to nature, and therefore to humankind – has been told to eclipse and overcome the multiplicity of seed stories people tell for the sake of power and financial profit. The purpose of this thesis is to expose the violence of this modern western narrative. When the cycles of transformation that these communities depend upon are disrupted, so too are the local knowledge systems, socialities, worldviews, and economies, which are inextricably tied to these cultures. It is my belief that this powerful story of improvement normalizes and depoliticizes neo-colonialism and therefore must be brought to light in order to be challenged.

This narrative begins in the seventeenth century when John Locke is charged with the problem of how to appropriate the land of sovereign Aboriginal peoples who do not consent to give up their lands. This is a period of history in which the accelerated development of agricultural technologies in England is leading to greater productivity and yields than ever seen before. It is also a period of enclosures in England so that landowners may profit from such surplus on the world market. This model is exported to America.

Locke – landowner and slave-trader – argues that if one mixes one's labour with the earth, thus improving the yields and fulfilling a good for humankind in doing so, the one has the natural right to enclose this land for his own, despite the prior sovereignty of Aboriginal peoples in America. Locke makes four crucial arguments to overcome the ancient constitutionalism of the Aboriginal peoples. The structure of the argument stipulates the conditions of enclosure: only those engaged in recognized European forms of labour – tilling, cultivating, etc. – may enclose land, for only their increased productivity can profit humankind, since the surplus may be traded on world markets and accrue value.

To understand Locke's articulation of improvement, I take the reader through a sketch of Locke's subjectification of natural rights – the distribution of a divine common dominion through individual labour – and a sketch of his notion of 'state of nature' from which Locke claims that Aboriginal peoples have no positive forms of ownership and just an ad hoc set of justice, therefore Europeans may appropriate property from them and wage war against them. The discourse of improvement proved so powerful an antidote to Crown Land distribution that it formed a part of the basis for the American Revolution. Adam Smith further developed it into a stadial view of progress, and other thinkers throughout history also developed and shaped the discourse.

Splashed across headlines around the world in 2001 was the story of famine in Africa – not the fact of starvation itself, but the refusal of genetically engineered food aid by African authorities. It struck me that there was a relationship between the discourse of improvement in the seventeenth century and the discourse of development and the means of entitlement to property in the twenty-first century. In my thesis I compare the two emergences of this discourse of improvement: (1) John Locke in the seventeenth century; and (2) the twenty-first century case of GE food aid to Southern Africa. In the second case, there are two senses in which I see the discourse of improvement operating: (1) an "inward" penetration of capital into the seed as the new colonial frontier of property appropriation, enabled by the universal narratives of development; and (2) as biopolitical power, operating at the level of shaping norms through technologies of biological control. I conclude that the discourse of improvement that introduces new forms of sovereignty must be met with a new form of resistance such as the food sovereignty movement and

look at three ways that the food sovereignty movement responds to discourse of improvement.

But how does one cover three hundred years of history in a convincing way? What would the importance of such an argument be? I soon found that if we understood "improvement" as a mode of problematization, as Foucault defines it, then one could not only compare the discourse of improvement across the ages, one could see that there were consistent features of how and why the structure of argument persisted, and that his historical investigation opens up an important site of inquiry into the language and justification of colonialism. My approach to comparing these emergences, then, was to recognize the contingent historical and political contexts of each case study, to compare the modes of problematization in the seventeenth and twenty-first centuries, to see the subject matter as phenomena on a "grid of interpretation" in which the reader and writer are implicated, to recognize the power of language and its relationship to non-discursive forces, and to identify the field of power in which these relations play out.

The context of the twenty-first century emergence of improvement is the case of the U.S. aid shipment to six Southern African countries – Swaziland, Mali, Mozambique, Zimbabwe, Zambia, and Lesotho. Here we are left with the incredible historical record of documents that recount the justifications of this unwanted GE aid, what I term the "official story" of this aid. But there are crucial differences in context between these case problematizations of improvement and one that I point to early in my second chapter is the element in famine. Here I bring in Mike Davis' work on the late Victorian holocaust, where he describes how the theological applications of Bentham, Mill, and Smith caused the death of millions and millions of people under British colonial watch. Davis argues that this occurred not outside of modernity, but rather at the centre of it and at the moment when all of these places in the Third World were being integrated into the global economy. I think we could even take this argument further today and argue that now aid has been structured into the failures of market society.

