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Building Relational Food Sovereignty Across Scales: An Example from the Peruvian Andes

Alastair Iles and Maywa Montenegro

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Abstract

While food sovereignty has begun making promising inroads into the existing corporate food system, it is still working through what, exactly, sovereignty means. At a basic level, sovereignty implies boundary-making – including some groups while excluding others -- yet food sovereignty movements often call for growing cooperation and interdependence. We suggest that many of the core epistemological and ontological challenges of food sovereignty can be helpfully unpacked through the lens of scale. To date, food sovereignty efforts have tended to employ a particular notion of 'scale' that is generally defined in opposition to the globalized food system. What appears to have gone missing is an appreciation of the multiple determinations of scale embedded in the concept of food sovereignty. We suggest that sovereignty is an intrinsically *relational* concept, only taking on meaning in relation to other processes, functions, and forms – not least, other sovereign units. To develop a notion of relational sovereignty, we rub the two conceptual blocks of polycentric governance systems and relational scale together. We then apply relational sovereignty to generate some practical strategies for achieving food sovereignty more effectively, using examples from the Parque de la Papa (the Potato Park) in the Peruvian Andes. Strategies such as developing alternative (interdependent) bases for sovereignty and devising means to achieve sovereign recognition may offer a robust starting point for critical food sovereignty work.

1. Introduction

Food sovereignty has been defined as "the right of local people or nations to determine their own food and agricultural policies, organize systems of production and consumption to meet local needs, and secure access to land, water, and seed" (Wittman et al. 2011). Originally articulated by the transnational peasant movement La Via Campesina in 1996, it has since become a rallying cry for actors and organizations disaffected with, and disenfranchised by, the current food regime. In framing an alternative, food sovereignty principles emphasize ecologically sustainable modes of production and consumption; just economic relations along the food supply chain; gender and racial parity, above all, the right to self-determination (Desmarais 2002; Patel 2009). These principles have created a common platform from which to debate the entrenched power of capital over agrarian populations, to heal the deepening rift in the metabolism of society and nature, and to forge alliances to confront the dominant food system.

Yet it remains unclear how food sovereignty will work, if at a very basic level sovereignty implies boundary making – including some groups while excluding others. Whether a self-

determining 'people' will consist of individuals, households, communities, cities, nations, or international networks remains ill-defined, as is the question of how sovereignty will be bounded, given various territorial, ethnic, indigenous, and class bases for claiming rights. Food sovereignty also embodies a deep tension between the right to self-determination and the increasingly recognized interdependencies of people, ecosystems, and economies. How will communal relations and sovereign relations coexist in the food sovereignty framework? Where does one sovereignty begin and another end? Who has the rights to decide?

Many of these core epistemological and ontological challenges can be helpfully addressed and unpacked through the lens of scale.[1] To date, food sovereignty efforts have tended to employ a particular notion of 'scale' that is generally defined in opposition to the globalized food system. Thus large-scale production, 'fast' food, globally linked supply chains, and agribusiness giants forge the contours of the antithetical food sovereignty identity. Against the global, large, and fast, we find sovereignty movements advocating the local, small, and slow. Indeed, food sovereignty is often treated as having an *ideal* scale, for which the movement looks to develop specific policies, experiments, and institutions. What appears to have gone missing, however, is an appreciation of the multiple determinations of scale embedded in the concept of food sovereignty.

Yes, the global shapes the local and vice-versa. What we would like to suggest, however, is that sovereignty is an intrinsically *relational* concept, only taking on meaning in relation to other processes, functions, and forms – not least, other sovereign units. By explicitly examining sovereignty in terms of the scalar relationships occurring between and through different levels of ecological and social organization, we hope to clarify that the underpinnings of food sovereignty, as scalar and relational, are not so easily captured in discourses of self-determination and autonomy. Reframing sovereignty in relational terms, we argue, will provide insight on how food production and consumption, knowledge and decision-making, and material and immaterial territories produce one another through relations within and across levels (Rosset & Martínez-Torres 2012; Sayre 2009). Such a view also aligns with emergent work arguing that food sovereignty should not be treated as an abstract, universal concept; it may have divergent, culturally and geographically-specific meanings that reflect the historical and political circumstances of different peoples (e.g., De Master, this conference).

[1] Many definitions of scale exist. We find that Cash et al (2006) define scale in an especially useful way: as "the spatial, temporal, quantitative, or analytical dimensions used to measure and study any phenomenon." They use "levels" as the units of analysis across a scale. They argue that multiple types of scale exist, ranging from geographical, temporal, jurisdictional, management actions, networks, to knowledge scales.

In this paper, we offer two conceptual building blocks to understand food sovereignty in these terms. The first is polycentric governance, a theory that has emerged in institutional economics to describe systems in which elements are autonomous, yet can make mutual adjustments for one another. The second is relational scale, a concept elaborated principally in geography to describe scale in terms of non-linear and dialectical processes across space and time. Rubbing these two conceptual blocks together (to make "revolutionary fire"! (Marx, in Harvey 2010: 4)), we explore how poly-centric and multiple levels of governance do not just coexist, but co-create one another. This idea provides the groundwork for 'relational sovereignty' which we explore in a case study of the Parque de la Papa (the Potato Park).

We begin the paper with an overview of the Potato Park. Next, we consider how food sovereignty movements currently conceptualize and utilize scale, identifying a number of 'scale gaps' in food movement discourse. We then introduce polycentric governance and relational scale, suggesting a synthesis in the notion of 'relational sovereignty.' Finally, we apply relational sovereignty to generate some practical strategies for achieving food sovereignty more effectively, illustrating each with further examples from the Potato Park. Strategies such as developing alternative (interdependent) bases for sovereignty and devising means to achieve sovereign recognition, we suggest, offer a robust starting point for critical food sovereignty work. These relational practices may help catalyze an 'emergent' sovereignty to pose a viable alternative to the dominant food system.

2. Conceptualizing Food Sovereignty as Relational Sovereignty

2.1 Overview of the Potato Park

On May 9, 2011, on a typical steely-grey day in Lima, Peru, more than 50 representatives of indigenous and peasant organizations gathered in the city's Plaza de Armas to kneel in front of buckets brimming with water and potatoes. In protest against a government decree allowing genetically modified foods into the country, they plunged their hands into the buckets and began to wash the potatoes. *"Lava las papas!"* they chanted, as a curious crowd gathered and the Limeña press swept in for the photo op.

It was on one hand a purely symbolic act – and an effective one too, judging by the media coverage. But for the indigenous farmers who had hauled well over a thousand varieties of potatoes to the capital city, this public cleansing of GMOs had very concrete implications. Biological and cultural diversity is the lifeblood of Quechua peoples, and their home, in the highlands of Peru, is among the most diverse regions in the world. The Andean highlands are the center of origin of the potato, home to at least 8 major cultivated species, and some 1,300 wild relatives (Argumedo 2008, 2010). Cultural diversity is reflected in the 250+ languages

spoken across the region. Yet, in a pattern ensuing across much of the world, this heterogeneity is fast disappearing in the gyre of globalization. As Peru pushes for further trade liberalization and market integration, cheap food imports simultaneously push indigenous peasants off the land with depressed farm prices, and pull them towards urban jobs created by cheap food. Local crop biodiversity and the traditional knowledge that sustains it have suffered the brunt of these processes. While there is vast wealth in the Peruvian mountains, it is all but invisible to the metrics of GDP growth.

In a move to protect this fast-eroding biological and cultural diversity, six indigenous communities began organizing in 1998 to create a community-based conservation area called Parque de la Papa, or "Potato Park." Spanning over 9,000 hectares of land in Pisaq, in the Sacred Valley of the Incas, this initiative has since brought together 4,000 villagers from the communities of Amaru, Chawaytire, Cuyo Grande, Pampallaqta, Paru-Paru, and Sacacaca to jointly manage their agrobiodiversity and traditional knowledge according to indigenous philosophies of equilibrium, dualism, and reciprocity (Argumedo 2010). Striving to achieve balance between human need and the *Pacha Mama* (Mother Earth), the communities of the Park foreground the right to self-determination, yet they base this right not on entitlements to land, seed, or water but on the interdependencies of knowledge, culture, and agriculture.

Over some 3,000 years, farmers have helped co-create the unique landscape of agroclimatic belts in the Andes. Each belt is found at a different altitude, and is characterized by specific field rotation practices, terraces, and irrigation systems, and the selection of specific animals, crops, and crop varieties (Zimmerman and Bassett 2003). In addition, the region is one of the richest native potato diversity areas in the world – considered by experts to be one of the centers of origin of the potato. Estimates of just how many potato species have emerged here vary widely according to botanical classifications – Charles Mann (2011) has called the Andean potato "less a single identifiable species than a bubbling stew of many related genetic identities" – and each has its own smorgasbord of subspecies, groups, varieties, and forms. The potato's wild relatives are far more numerous: the International Potato Center (CIP) in Lima has sampled and preserved more than 3,700 landraces.

The park is an attempt to sustain this mountain agroecosystem – and the social-ecological metabolism upon which it depends – by reviving and innovating traditional Andean practices. Agroecological farming, barter exchange, and customary law underpin a variety of ongoing initiatives in the Potato Park. Six natural medicine pharmacies, a cottage industry of natural products based on potatoes and medicinal plants, a biocultural tourism program, a culinary sanctuary dedicated to the potato, and a computer-based registry for traditional knowledge are currently run by a system of collectives whose goal is to build a "solidarity economy based on

local resources" (Swiderska et al 2011, Argumedo 2010). In addition, the communities have developed an "intercommunity agreement" for Park governance based on a dual model of Peruvian state law and customary law (see below). Through this agreement, the Park has aimed to develop the legal and policy foundations an equitable and sustainable local economy, based on biocultural goods and services. At the basis of all of this work is an articulated framework not for food sovereignty per se, but for *bio-cultural sovereignty* based on the Incan *ayllu* (see below).

In some ways, the Potato Park can be seen as an attempt to create a culturally insular enclave that is set apart from the larger world, and to defend biocultural heritage against the dominant neoliberal market economy. In common with countless other efforts to practice food sovereignty, the park is trying to exercise sovereignty over its own local territory level as against the larger world. Yet many of the elements of sovereignty that the Potato Park needs to accomplish its own self-determination can only be accessed at multiple levels outside the local territory. For instance, Quechua-bred potato germplasm has increasingly been controlled by national and international science agencies, and regulated by the intellectual property rights system imposed by the Convention of the International Union for the Protection of New Varieties (UPOV). Such barriers pose a serious threat to indigenous practices of communal ownership and deprive farmers of access to genetic resources that could help them experiment with seeds in the face of climate change. Imports of genetically modified varieties from other countries further imperil the biocultural integrity of Quechua agriculture. Yet the regional government based in Cusco has been able to pass a moratorium on the use of GM varieties, at the urging of the park, amongst other groups.[2]

Securing self-determination for the Potato Park has also meant engaging with governing institutions at the national level. The increasingly neoliberal Peruvian state has proven particularly challenging in this regard. After struggling to realize redistributive land reforms in the 1970s, the state took a hard right with structural adjustment in the late 1980s, the Fuji-Shock[3] of the 1990s, and the US-Peru free trade agreement of 2006. Recently hailed by the *New York Times* as "one of the world's star economies" (Neumann 2013), the country's aggressive bid for GDP growth obscures a soaring Gini coefficient. Peruvian farmers are poor, its peasant

[2] See: Ordinance establishing Transgenic-Free Zone: La Ordenanza Regional 010-2007- CR/GRC.CUSCO and Ordinance on Biopiracy: La Ordenanza Regional 048- 2008 CR/GRC.CUSCO.

[3] Fujimori's approach to stabilization – so-called 'Fujishock' – was "full-blooded and implemented 'without anaesthetics'"(Crabtree 2011: 139). The series of stabilization packages that began in 1988 sought to change the pattern of relative prices within the economy to bring inflation under control. With that success in hand, Fujimori moved to radically restructure the Peruvian economy along neo-liberal lines, removing the last vestiges of the state-oriented ISI model introduced in the 1970s. This involved a drastic reduction in public sector activity, deregulation of markets (including the labour market), encouragement of privatization and foreign investment, dismantling of industrial protection, and gradual reorientation of the economy towards export-led growth.

farmers are poorer, and a full third of its highland peasants, most of whom are indigenous, face "extreme poverty" (Crabtree 2011). Not surprisingly, then, the Peruvian state has done little to support the empowerment of indigenous peasant coalitions such as the Potato Park. While national laws authorize 'indigenous community' units, the formal, written nature of state law and its grounding in Western property rights are inhospitable to the largely oral tradition of Andean knowledge and customary laws, and to communal systems of resource access.

Remarkably, however, the Potato Park appears to be navigating the hostile Peruvian state with an assemblage of mechanisms that effectively 'bypass' the national level (Agumedo 2008, 2010). Biocultural protocols developed with the assistance of the local NGO, Asocasión Andes, have been drafted to align with global and multilateral frameworks for the protection of biodiversity and traditional knowledge (these include the CBD Nagoya Protocol, the FAO Plant Treaty, and the World Intellectual Property Organization, among others). The Potato Park has also forged partnerships with organizations such as the London-based International Institute for Environment and Development (IIED) and with the United Nations University headquartered in Japan. Among other things, these alliances have enabled the Park communities (many of whom are illiterate) to draft substantive reports on their activities, to research and develop the aforementioned biocultural protocols, and to gain recognition within the international circuit of sustainable development. Within Peru, bypass mechanisms have consisted of successful sub-national campaigns to ban transgenics from the Cuzco region, and to establish a regional anti-biopiracy law (Argumedo 2012).

2.2 Scale/Sovereignty Gaps

The Potato Park provides a microcosm of local, regional, national, and international scale activities mingling in the pursuit of food sovereignty. Importantly, it becomes clear that even an attempt to foster rights at a local territory level implicates many other levels of government, scientific institutions, and economic and legal arrangements. As Reed and Bruyneel (2010) say, "Thus, even local commons, once considered to be localized systems, are now viewed as complex systems problems (Berkes, 2008)." It is this enfolding process that has posed challenges to food sovereignty movements: they aspire to change their immediate food systems yet cannot do so without tackling larger scale processes and higher level systems. It is therefore important to consider how food sovereignty movements commonly interpret scale. These unrecognized common senses, we suggest, indicate large 'scale gaps' in the theory and practice of food sovereignty, whose bridging might in turn offer a broader strategic toolkit for food system change.

To begin, food sovereignty has largely been framed as a resistance to large-scale, industrialized production, processing, distribution, and retail, as well as to the global food system. This is no

accident, as food sovereignty has recognizably Marxist roots; the political-economic theories from which it draws generally call attention to how capitalist transitions toward large-scale industry and large-scale agriculture have disrupted existing social-ecological metabolisms and set into motion processes of differentiation and displacement (Foster 1999, Moore 2009, Araghi 2004, Wittman 2009). It arrays itself more broadly against globalization, including greater economic efficiency resulting from technology use, scales of economy, expanding speeds and quantities of mass production, and free trade in commodities.

Food sovereignty, then, is frequently apprehended as an attempt to make food systems far more human, organic, and socially-embedded through re-creating domains of local control, self-reliance, and authority. Peoples who seek more decision-making power over production and consumption tend to focus on the farm/household, village/neighborhood, or city scales for both practical and ideological reasons. They emphasize self-determination as their goal and often envisage a dramatically shrunken role for corporations and/or governments in the larger food system, thus emancipating them to create bio-regions and agrarian citizenship (Wittman 2009). Bounded territories, both spatial and social, often become the focus of food sovereignty. La Via Campesina, for example, declared in 1996 that, "We have the right to produce our own food in our own territory." Yet several of these scalar affines (local, small, territorial, self-determined) have arguably become absorbed by sovereignty movements without a critical examination of what exactly determines and defines "scale." Is this scale a small size? A local territory? A lower level of organization? A proximate relationship? As a result, the promotion of particular scales has become an undifferentiated mix of size, levels of decision-making and organizing, and the relational processes at their intersection.

Another result of this scalar muddle is that ideologies of de-centralization have also become conflated with those of de-rationalization. Yet movements seeking to devolve power to lower scales of governance may or may not align with those seeking to temper the scientific/reductionist view of modernity by reinserting locally produced and situated knowledges into food systems governance. Social movements have long cut across centralizing/localizing and re-rationalist/antirationalist spheres (Buttel 1997: 353).