My thesis looks at what I am calling the Second and Third Enclosures – respectively, colonialism, and as Boyle terms it, "the enclosure of the intangible commons of the mind." I tell a story about how capital penetrated the seed, changing it from being both a means of production and final product to being just a final product, and

how this penetration, first through hybrid engineering and now through genetic engineering, was undergirded by changes taking place in courtrooms, i.e. the expansion of intellectual property regimes. In order to distinguish between forms of propriety over seeds, we get the story of improvement all over again – mixed labour improves the utility, productivity, and yields of the seed; it is connected to world trade; it is for the benefit of all humankind. The language of improvement is explicit here and is held up against the "common heritage of humankind" and thus the labour of millions of indigenous peasants over thousands of years.

The argument for the First, Second, and Third Enclosures is that private property saves lives. In two senses this applies to GE food aid: (1) grain commodities can save people from starvation; and (2) indirectly, private property saves lives, by leveraging GE onto the two-thirds world ushering in a new agricultural system of production which results in wide-spread social and economic transformation and land transfer from the poor to the richer peasants and farmers. I begin to unpack the relationships between property and sovereignty, making the point that if this relationship as it stands today is called into question in relation to immaterial property, the state ceases to seem neutral in its enforcement, and can expose the injustice of genetic engineering.

However, these contingent, unnatural property rights are posited as signifying universal standards and signaling inevitable progress: development. Improvement is also a story about progress – progress linked to world trade and claims to the benefit of all humankind. I look at the ontological shift prefigured by the colonial context in the language and philosophy that distinguishes between civilized and non-civilized peoples and the guise of humanitarianism that cloaks the biotech agenda. I also look at the universal Roman laws invoked by Locke and entrenched as rights to colonial acquisition in the international legal order.

But power is not just controlled through property rights, but also at the level of norms through biopower. And biopower introduces its own norms of sovereignty that in turn shape property laws. In my third chapter, I look at GE food aid as biopower and how it represents a form of power that may slip beyond everyone's control. I track empirically how biopolitical power works: the sheer power of American surplus agricultural production, the management of statistics to define famine, the way the GE

food aid allowed a particular way for people to live and be disallowed to die, the role of intermediaries in dissolving the friend/enemy divide and to blur who is inside/outside of power, and the interventions into nature by science, where I looked at Heidegger's work in respect to how perceptions of the bios can be understood to reckon a particular understanding of improvement.

In this third chapter, I also tell the "back story" of the GE food aid case and I argue that it is not enough to make new laws to challenge GE food aid, since these laws already exist and are ineffective. Rather, we must think about power differently in light of biopower and intellectual property and the deeply ingrained narratives of development. Here I introduce the food sovereignty movement and the ways it responds to the two forms of improvement that I have outlined, and I introduce a further narrative of improvement that I term the "third improvements," which refers to "value-added" production.

After surveying the way food sovereignty presents resistance to each of these forms of improvement, I conclude that ruralism as a form of life must be valued and that new types of coalitions are needed to carry out this task. Lastly, we need to constantly problematize sovereignty and sovereignty claims, not as an academic exercise, but in the context of engaged practice, with farmers and indigenous peoples leading this conversation.

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[1] Why can't we say "aspects of this power"? What does it mean to characterize power as a field? This is to say that Foucault, whose approach to political and social phenomenon I am indebted to in this paper, has an intersubjective understanding of power. Power and freedom are defined as an ongoing negotiation between partners, where new forms are constantly opened up through action and reflection: 'Power exists only as exercised by some on others, only when it is put into action' (340, 1994).

[2] By "us" here I mean anyone who relies on others to either supply or buy the food they grow.