Indeed, while many strains of food sovereignty take on a de-centralized (populist) stance, another strong current has tended to conceive of sovereignty in terms reminiscent of classical state-centered sovereignty. In this framing, sovereign units can make their own decisions, occupy and govern their own territory, and attain self-determination as though they were unitary entities acting independently of other units. The attraction of this approach is clear: it allows centralized authority and concentrated power to be exercised against the corporate food regime. Yet different 'sovereign' units may conflict with one another, either within the

same level of organization (such as two fishing villages claiming rights to determine local catch policies within the same territory), or across levels of organization (as in a state government asserting power over local towns in the United States). Sovereign units of this ilk may also bind their own peoples to the unit's choices, even though there may be internal differences of views. For example, the assertion of sovereignty can transgress the communal relations and customary practices of communities within the larger group. Similarly, a sovereign unit may not acknowledge interdependences between human and ecological systems when making decisions, because the environment exists as a broader reality.

These common approaches to scale in the food sovereignty movement limit both the room for maneuver and the opportunities for alliance building beyond the local-scale, small-scale, and fiercely autonomous. The movement has already begun tackling the issues of (1) how to "unite" its disparate currents (e.g., Holt-Gimenez et al 2011), and (2) how to scale up its activities so as to challenge the existing food system without recreating many of its same features (Wittman et al 2011). Beyond this, we suggest that at least five major unresolved tensions occur as a direct, if unrecognized, result of these 'scale gaps.' These tensions inhibit the movement's success yet could give birth to real alternatives to the dominant system.

First, food sovereignty apprehended as solely small/local/autonomous quickly becomes hamstrung from acting upon the very processes and structures that restrain or empower people's ability to make decisions about their preferred food systems. True, food sovereignty academics and activists have developed a cogent analysis of power and political economy in the food system; this structural critique is among its greatest strengths (e.g., Wittman et al 2011; Holt-Gimenez and Shattuck 2011). Yet by delimiting the organizational and practical scope of food sovereignty to the local/small scale, the movement is quickly impeded by barriers to social change imposed by higher orders of regulation/organization. It seldom grapples with questions of infrastructure constraints, systemic lock-ins, the ability to embrace diversity in all its varieties, and the systemic risks of undertaking change. For example, in Oakland, California, much work has been done to promote urban agriculture, supporting the largely African American population of West Oakland to begin planting community and household gardens. Among the many challenges to this work, however, are structural constraints such as employment conditions (unstable jobs and the length of the working day) and limited access to health care, education, and transportation that undercut the ability of people to contribute their labor. Larger infrastructures (e.g., water, energy, and transportation) also shape the possibilities for realizing urban agriculture. To begin to change the food system, we need to change other systems as well, which can create strong tensions that are invisible without appreciating the multiple determinations of scale at play. In addition, food sovereignty efforts may propagate injustices across the food system if they fail to account for how their

consequences relate to other structural elements: restaurant workers, for example, may be harmed by attempts to foster urban agriculture and encourage home cooking; and expanding diversified farms in the US can undermine peasant efforts elsewhere to sell crops to consumers in the US (for example, Colorado's efforts to breed local 'organic' quinoa will likely create instabilities for Bolivian growers).

Second, we find that while the food sovereignty movement has been particularly incisive in its critique of private capital, the ongoing role of the state has been less rigorously tracked. Yet if there is one thing the extensive 'land grabbing' literature has taught us, it is that the world food economy is never easily distilled to a chess match between sovereign states, nor to a heist by transnational agribusiness. Instead, the dynamics of these large-scale land acquisitions were configured by complex assemblages of sovereign wealth funds, national and sub-national governments, nature/conservation organizations, energy companies, private equity, and agribusiness – all working across numerous scales of institutional and geographical organization (Borras et al. 2011; White el al. 2012). The scale gap here arises from a relative neglect of how market processes work in and through the state, and in failing to delineate how public regulation – or lack thereof – intervenes in food supply chains that have become increasingly stretched in time and space. In turn, there has been inattention to exploring how the state can be made far more accountable for its decisions and policies through developing (or rejuvenating) processes for democratic participation. Food sovereignty movements tend to focus more on resistance to the state and drawing firm scalar boundaries between state power and local territories. Yet considerable room exists for building new institutional conduits to provide democratic accountability between scales, and for using state power at one level to sustain activities at another plane.

Third, explicit discussion of the politics of making and using knowledge is frequently absent from food sovereignty movements. The knowledge foundations underlying food sovereignty are disconnected from those of states, international institutions, and corporations. Often, food sovereignty movements want to affirm certain kinds of knowledge through their work: knowledge that James Scott (1998) calls *metis* – that is, grounded in local and lay knowledge, experiential data, indigenous or farmer practice, and other forms of situated, 'non-rational' knowing. These movements draw boundaries against the Western positivist knowledge that has already gained power and traction within existing institutions (e.g., Jasanoff 1999) – such knowledge is commonly seen as technical, juridical, and scientific in character, and as exclusionary of metis. Because of this epistemic rift, sovereignty movements may struggle to influence powerful institutions, who either do not recognize, or do not validate 'alternative' knowledges. Yet knowledge politics – if understood in relational terms – are much more multivalent and scalar. Local knowledge does not need to be geographically bounded: any

knowledge can be 'local' to wherever it is produced and used (Jasanoff and Long 2004). Similarly, technoscientific knowledge does not need to be generated and imposed from the top-down: it can also be produced in local and small-scale settings, to the advantage of food sovereignty movements. The ways in which different forms of knowledge shuttle between local and global ambitions deserve far more scrutiny (Iles 2004). Food sovereignty would be strengthened by adopting a two-fold approach: establishing knowledges that are technical, juridical and scientific in character to 'speak the same language' as the dominant order. At the same time, movements need to extend the parameters of knowledge to include other forms of data and reasoning so that they can claim their own territory.

Fourth, food sovereignty movements have mounted a strong critique of the current food system and have begun to articulate a vision of the 'future we want' (e.g., Varghese 2012). However, what the process of transition might look like – how to move from A to Z, or even to M – remains unclear. A very commonly cited strategy is to 'scale up' food sovereignty activities so that they may move from being peripheral to posing a viable alternative to the existing food regime. Yet this 'scaling' is nebulous: does it mean size (getting to a particular scale of economy in order to compete with the existing system); dispersion (catalyzing the uptake of food sovereignty at many levels and locations); influence (affecting the policies prevailing at higher levels); or openness (assuring that there are many pathways for change, not a few)?

We also find a tension between sameness and difference. At one scale, a food sovereignty movement might manifest significant diversity, such as reviving ethnic traditions. At another scale, there may be much sameness because all the experiments share similar strategies and epistemological bases. Similarly, what seems disruptive in this moment in time may dissipate into consistency over decades. This emerging uniformity may make food sovereignty more vulnerable to being squashed or coopted by the corporate food regime, much as state government convergence on a few environmental rules has made it easier for industry to control how pollution control evolves. Whether or not the movement is heterogeneous or homogenous over space and time may not be evident without looking at it from multiple scales. The grain of analysis – whether it is viewed as one "food sovereignty movement" or as many movements, whether the focus is on 2013, the 21st century, or the long dureé of capitalist agriculture – will determine how the diversity and dynamism of the movement is measured and understood.

In a similar fashion, the food system itself will manifest stability or change dependent on the scale of observation. To take an example from nature, a tidal wave at the scale of human observation appears to be a massive movement of water. But at the molecular scale, each individual unit of H_2O moves hardly at all. Likewise in food systems, where local actors and

institutions may appear obdurate and 'locked-in' – and hence intransigent to change – while on a macro-scale, the system shows itself to be highly volatile and in flux. As a result, movements may fail to discern where the food system could be at a 'tipping point,' where pressures/interventions could lead to a qualitatively different (and relatively stable) state.

Fifth, movements may not realize that their power and autonomy depends on being recognized as authoritative sovereign units both *internally* – by the peoples of their intended local territory – and *externally,* by institutions and publics at higher (or lower) levels. They may presume it is self-evident that they should have sovereign status because they represent a people or a territory or an alternative food system. Yet, food sovereignty movements – in common with other social movements – may struggle to gain external acknowledgement, precisely because they *do not fit* easily into dominant institutional and constitutional structures. For example, there are few or no institutional procedures that food sovereignty movements can call on to broker settlements of conflicts in their own right. Instead, food sovereignty currently depends on, and lives alongside, existing institutions at multiple levels. By contrast, social movements that lack legal status are increasingly acknowledged as exerting practical power through organizing their own programs. This 'practical sovereignty' offers a potential inroad, as over time, movements may win growing recognition from powerful institutional actors and publics, thus legitimating their existence and work. Sovereignty is not something that simply exists: it has to be built up, recognized, and maintained over time and space. Thus how the authority of a sovereign unit is created is central to its emergence and success.

These scale/sovereignty gaps result in part from how food sovereignty movements are currently drawing boundaries across the food system. Yet the food system is itself polycentric – defying ready boundary-making and calling for bridging.

2.3 Polycentric and Multi-Level Food Sovereignty

Food sovereignty is among a growing variety of social movements that must contend with a bewilderingly complicated world that does not nestle easily into a standardized, universal, stable framework. Many forms, actions, and levels of food sovereignty potentially exist: from setting up diversified farms that employ workers fairly and building farmer-to-farmer networks that encourage social learning, to establishing food policy councils and fostering grassroots agrarian reforms worldwide (Patel 2009). These can all contribute to the realization of food sovereignty through creating domains of self-determination for the people and communities in villages, cities, states, territories, organizations, and other scales of sovereignty. As many scholars have noted, food sovereignty is hardly monolithic. For instance, Desmarais et al (2011; also this conference) show that the food sovereignty movement in Canada comprises many movements, organizations, and currents that are difficult to categorize and to organize into

concerted action. These can be found in numerous localities and at the provincial and federal levels of government.

Similarly, the actors and processes that food sovereignty movements seek to collaborate with – and as importantly to *resist* – may be located at or across various sectors and levels of the political economy. Governments, for example, retain substantial power through their law-making, financial allocation, and implicit or explicit regulation of the market. Similarly, the apparatus of the corporate food regime (c.f. McMichael 2005), reaches across transnational agrifood businesses, government agencies, courts, and NGOs, investors, and philanthropic foundations at local, regional, and global scales. Indeed, through forging such multivalent alliances, the dominant food regime has come to exercise its own sort of sovereignty – though arguably this brand of sovereignty is a negation of popular sovereignty, an assertion that local peoples and nations do not have the right to have rights (Patel 2009). From the perspective of the food sovereignty movement, the complex scalar networks of governments and corporations suggest at least two things. One is that power asymmetries will pervade the struggle for sovereignty, as these dominant actors and institutions have much greater control over and access to resources than do local communities. The second is that the food sovereignty movement must itself adopt a multi-valent and multi-directional strategy if it is to successfully penetrate, interrupt, and intervene in the many points of the food system. One cannot adopt a fixed, small-scale approach to confront such a flexible 'many-headed beast' as capitalist agriculture.

Food sovereignty is, then, inherently a polycentric and multi-level struggle, irrespective of how far specific actors or movements seek to reach. Over the past 25 years, Ostrom, McGinnis, and other scholars have explored at length the emergence and workings of polycentric and multi-level governance systems. Thus far, their work has hardly been applied to the food sovereignty arena. Governance means the processes and rules through which peoples make decisions. In short, "Governance determines who can do what to whom, and on whose authority" (McGinnis 2005). These scholars have highlighted how these systems contrast markedly to, and have appeared alongside, traditional state-centered governance systems that feature centralized authority, sharply defined jurisdictions, and hierarchical levels (Ostrom 2010; Sovacool 2011; Hooghe and Marks 2003; Andersson and Ostrom 2010). Such state-centered systems can conceal many variations in the independence between jurisdictions as well as the importance of informal interactions. These systems, however, themselves frequently include multiple levels: One example is the federal system of government found in the United States where city/county, state, and federal levels have clearly delineated jurisdictions and constitutionally determined allocations of authority.

In contrast, Ostrom (1999, p. 57) defines a polycentric system as "one where many elements are capable of making mutual adjustments for ordering their relationships with one another within a general system of rules where each element acts with independence of other elements". According to Hooghe and Marks (2003), such systems feature fluid, numerous, overlapping jurisdictions in which decisions are made. Authority is dispersed across the many nodes of a polycentric system, so that each node may need to establish its own authority. A polycentric system can include multiple levels (e.g, local to national levels), multiple types (e.g, nested jurisdictions and special cross-jurisdictional units), multiple sectors (from public to corporate to community), and multiple functions (e,g., financing, coordination, and resolving conflicts) (McGinnis 2011). In sum, a polycentric approach mixes levels, mechanisms, and actors to achieve societal change (Sovacool 2011).

Polycentric systems are now becoming more popular among policy-makers and scholars because they are deemed to be more effective in addressing complex environmental and social problems (especially climate change) that bulge beyond specific levels and areas; can bring peoples closer to decision-making power; and can allow experimentation (Pahl-Wostl 2009; Sovacool 2011). Polycentric systems do raise many challenges, notably of conflict resolution, coordination, and transaction costs. McGinnis (2005) argues: "Sharing of responsibilities naturally generates contestation, so the system must include mechanisms through which disputes over the consequences of collective decisions can be resolved". Such mechanisms are often overlooked and not devised, resulting in ongoing struggles over authority and jurisdiction (Temeer et al 2010). A more hierarchical system may be better able to resolve (if not accommodate) conflicts. Nonetheless, polycentric systems are increasingly regarded as more tractable than traditional governance systems because they are more flexible and responsive.

2.4 Rethinking Food Sovereignty As Relational Scale

We now turn to the treatment of 'scale' in the geography literature to unpack the importance of dialectical and non-linear processes that occur across levels in a polycentric governance system. On one hand manifestly apparent, scale is also astoundingly complex, leading two experts in the field to declaim: "conceptions of geographic scale range across a spectrum of almost intimidating diversity" (Sheppard and McMaster, 2008, p. 256). We do not intend to add to this array but rather to use scale as a means of shedding light on food sovereignty's internal tensions and unrecognized common senses; therein lie possibilities for change.

Various approaches to analyzing polycentric governance systems in terms of scale have been proposed. One particularly promising framework is the 'cross-scale interactions' that some ecologists, resilience scientists, and geographers have offered. Cash et al (2006) define scale as "the spatial, temporal, quantitative, or analytical dimensions used to measure and study any

phenomenon." We would highlight, in addition, that scale is fundamentally about measurement in the sense that human actors are trying to frame the world according to their politics, cultures, and knowledge systems. Cash et al use levels as the units of analysis across a scale. They argue, quite originally, that multiple types of scale co-exist, including geographical, temporal, jurisdictional, management actions, networks, and knowledge scales. This breadth allows for more precision in delineating the nature of whatever is being transformed into a scale – but it is still a bounded measurement that reflects the functionalist, positivist nature of Western science. The researchers discuss various kinds of cross-scale interactions such as nested jurisdictions influencing each other. Nonetheless, their framework still assumes fairly uncritically that scale is about size or quantity as seen from particular points in the polycentric system, and treats the cross-scale interactions as an output, not as inherent in scale itself.

As mentioned earlier, the tendency in food sovereignty discourse has been to align scale with size (or a proxy such as capital-intensity). Yet size is only one dimension of scale, and arguably the least interesting from the standpoint of food sovereignty. Sayre (2005, 2009) has helpfully distinguished among scale as size, level, and relation. Scale as size is perhaps the most familiar: it is the carving up of space and time into standardized units of measure – length, volume, and magnitude to take common examples. Scale as level refers to organizational groupings. Here, we can consider both the ways in which elements in nature and society are themselves organized – that is, an ontological view – and how humans group elements together for the purposes of observation, which is an epistemological view.

Scale-as-relation is much more difficult to grasp, as it requires a sharp break from conceiving organizational tiers consisting of bounded, static units. Relational scale is defined as the spatial and temporal relations among processes at different levels, as well as the processes connecting elements within levels. The central point is that the very processes shaping food sovereignty practice are *defining their spatial and temporal frame* and hence their own scale (Harvey 2004). This frame may cross multiple levels vertically and horizontally: it holds its own internal space, in that various structures, peoples, socio-ecological elements, and intangible, non-quantifiable dimensions such as emotional ties and traditional/spiritual solidarity are brought together within it. 'External' influences such as environmental trends, government systems, or market economies can become internalized into (but can also warp) this frame. As David Harvey says, "An event or a thing at a point in space cannot be understood by appeal to what exists only at that point. It depends upon everything else going on around it (although in practice usually within only a certain range of influence)" (2004, p. 4).