[3] In his later life, Foucault "replaces the view that discourses are autonomous systems of statements structured by historically specific formation rules, with particular systems of 'power/knowledge relations'" (Howarth, 2000, 77).

[4] This act was implemented by Charles II.

[5] Locke means this universality in two senses: the first sense is that, "the state of nature recurs I an political communities when the government becomes tyrannical" (Goldie, 1993, xxiv); the second sense is that, "governments remain in a state of nature in relation to one another, having no common sovereign to whom they may appeal to settle their differences" (Goldie, 1993, xxiv). The historical aspect of Locke's argument is framed within his naïve anthropology. Whereas the first age of individual popular sovereignty is the state of nature, humans can then graduate from this personal sovereignty to civil society: Locke describes this upward movement as the delegation of powers of self-government to representative governments and modern constitutional institutions.

[6] The global context of colonialism also transforms natural law theory "by the need to answer new questions posed, both on sea and on land, by the expanding colonial empires of Europe" (Kelly, 45).

[7] For example, the New Partnership for Africa's Development (NEPAD) is at the forefront of the global goodwill campaign to "save" Africa and the NEPAD document, composed by several heads of African states with no civil society consultation, but reading (between the humanitarian lines) like an IMF/WB structural adjustment program is designed to attract foreign direct investment. The document states, that, "The Programme is anchored on the determination of Africans to extricate themselves and the continent from the malaise of underdevelopment and exclusion in a globalising world." The presumption being that "the 'poverty' and 'backwardness' of Africa are as a result of 'exclusion' and 'marginalisation' from 'globalisation'" and not an intrinsic feature of it (Bond, 2002).

[8] It is unclear to me, however, whether Boyle is critiquing the application of legal frameworks designed and conceived for material and immobile forms of property to intellectual property, or rather if he is making a more general statement about property and its necessary relationship to forms of enclosure and their ensuing violence and inequality. I tend to sympathize with the former complaint.

[9] As Kloppenburg elaborates: "The New World supplied new plants of enormous culinary, medicinal, and industrial significance: cocoa, quinine, tobacco, sisal, rubber. More than this, the Americas also provided a new arena for the production of the Old World's plant commodities (e.g. spices, bananas, tea, coffee, sugar, indigo)" (154).

[10] According to Waswo, the key citation is *Aeneid* I.539-41.

[11] "In the 1950s food aid accounted for nearly a third of US agricultural exports, whereas in the mid 1990s it was closer to 6 percent" (2004, 3).

[12] The Oncomouse® was developed in the 1980s at Harvard Medical School, through DuPont funding. It was patented by Harvard researcher Dr. Philip Leder, and licensed

exclusively to DuPont. 'Onco' is derived from *oncogene*, a name geneticists give to a damaged or mutated gene. The mouse produces oncogenes at an incredible rate, producing cancer and providing a vehicle to test cancer-killing drugs on.

[13] Chee Yoke Ling, of Third World Network, reports that, "The **African** region had submitted a detailed protocol as early as 1996, while the other countries also submitted specific provisions on the major elements of the protocol which were on the table at the recent February meeting… The proposal of the **African** region goes further, by requiring a minimum of seven years' advance notification of product substitution, a form of early-warning system….The **African** proposal also requires the user of an LMO [living modified organisms] and products thereof to take due account of the long observation period that these socio-economic impacts may require to manifest adverse effects. Risk management steps shall also incorporate strategies and measures that prevent or mitigate the potential adverse socio-economic impacts" ("An International Biosafety Protocol: The fight is still on" http://www.twnside.org.sg/title/fight-cn.htm).