Relational scale calls for 'measuring' the world in terms of *processes* happening over time and space, precisely the phenomena (such as building regional food hubs serving urban centers)

that may be more distant to human viewers. Focusing on processes as defining the spatial and temporal frame requires the acceptance and use of alternative, pluralistic forms of process-based measurements beyond the reductionist, point-based ones that prevail in the existing food system. Relational measures are thus peculiarly apposite for a polycentric governance system: multiple nodes of decision-making and agency exist that do not readily map onto a specific level or location only, and that are better understood in terms of their relationships.

One way to apprehend relational scale is to see how this concept may be applied to the scale/sovereignty gaps that we identified earlier. For instance, city infrastructure has a variety of relationships with urban agriculture that are often obscured from the standpoint of African-American farmers transforming vacant, paved-over lots into fertile gardens. This process of producing crops during a season at a site is conjoined with many other processes occurring at other time- and space scales, ranging from local government controlling land availability through city-wide rules, to the creation of neighborhood markets connected to eaters, to the design and use of sewage plants that can provide nutrients, to the process of supplying water and energy to the garden. Growing food is not simply an activity happening 'locally' but is supported or precluded by activities at many other scales. Simultaneously, growing urban food becomes a process that enfolds many elements in a newly emergent spatial and temporal frame that defies existing institutional and jurisdictional boundaries. Insofar as it supports not only alternative modes of production, but alternative epistemologies, growing urban food also demands going beyond dominant scientific and technical types of point-based measurements (e.g., how much food is grown per acre, how many people are acquiring livelihoods, how many gardens are made) to measurements that recognize the changes in agency, communal bonds, or socio-ecological resilience occurring across a city. Changes in infrastructures, labor, and ecological functions may work together to make urban agriculture more or less viable. While these various components reveal cross-scale linkages, their full range of effects – and potential points of intervention – only become apparent when considered as a frame in itself. What may be more important than focusing on a particular level is the *connectivity* of actors and institutions across levels, and the social-ecological proximities engendered by this connectivity.

Taking a relational scale view suggests several key implications for polycentric governance systems such as that of food sovereignty. First, creating, reviving, and strengthening, or, conversely, weakening ties and relationships among different nodes may result in processes that transfer knowledge, authority, and power from some nodes to others (or create new resources for some nodes in relation to others). These ties may be stronger or weaker in degree and nature of connection. Importantly, a spatial and temporal frame is nothing mystical: there are many practical strategies that movements can mobilize to improve connectivity. In this context, food sovereignty movements need to exercise power or influence over not simply the

land used for urban farming but also over city planners, utilities, schools, and bankers, and over flows of water, soil, and crops. Their sovereignty therefore needs to extend across their spatial and temporal frame, not just their specific level or location, calling for attention to the ties that they are creating or undercutting.

Second, new properties or qualities may emerge from how food sovereignty is being expressed through making relationships across a spatial and temporal frame in a polycentric system. Often expressed as "the whole is greater than the sum of its parts," the notion of emergence suggests that behaviors that exist among units at one level, when combined at the next level up, may display patterns of self-organization and properties that cannot be observed in the behavior at the original level (Sayre 2009). In ecology, scale-as-relation finds resonance in current studies of resilience in complex adaptive systems: how do systems transition between multiple stable states? What are the important thresholds, or 'tipping points' between these states? Social scientists often confront relational scale through exploring the production and politics of scale; they look to the historical-geographical processes that configure relationships of human and non-human nature within and across multiple levels –for instance, the body, household, community, city, nation, or world. As in ecology, there is growing interest in thresholds of non-linear or qualitative change in economic, political, and cultural systems across scales, and between processes of different scales. Where these thresholds are found, and how they can be measured, will be of particular importance to food sovereignty movements.

Third, rescaling can play a central role in polycentric systems by changing the existing and ostensibly entrenched relationships between institutions, communities, and producers. Sayre (2005) argues that the geography literature on 'jumping scales' is insufficient to explain what is happening when social actors seek to accomplish certain goals within an established institutional or political system . The idea is that actors may simply move, or 'jump,' their activities from one level to another. Yet, re-scaling always means a new process comes into play as a result. It is not just a matter of jumping scales, but of creating new processes that can change the system itself. Re-scaling is about trying to take advantage of the emergent spatial and temporal frame by, for example, figuring out how movements can gain greater legitimacy and authority by not just speaking to different actors at higher levels but speaking in their languages and knowledge terms. Re-scaling is also about trying to change the kinds of measurements that are being used to define food production. Sayre notes: "It is precisely by rescaling processes that networks have the potential to bypass or subvert conventional hierarchies of power" (2009, p. 105).

The upshot is that food sovereignty movements need to devote much more serious attention to tensions between self-determination and collaboration/alliance-building, as well as between

autonomy and interdependence (including between people and nature). Using relational scale can bridge these tensions because of its focus on working through processes as opposed to simply working within boundaries. Relational scale underscores the indivisibility of humans, ecosystems, and infrastructures in polycentric systems. Importantly, sovereignty is itself a relational concept: sovereign units are always defined in relation to something else and are always a process rather than a 'state'. Sovereignty is not fixed in nature and does not have an endpoint; rather, it is about occupying and measuring a spatial and temporal frame as it emerges, evolves, and atrophies. We suggest, then, that the concept of relational sovereignty may provide a means of gripping this otherwise difficult-to-see frame.

3. Creating Connectivity Across Scales: Applications of Relational Sovereignty

In this section, we examine how the concept of relational sovereignty can help food sovereignty movements devise practical strategies for achieving their aspirations within polycentric systems. Two intertwined elements of relational sovereignty seem particularly significant for achieving food sovereignty: creating the base of sovereignty and building recognition of sovereignty. We explore each element below, before presenting examples from the Potato Park to make the ideas more concrete within a particular spatial and temporal frame (see the overview of the park earlier, which charts this frame).

3.1 The Base of Sovereignty

The first attribute of sovereignty that we explore is the epistemological basis of sovereignty in a polycentric system. Where does sovereignty come from? How does sovereignty create authority? Where is sovereignty exercised, and over what? Despite the vast political science and legal literature examining these fundamental questions, they are frequently left undeveloped in the widespread acceptance of food sovereignty as originating in small-scale, self-reliant, autonomous settings. Food sovereignty movements have the potential to open up these questions more fruitfully and therefore expand their portfolio of strategies and goals. In doing so, we suggest, they need to go well beyond the traditional political philosophy, moral, and institutional bases of sovereignty.

Traditionally, sovereignty has been defined as the quality of having independent authority over a geographical territory (Biersteker and Weber 1996; Krasner 1999). A sovereign entity has the power to govern and make rules for that territory; and the ability to protect the interests and lives of the peoples existing on the territory. The classic model of sovereignty is state-centered and two-fold: externally, a state occupies territory and is acknowledged by other states as having exclusive jurisdiction over that space; internally, that state maintains order within the jurisdiction through laws, administration, and police force (Jessop 2007; Bartelson 1995). Over

the centuries, theorists and rulers have made countless philosophical justifications of sovereignty. Most notable in terms of contemporary democratic states are (1) popular sovereignty which asserts that authority is ultimately held by "the people"; and (2) representative sovereignty that argues final authority is embodied in a governance institution (the people have transferred their sovereignty to that institution). More recently, following the eras of decolonization and emerging indigenous people demands, sovereignty has become equated to the right to self-determination to some extent (Anaya 2004; Crawford 2001). That is, sovereignty is justified as allowing a racial, ethnic, or cultural group to shape its own trajectory, either as an independent entity or as a highly autonomous part within a state, on human rights grounds. One important distinction is that sovereignty can have co-existing legal and factual forms. Whereas an entity may be legally recognized as sovereign, it may not have actual, on-the-ground control or influence, and the inverse can be true.

Sovereignty is now understood in more heterogeneous, relative, polycentric terms. Much recent political science research unpacks how sovereignty has come to be dispersed and shared across a country (e.g., Slaughter 2004; Sassen 1996). The state is no longer the exclusive wielder of power and authority: many other actors have acquired more state-like functions and characteristics. As a result, the epistemic bases of sovereignty are becoming more confused and less grounded in mass politics and state institutions. The corporate food regime depends, in large part, on agri-business corporations claiming authority over supply chains and markets because of their legally affirmed personhood and right to manage their own business jurisdictions. We even encounter the highly individualistic concepts of "sovereign citizens" (a growing trend in the US where libertarian individuals can impose liens on government officials through the legal system to claim "damages" as a means of resisting state power: Goode 2013) and "consumer sovereignty" (in which consumers are said to have the right to choose what they want to consume, and governments should not infringe on this freedom through regulation: Cohen 2004). These concepts echo a long-standing liberal stance that people are sovereign over themselves.

In these ways, traditional concepts of sovereignty entail reducing and simplifying complex social systems to autonomous actors and spheres. This can be seen in scholarly and ruler preoccupations with issues such as: the degree of absoluteness: how far can sovereign power be constrained/dispersed? and the degree of exclusiveness: how far can sovereign decisions be contradicted by other sovereign actors? Yet these questions assume that sovereignty is equated to independence, so that self-reliance becomes the paramount marker.

In contrast, polycentric governance systems, when combined with the concept of relational scale, hint at something qualitatively different. We suggest that sovereignty can be read in a far

more *interdependent* and shared sense -- as 'emergent' from its constituent discrete units, and shaped not simply by sovereign entities but from the ways through which they decide to collaborate and join together in multi-scalar social institutions. Power sharing is implicit in this concept of relational sovereignty. Farmer movements may choose to ally and distribute their power via a La Via Campesina-type network (Wittman 2009). These moves would reflect what many indigenous peoples have historically done in sharing power through village-to-village institutions, and support what community-based cooperatives are already doing (Wollf 2013). These entities may want to create their own viable local territories but can only accomplish this by finding ways to support each other's territories at other levels -- something that is at the heart of La Via Campesina's epistemology. A new trend in federal systems is to make agreements for shared sovereignty shared between levels or between actors at a level (e.g., Ruhl & Salzman 2010). For instance, state governments in the US West have formed a regional carbon trading program, while city governments (e.g., Detroit) are beginning to agree to share oversight over vacant or abandoned lands for urban agriculture purposes. Many political theorists have argued that states and governments are formed from social compacts, but this still leads to a view of sovereignty itself as excluding in the end. We want to emphasize how some forms of sovereignty grows out of sharing, not pure self-reliance alone.

Intriguingly, sovereignty could also grow from the interdependent nature of socio-ecological systems. Some scholars have explored ecological rights: the notion that ecosystems and environments should be treated as having their own existence and agency to shape the planet (e.g., Boyd 2011), alongside human actors. Ecological rights, however, can still reproduce the dominant sense of sovereignty as autonomous. Conversely, we are interested in whether sovereignty comes from how humans *and* natural systems form interdependent relationships with each other, as in the biocultural area concept that the Potato Park has developed (Argumedo 2010). Socio-ecological systems emerge from the processes through which humans and natural systems shape each other. Being able to manage and sustain these interdependent relations can justify what could be named biocultural sovereignty more broadly. This kind of sovereignty can be seen in efforts to create regional agricultural zones in Maine and France; in urban agriculture processes that overcome the metabolic rift in US cities; and in the various sites that FAO's new Global Indigenous Agricultural Heritage Sites program has recognized around the planet. It is not a phenomenon that is confined to the Peruvian Andes or to indigenous peoples; it calls for the growth of different ways to measure biocultural sovereignty in the many spatial and temporal frames that support it. Importantly, biocultural sovereignty can combine with socio-institutional sovereignty to create a re-scaling of a food movement from simply local to multi-scalar.

3.2 Recognizing Sovereignty

The second attribute of sovereignty that we explore is *recognition*: namely, a unit is recognized by other units -- as well as its own constituents -- as having and exerting sovereignty. At the global level, well-established (if open to interpretation) criteria exist in international law for recognizing nation-states as sovereign entities (Brownlie 2008; Lauterpacht 2012). Other nation-states may use a declaration to recognize the appearance of a new nation-state if it meets their criteria. The classic criteria for international recognition as a state include: "(a) a permanent population; (b) a defined territory; (c) government; and (d) capacity to enter into relations with other States."[4] The state should also be an independent entity; the single most important criterion is usually whether there is a viable, working government. Nation-states may also declare that they will recognize a new government that has gained control over a nation-state in circumstances such as a coup. However, in some conditions, formal declarations fall by the wayside: a nation-state or government may gain recognition through day-to-day interactions that implicitly acknowledge its statehood or power.

The politics and law of recognition has also been central to indigenous and 'culturally distinctive' people's struggles for self-determination within extant nation-states since at least the 1970s (Havercroft 2008). Whether a state is obliged to recognize a people within its territory as having their own sovereignty or jurisdiction has been much debated. In international law, the right to self-determination has emerged as a widely accepted, if not always observed, key right for indigenous peoples. Formal recognition is central to the right of self-determination: whether a "people" can qualify as a self-determining group on grounds such as having indigenous identity, a territory, and customary laws; and whether a state is even willing to provide this recognition. Even so, a people may still have practical, on-the-ground autonomy over its own affairs, and may be recognized by the public at large as having this power.

For social movements and collectives that may not have a cohesive racial, ethnic, or cultural identities, recognition of units is far more unsettled. Here, important insights can come from environmental justice scholarship. The US philosopher David Schlosberg argues that the importance of recognition in helping create or perpetuate environmental injustices is largely overlooked. The lack of recognition of a people's identity (e.g., as an indigenous community entitled to control its own culture and land) in governmental policies or public discourse can result in weakening their status in a society. Conversely, providing recognition can enable people not only to resist this marginalization but to strengthen their sense of identity. As Schlosberg says, "The call for justice, in this instance, is a call for recognition and preservation of diverse cultures, identities, economies, and ways of knowing" (Schlosberg 2004). Many

[4] See the Montevideo Convention of 1931.

recent indigenous and rural political movements have centered on demanding respect for their existence and integrity – for their cultural ways of living and means of production (Anaya 2004). In Brazil, for example, agricultural laborers insist that they be recognized as legitimate farmers and holders of land that they have seized, rather than as landless peoples without rights (Wittman 2009).

However in most situations where actors are claiming the right to practice food sovereignty, they are not recognized as being sovereign. Few widely accepted criteria exist to determine their subaltern sovereign status. Villages that band together to form a collective, a rural landless movement, a farmer peer-to-peer learning network, or a cooperative business are all not seen as "sovereign" in terms of the state-centric conception of sovereignty. Thus, in asserting sovereignty, actors are also urging that they *be recognized* as sovereign - they are framing an alternative to a dominant form of sovereignty. Without recognition, these actors will face much more difficulty in accomplishing their goals. In other words, sovereignty has an internal/external dimension. Sovereignty must be legitimized both by and within the communities seeking sovereignty and by external institutions and publics at other scales. In this sense, recognition is relational: it does not simply occur at a particular level but *emerges* through how multiple acts and behavior of recognition cumulatively take place at multiple levels - in short, across the spatial and temporal frame for the food sovereignty effort. In turn, these acts can only happen in the form of ongoing processes that need maintenance, and that represent re-scaling efforts.

Such recognition, of course, may be unlikely to come from the very institutions against which sovereignty is organized: groups such as the WTO, the G8, and the World Bank specifically do not recognize or include social movements in their deliberations. Even given the paradoxical nature of recognition, however, there is much room for leverage. Recognition of food sovereign units could happen though various mechanisms and processes, including reforming regional and national laws, obtaining official legitimacy through alliances with NGOs, certification programs, governments, and international organizations at other levels, and winning back previously appropriated control over important resources such as land and seeds. Recognition also calls for new, process-based measurement of the degree to which a movement is recognized, by whom, and at what scales. Yet the food sovereignty movement, to date, appears much more focused on asserting sovereignty than on understanding and plotting how this sovereignty will be legitimated or measured. Movements, then, need to develop strategies for how to become recognized as progenitors of food sovereignty.

3.3 Applying Relational Sovereignty Through the Potato Park

The Potato Park exemplifies how food sovereignty movements can creatively conceptualize their spatial and temporal frames, and accordingly develop practical strategies to advance their sovereignty, without falling into the scale/sovereignty gaps that we explored earlier. Rather than try to dissect out strategies for building the base of sovereignty and achieving recognition, we show how both can emerge from the work that Potato Park communities are doing to support their interdependence while simultaneously setting in play and benefiting from a variety of processes that work across their spatial and temporal frame.