[14] The most famous case of this occurred in 1998, when Arpad Pusztai, a scientist at the Rowett Research Institute in Aberdeen, Scotland discovered that genetically modified potatoes caused inflammations and tumors in the lining of stomachs of lab rodents. After publishing his story, his home was burglarized, his research was stolen, he lost his job at Rowett after 30 years of employment, and he was maligned by the Royal Medical Society (after his research was published in the reputable scientific journal Lancet). See, for one, Joel Bleifuss' article: "No Small (Genetic) Potatoes." *In These Times*, January 10, 2000. Another well-known case is that of Ignacio Chapela who is losing his position at Berkeley for reporting on Mexican corn contamination. (See: http://www.gmwatch.org/archive2.asp?arcid=3287)

According to Project Censored, Sonoma State University's student run media research group, one of the top 25 censored stories of 2005 is "Forcing a World Market for GMOs." They write: "The Bush Administration is trying to force Europe to drop trade barriers against genetically modified organisms (GMOs). Meanwhile, the agricultural biotechnology industry is focusing even more intently on developing countries, where regulations governing their use are generally more lax. At the same time, biotech promoters continue to suppress studies that show GMOs may have adverse effects on health and the environment" (http://www.rense.com/general57/news.htm).

[15] There are dozens of articles I could site here, each containing one thread of the multiple stories that I have sited. However, for the sake of expedience, the press release written by Ambassador Tony P. Hall brings together definitively all of these stories. Titled, *"Rejecting Biotech Food Aid Risks Lives, U.N. Official Says,"* the sub-title reads: *"Starving people 'simply want to be fed,' Hall adds.* Hall is the U.S. Mission to the U.N. Agencies for Food and Agriculture and this article appears in the September 2003 issue of the State Department's electronic journal, *Economic Perspectives.* The issue is titled: Agricultural Biotechnology. The entire journal can be viewed at usinfo.state.gov/journals/journals.htm.

[16] The six institutions are as follows: The Food Aid Convention; WTO Marrakesh Decision; FAO Consultative Sub-Committee on Surplus Disposal; WFP; International Institutional Mandates and Responsibilities for Food Aid; Regional Intergovernmental Consultative Agreements.

[17] For more information, see the press release of 23 October 2002 put out by Norfolk Genetic Information Network where six specific violations of the FAC are outlined (http://ngin.tripod.com/231002c.htm)

[18] ISAAA's whose projects all "serve primarily to awaken interest in and commitment to biotechnology within national agricultural systems and to develop national capacity to conduct biotechnology research and development." AATF is funded by the world largest agro-chemical companies to open markets in Africa for "access" to agricultural technologies. Source: Devlin Kuyek. "ISAAA in Asia: Promoting Corporate Profits in the Name of the Poor." October 2000. GRAIN.

[19] GRAIN reports that in Ecuador, "GMO levels as high as 55% were found in samples from food from the 'Mi Papilla' food aid programme, which provides for children aged six months to two years and pregnant mothers… In Colombia, soya was collected from the Colombian Institute of Family Welfare. The results showed 90% GM soya content in soybeans that are distributed directly to orphanages and also through Bienestarina, a food product made from soya and provided mainly to children. In Colombia there is no competent authority that has any biosafety rules over GMO foods" (GRAIN. "GMOs Found In Food Aid To Latin America." *Seedling*. June 2001).

[20] See, "Understanding on Rules and Procedures Governing the Settlement of Disputes, Apr. 15, 1994, WTO Agreement, Annex 2, Results of the Uruguay Round of Multilateral Trade Negotiations: The Legal Texts," at 404; 1994 WL 761484 ("DSU").

[21] In *Modernity and the Holocaust*, Bauman sites the traditional elites of the marked community as by far the most crucial target of destruction to a successfully defeated resistance movement. "The most seminal effect of the genocide is the 'beheading' of the enemy" (119). These leaders are seen as providing the cohesive unity needed to hold the community together. Without these leaders' authority, the community's "ability to sustain its own identity, and consequently its defensive potential" would be lost (119). In a sense, one could read the project of organizations such as the ISAAA, or USAID more generally, as operating by logic that Bauman describes: to perform a beheading.