Quechua peoples see people and nature as inextricably linked within the *ayllu* system, the traditional form of community in the Andes. Although academic definitions of the *ayllu* vary widely, with some characterizing it as a socio-economic system; others as a unit of commonly held territory; and still others as a process of collectivism, as it has been interpreted by the Potato Park communities, it is above all a social *and* ecological phenomenon. They describe the *ayllu* as a "social-ecological terrain made up of three intersecting realms: the *runa* (domesticated plants and animals), the *sallka* (wild animals, plants, and crop relatives) and the *auki* (the community of the sacred, including *apus*, *pakarinas*,[5] and others)" (Argumedo 2012). According to Quechua belief, only by achieving balance between the land (*Pachamama*) and these three *ayllus* can one achieve S*umaq Qausay*,[6] or 'the good life.'

The *ayllu* is thus a social-ecological concept that provides the basis for the Potato Park's sovereignty. As such, it is a concept of sovereignty that does not fit easily Western categories; based neither in popular democracy, institutional power, nor the state, it grows out of how humans live in relations with nature. It is *biocultural* sovereignty. We consider this form to be an intrinsically relational apprehension of sovereignty, in which the society and environment cannot be reduced to the sum of their parts, since pieces cannot be isolated, abstracted, or removed from the system without disrupting the integrity of the whole (Argumedo 2012). The *ayllu* also reflects scalar tensions between continuity and change; while seeking to conserve traditional customs and norms, the *ayllu* emphasizes continuity across every changing cultural, physical, and biological realms.

[5] Pakarinas are sacred places to which communities trace their ancestry – they can be water sources, or other points in the physical landscape at which groups literally emerged into creation.

[6] *Sumaq qausay* itself represents an affront to the dominant political-economy, in which wellbeing is often measured in terms of monetary income or financial assets. Instead, the Quechua notion of wellbeing considers diverse elements of the human condition, including the values, knowledges, and practices that influence quality of life – with 'life' applying to humans and non-human beings alike. Anticipating the core tenets of food sovereignty, *sumaq qausay* supports the right of people to control their own resources, economies, and livelihoods; it enables local peoples "to choose what cultural values they embrace" (Argumedo 2010).

Local political control over natural resources and traditional knowledge in the Potato Park has been greatly strengthened through the development of an Inter-community Agreement for Benefit Sharing – a formal arrangement amongst the communities of the Park, borne of the realization that asserting sovereignty with external groups had to be based upon internal consensus. We find the Inter-community Agreement to be a fascinating illustration of the ways in which the Potato Park has navigated around the state scale, first by designing a binary system of governance within the Park, and second by designing the Agreement to be consistent with protocols at international scales of sustainable development, food, and conservation law.

As mentioned previously, customary law carries little weight in the eyes of the Peruvian state. The Potato Park has met this challenge by designing a governance system that is consistent with formal (Constitutional) law yet reflects the continued wish by communities to be governed by customary law. In practice, this means a binary governance scheme: formal local organizations with elected authorities are recognized by the Peruvian state as legal representatives of the Potato Park, while traditional authorities continue to fulfill multiple important roles within the communities without formal state recognition.

Both the formal and the customary systems take the shape of a three-level pecking order. By the terms of Peru's "Comunidades Campesinas" Law (No. 24656), the formal system is based on a general assembly, a community board, and specialized sub-committees. The customary governance structures, meanwhile, reflect the indigenous perspective: a landscape-scale, a community-scale, and a family-scale.

The NGOs ANDES and IIED aided the Potato Park in drafting the Agreement to be consistent with international protocols on 'access and benefit-sharing' (ABS), specifically the Nagoya Protocol under the framework of the Convention on Biological Diversity, and the Food and Agriculture Organization's International Treaty on Plant Genetic Resources ('Plant Treaty'). However, according to the written report describing the participatory project that led to the Agreement (IIED 2011), the Agreement explicitly rejects conventional ABS models that "that seek to divorce indigenous knowledge from its biological and cultural context." Uncertainty still lingers over how the Nagoya Protocol and Plant Treaty will be implemented, but the Agreement was a clear effort to anticipate and prepare for forthcoming international negotiations, and to take advantage of the WTO's TRIPS which offers an intellectual property loophole if nations provide their own sui generis systems for recognizing indigenous rights. Dominant approaches to ABS, which are based largely on Western property rights are not only foreign to Quechua understandings of the communal, but also facilitate the commodification of indigenous knowledge by defining it as an object instead of as a relationship, the report notes. "Thus

objectified, indigenous knowledge can be severed from culture and nature, and extricated from the landscapes in which it is embedded."

Biocultural sovereignty has also played a crucial role in the Potato Park's endeavors to gain recognition for its local territory and socio-ecological governance from numerous governmental and international institution actors. One especially important process of winning recognition led to an agreement with the International Potato Center, or "CIP", to repatriate its genetic resources back to the Potato Park, affirming its seed sovereignty. CIP sits on a barren desert hill in the capitol city of Lima, about 600 kilometers northwest of Cusco. Lining the shelves of neon-lit cold chambers and freezers are representatives of each potato variety in the Potato Park plus thousands of other varieties from across the globe. As custodian of the world's largest in vitro gene bank, CIP holds over 80% of the planet's native potato and sweet potato cultivars and about 80% of the known species of wild potato (CIP 2011). Of the seven original potato species domesticated 8,000 years ago, it conserves about 4,500 varieties – more than 2,500 of which are native to Peru.

This model of off-site, or *ex situ*, agrobiodiversity conservation has done much for safeguarding germplasm and for improving certain crops, but it also has major limitations (Frankel and Bennett 1970, Oldfield 1984). One problem is that *ex situ* methods take no account of farmers and farmer knowledge. By their very definition, crops are a product of intimate cultural-ecological interactions (Nabhan 1985), yet *ex situ* methods cannot replicate the ecological or knowledge contexts in which crops evolved (Altieri and Merrick 1988). Until very recently, the global network of gene banks and agricultural research centers of which CIP is a part have largely emphasized *ex situ* approaches, which were consonant with their focus on increasing yield rather than on maintaining sustainable harvests. Landraces and wild relatives were simply collected from their native habitats and their genes placed in banks for storage or breeding collections.

It was therefore a major coup when, in 2004, the Potato Park communities, with assistance from ANDES, IIED and the Dutch government, successfully negotiated an agreement with CIP for returning hundreds of potato varieties to the Park (New Scientist, 2005; Shetty, 2005; Argumedo 2012). Under the terms of the agreement, CIP scientists and the Potato Park farmers would collaborate to grow and study these potatoes *in situ*, and commercial rights over the genetic materials would be transferred from CIP back to the local communities. For CIP, the agreement emerged from a broader recognition amongst the CGIAR, the FAO, and various national governments, that global food security is imperiled by relying solely on *ex situ* strategies, especially in the face of climate change. In partnering with the Potato Park communities, CIP established a unique *in situ – ex situ* system, including a plan for ongoing

collaborative research. CIP researchers and local farmers would be able to investigate how the specimens culled from CIP's vast collection develop and evolve as they begin growing anew in the Park's farmlands.

For the communities of the Potato Park, as well as for many independent watchdog organizations, the repatriation agreement signaled a major victory for seed sovereignty. Biowatch South Africa, an organization that monitors privatization of biological resources, commented that the CIP-Potato Park repatriation agreement "signals a new way of working for CGIAR centers – one which advances the rights of local farming communities, over those of corporations, and which places the ownership of genetic resources firmly with the local custodians of these resources" (Shetty 2005). Importantly, the agreement was not an attempt by the Potato Park communities to secure intellectual property rights – and future patent rights – over indigenous potato strains. Rather, it was their effort to ensure that *no one else* could claim rights over indigenous knowledge, as has so often happened in Latin America. The repatriation agreement, unprecedented in CGIAR history, also proved to be a strategic boon for the Potato Park. Prior to partnering with CIP, the Park had struggled to gain any kind of official legal recognition. By entering the authority hub of the CGIAR network, it gained a new legitimacy in the eyes of regional and national policymakers as well as with potential donors and collaborators. In subsequent years, Park communities have collaborated extensively with two NGOs, namely ANDES and IIED, to circumvent the obstacles posed by an antagonistic national government. In a kind of snowball effect, other relations, and other victories soon followed. Largely due to the Park communities' increased recognition and clout, the Cuzco regional government, for example, has now established ordinances against biopiracy and entry of transgenics into the department.