[22] I want to quote a portion of a lengthy interview here as a means to demonstrate my point about the normalization of worldviews that threaten to eclipse others.
When asked what Ethiopian farmers think about GM, Dr. Tewolde replied: "They get horrified because they cannot imagine that what God made would be mutilated in this way… When we explain the question of patenting and loss of control [Ethiopian farmers] find it totally absurd. After a long discussion, when they understand it, they become

totally incensed – they can't imagine there would be humans who would want to do that. They cannot understand that anybody would refuse to make seed available to anybody who needs it or asks for it. Their tradition is if you want some seed from what they have, take it. And the kind of control that patenting seeds implies they find totally abhorrent when they know, when they understand it" (Adam Bradbury. "GM won't cure hunger in Africa.")

[23] From the FAO website: "The Rome Declaration calls upon us to reduce by half the number of chronically undernourished people on the Earth by the year 2015.... If each of us gives his or her best I believe that we can meet and even exceed the target we have set for ourselves." Spoken by, H.E. Romano Prodi, President of the Council of Ministers of the Italian Republic and Chairman of the World Food Summit. www.fao.org

[24] Mittal reports: "It is the chronic day-in and day-out hunger which affects an estimated 852 million people. According to the U.N. Food and Agriculture Organization's (FAO) 2004 Annual Hunger Report, the number of hungry people has been increasing at a rate of almost four million per year since the second half of the 1990s—wiping out two thirds of the reduction of 27 million hungry people achieved during the previous five years. While most of the world's hungry live in Asia (over 500 million) with 221.1 million in India and 142.1 million in China, hunger is most intractable in Africa. In Sub-Saharan Africa, over 230 million people are hungry. In Latin America and the Caribbean, there are an estimated 64 million hungry people, and in the Middle East, over 35 million. While chronic hunger rarely makes the evening news, it is deadly. Each year it kills as many as 30 to 50 million people, more than three times the number who died annually during World War II. Its victims include the approximately 6.5 million children who die from hunger each year—one every five seconds" (Mittal, Arundha. "Introduction." *Food Aid or Food Sovereignty*? Frederic Mousseau. The Oakland Institute, October 2005).

[25] See <http://www.viacampesina.org/art_english.php3?id_article=216>

[26] The seven regions and the Regional Coordinators of the Vía Campesina are: South Asia: Karnataka State Farmers Association (KRRS), India. Southeast and Northeast Asia: Federation of Peasant Organizations of Indonesia (FSPI), Indonesia. Western and Eastern Europe: Coordination Paysanne Européenne (CPE), Europe. North America: National Farmers Union (NFU), Canada; Union Nacional de Organizaciones Regionales Campesinas Autonomas (UNORCA), Mexico. Central America: Asociación de Organizaciones Campesinas Centroamericanas para la Cooperación y el Desarrollo (ASOCODE); Belize Association of Producer Organization (BAPO). Caribbean: Asociacion Nacional de Agricultores Pequenos (ANAP), Cuba; Winward Islands Farmers Association (WINFA). South America: Movimento de Trabalhadores sem Terra (MST), Brazil; Asociación Nacional de Mujeres Rurales e Indígenas (ANAMURI), Chile.

[27] Immanent means indwelling, inherent; actually present or abiding *in*; remaining *within* (OED). For Kant, an immanent principle is limited to the realm of experience: it is opposed to a *transcendental principle*.

[28] See Arthur Kroker's "Born Again Ideology" on cthoery.net for a discussion of the relationship between religion, fascism, and technology.

[29] Monsanto Annual Report 1998.

[30] "Two transnationals—Cargill and Tyson—kill and pack the bulk of Canadian beef. Three transnationals make most of our cereal. Five retail most of our food. Farmers have just three major tractor manufacturers to choose from—half the number that existed 15 years ago," NFU. "The Farm Crisis, Bigger Farms, and the Myths of "Competition" and "Efficiency." November 20, 2003, p. 17.

[31] This concept of "ruralism as a form of life" is in conversation with Henri Lefebvre's work on "urbanism as a form of life " in the *Urban Revolution* (2003). In a sense, I am arguing here against modernity's privileging the urban as the crucial site of meaning-making and therefore implicitly locating resistance in the city as well.