Most recently, the Potato Park, ANDES, and IIED have furthered their ties to the international governance community, strategically targeting these efforts to both biodiversity conservation and food security circles. In 2010, the Potato Park became a pilot project for the Satoyama Initiative, established at the 2010 Nagoya meeting of the Convention on Biological Diversity. The Satoyama Initiative, by its own description, "promotes and supports socio-ecological production landscapes, which have been shaped over the years by the interaction between people with nature….[it] aims to realise societies in harmony with nature where both biodiversity and human well-being are maintained harmoniously" (Satoyama 2011). In the food security realm, the Potato Park has partnered with the Food and Agriculture Organization to become part of its recently-launched program to protect "Global Indigenous Agricultural Heritage Sites" (GIAHS). The first pilot case for GIAHS includes a transect stretching from Cuzco in the south to Lake Titicaca in the north and encompasses all six of the Potato Park communities. Both the Satoyama and GIAHS initiatives reflect a heightened awareness at the

international level that traditional knowledge is inseparable from, and intrinsically linked to, both biodiversity conservation and food security.

The Potato Park and its NGO allies are now maneuvering to present the Park to the international policy community as a model agroecological system, further developing its biocultural sovereignty. In turn, these multiple acts of recognition help legitimate the Park's sovereignty within Peru, both for its communities and for various levels of government. All these activities take place within the spatial and temporal frame of building food sovereignty in the Park, which thereby pulls in many levels, actors, and processes. Importantly they are also refashioning the concept of sovereignty: as a spatial and temporal frame grounded in the ayllu's three (vertically and horizontally) interlinked worlds of spirits, wild nature, and human/domesticated nature; as an effort to re-scale sovereignty along lines that legitimate the communities' own language and knowledge terms; and as a way of changing the very basis of sovereignty through a vision of right-based reciprocities and mutualisms.

4. Conclusions

Food sovereignty movements face a conundrum stemming from how they have configured their work -- as a resistance to large-scale, industrialized production, processing, distribution, and retail, as well as to the globalized food system. The emphasis on promoting and pursuing an idealized small and local scale for food sovereignty has meant that movements have devoted less energy to a reflexive exploration of their sovereignty: How does sovereignty emerge, and from what or whom? Is sovereignty an ambit to access new resources, gain recognition as authoritative decision-makers, or transmute institutional barriers? Movements have also not fully appreciated the multiple determinations of scale, leading to at least five major scale/sovereignty gaps that may impede their continuing growth, or even result in a failure to sustain a challenge to the existing food system over longer time and space horizons.

To address these scale/sovereignty gaps, we show that food sovereignty is itself polycentric in character and replete with multiple points of decision-making authority, in common with the larger food system that it seeks to transform. We draw on the concept of relational scale to call for a very different way to understand what food sovereignty movements are doing: the very processes shaping food sovereignty practice are *defining their spatial and temporal 'frame'* and hence their own scale. This frame holds its own internal space, in that various structures, peoples, socio-ecological elements, and intangible, non-quantifiable dimensions such as emotional ties and traditional/spiritual solidarity are brought together within it, and connections are being made throughout it. In turn, multiple frames and scales are being formed

as diverse food sovereignty movements engage with the existing food system, connect with each other, and measure this system.

Understood in terms of relational scale, food sovereignty becomes as much a practice of creating connectivity as of creating autonomy. Stronger ties within the diverse/polymorphous food sovereignty movement and between the movement and potential allies will not only strengthen the basis of sovereignty, but will give it space in which to evolve: New properties or qualities may emerge from how food sovereignty is being expressed through making relationships across a spatial and temporal frame. We especially want to underscore: “It is precisely by rescaling processes that networks have the potential to bypass or subvert conventional hierarchies of power”.

Though notoriously difficult to articulate and apply, relational scale is a concept of much potential value for food sovereignty, both in terms of practical strategies and strengthened theoretical foundations. What may appear a limited example (an indigenous people’s park high in the Andes) is manifestly "scalable" and applicable to many contexts worldwide. The practical work such as creating the base of sovereignty and building recognition of sovereignty can be applied anywhere, if adapted to particular social and geographic circumstances. Being able to create multiple, interdependent bases of sovereignty can position movements to create alliances, become better able to ‘measure’ the food system in radically different, process-based terms, and manage the perennial tensions between autonomy and interdependence. Being recognized as “sovereign” by influential institutions and decision-makers may be critical in enacting policies, allocating institutional resources, providing financial support, and carrying out other activities that support the movement.

One key thought for food sovereignty’s future is that it, as a counter-movement, has gained its identity largely in opposition to something else (the corporate food regime). As a result, the autonomy and self-determination that food sovereignty wants to nurture have been framed, understood, and embedded in the subjectivity of the movement in struggling to gain independence from dominant food system forces. But that is just it: these principles are *in relation* to the dominant food system. If and when progress is made at peeling back the power of that dominant system, food sovereignty will necessarily need to evolve further and further away from autonomy (autonomy from what at this point?), and more towards interdependence. The pathways of achieving food sovereignty need not to foreclose on this possibility.

Finally, we want to conclude with a reflection on the often unseen importance of human leadership in providing “scale intelligence” to food sovereignty movements. Recognizing and

acting through a spatial and temporal frame is a skill that can be learned but takes much time, commitment, and effort. One person has been particularly influential in helping develop what we call relational sovereignty: Alejandro Argumedo, a Quechua-Canadian citizen who has devoted his life to developing ANDES as a platform from which to promote indigenous biocultural sovereignty. It was ANDES and IIED that provided the institutional support to get the Potato Park concept off the ground. Since then, Argumedo has served as a spokesperson on behalf of the Park communities, co-authoring many of the publications related to the Potato Park, with IIED and the United Nations University, advocating the Park at countless conferences and international negotiations, making connections to other influential spokespeople such as Raj Patel and Vandana Shiva, and training many interns to do research for the Park. Without his uncanny ability to work with relational scale, the Potato Park would not have emerged in the way that it has.

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Food Sovereignty:
A Critical Dialogue

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FOOD SOVEREIGNTY: A CRITICAL DIALOGUE INTERNATIONAL CONFERENCE PAPER SERIES

A fundamentally contested concept, food sovereignty has — as a political project and campaign, an alternative, a social movement, and an analytical framework — barged into global agrarian discourse over the last two decades. Since then, it has inspired and mobilized diverse publics: workers, scholars and public intellectuals, farmers and peasant movements, NGOs and human rights activists in the North and global South. The term has become a challenging subject for social science research, and has been interpreted and reinterpreted in a variety of ways by various groups and individuals. Indeed, it is a concept that is broadly defined as the right of peoples to democratically control or determine the shape of their food system, and to produce sufficient and healthy food in culturally appropriate and ecologically sustainable ways in and near their territory. As such it spans issues such as food politics, agroecology, land reform, biofuels, genetically modified organisms (GMOs), urban gardening, the patenting of life forms, labor migration, the feeding of volatile cities, ecological sustainability, and subsistence rights.

Sponsored by the Program in Agrarian Studies at Yale University and the Journal of Peasant Studies, and co-organized by Food First, Initiatives in Critical Agrarian Studies (ICAS) and the International Institute of Social Studies (ISS) in The Hague, as well as the Amsterdam-based Transnational Institute (TNI), the conference "Food Sovereignty: A Critical Dialogue" will be held at Yale University on September 14–15, 2013. The event will bring together leading scholars and political activists who are advocates of and sympathetic to the idea of food sovereignty, as well as those who are skeptical to the concept of food sovereignty to foster a critical and productive dialogue on the issue. The purpose of the meeting is to examine what food sovereignty might mean, how it might be variously construed, and what policies (e.g. of land use, commodity policy, and food subsidies) it implies. Moreover, such a dialogue aims at exploring whether the subject of food sovereignty has an "intellectual future" in critical agrarian studies and, if so, on what terms.

ABOUT THE AUTHORS

Alastair Iles is an Associate Professor of Science, Technology & Environment in the Department of Environmental Science, Policy, and Management at the University of California at Berkeley; and the faculty co-director of the new Berkeley Food Institute.

Maywa Montenegro is a PhD student in the Department of Environmental Science, Policy, and Management at the University of California at Berkeley.