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On: 14 July 2015, At: 12:38

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: 5 Howick Place, London, SW1P 1WG



Globalizations

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/rglo20>

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Published online: 16 Sep 2014.



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To cite this article: Alastair Iles & Maywa Montenegro de Wit (2015) Sovereignty at What Scale? An Inquiry into Multiple Dimensions of Food Sovereignty, *Globalizations*, 12:4, 481-497, DOI: [10.1080/14747731.2014.957587](https://doi.org/10.1080/14747731.2014.957587)

To link to this article: <http://dx.doi.org/10.1080/14747731.2014.957587>

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Sovereignty at What Scale? An Inquiry into Multiple Dimensions of Food Sovereignty

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ABSTRACT *Food sovereignty has struggled to make inroads into changing the structures and processes underlying the corporate food regime. One reason is that scale is still underspecified in the politics, strategies, and theories of food sovereignty. We suggest that much can be learned from examining the multiple dimensions of scale inherent in ongoing food sovereignty struggles. A gap exists between these in vivo experiments and the maturing academic theory of scale. The concept of 'sovereignty' can be opened up to reveal that movements, peoples, and communities, for example, are creating multiple sovereignties and are exercising sovereignty in more relational ways. Relational scale can aid movements and scholars to map and evaluate how spatial and temporal processes at and among various levels work to reinforce dominant agri-food systems but could also be reconfigured to support progressive alternatives. Finally, we apply relational scale to suggest practical strategies for realizing food sovereignty, using examples from the Potato Park in the Peruvian Andes.*

Keywords: food sovereignty, scale, multiple sovereignties, relational scale, networks

1. Introduction

Food sovereignty has emerged as an idea and practice that could transform current agri-food systems to far more democratic, decentralized, and ecologically sustainable forms. Many movements worldwide are creating or reviving alternatives, from food policy councils in the USA to *campesino-a-campesino* networks in Central America, to seed sharing coalitions in India. Nonetheless, food sovereignty¹ has struggled to make deep inroads into changing the structures and processes underlying the corporate food regime (CFR).²

Scholars and activists have offered various explanations. For example, Hospes (2014) argues that international institutions such as FAO and the WTO remain impervious to the principles of

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food sovereignty. Though several countries such as Ecuador and Bolivia have adopted food sovereignty policies and constitutional provisions, their implementation remains fragmentary. Analysts such as Patel (2009) and McMichael (2009b) find entrenched capitalist power structures favoring the CFR frequently thwart official state level recognition. In contrast, others attribute the weakness of food sovereignty to the conceptually vague nature of ‘sovereignty’ (e.g. Agarwal, 2014; Claeys, 2012; Edelman, 2014; Hospes, 2014). These critics commonly use La Via Campesina’s evolving definition of sovereignty—changing markedly from 1996 to the present—to argue inherent inconsistency even though this can also reflect diverse approaches depending on context (Patel, 2009). Moreover, they suggest, there appear to be fundamental contradictions between food sovereignty’s solidarity vision and individual farmer rights. How to respond to these challenges has incited a similarly polarized conversation: some want to re-formulate food sovereignty in terms that are more palatable to powerful elites, while others call for oppositional strategies against dominant institutions. Still others seek greater juridical definitional rigor.

A thread running throughout these debates, though seldom explicitly interrogated, is that of scale. Both academics and activists, we suggest, use, invoke, and depend upon scale in conceptualizing food sovereignty and agri-food systems more broadly. Yet they are still wrestling with a precise conceptualization of scale (both physically and metaphorically) in their politics, strategies, and theorizing. For example, localized food systems are often opposed to the CFR but the scale in question may be ambiguous. What does ‘local’ mean, how is it bounded, and by whom?³ Should the small be the primary scale at which production occurs? Does the grassroots contain or connect to other levels as well?

What appears to have gone awry is a two-part dilemma: first is scant appreciation of the multiple dimensions of scale inherent in many food sovereignty experiments already underway around the world. Some movements, peoples, and communities employ a more malleable, ‘relational’ ontology of food sovereignty in their work to unseat dominant institutions. Second is a gap between developments on the ground and maturing academic theory on scale. Particularly amongst human geographers and political ecologists, relational scale has emerged as a more dialectical way of thinking about space, time, measurement, and process for any given phenomenon.

We suggest that exploring the concept of relational scale could pluck food sovereignty efforts off the horns of this dilemma. By reminding us all that sovereignty is not an extraneously existing object but is a *living process*, it foregrounds the conscientious building and maintaining of relationships between people, institutions, technologies, ecosystems, and landscapes across multiple scales. It provokes more attention to the how of systemic change than to the what. To date, food sovereignty scholars and movements have tended to assume that scale is a matter of size or level, which organize and bind familiar parts of agri-food systems: level often refers to the institutional levels of government and markets (e.g. local and national), while size means spatial or organizational reach (e.g. small farms and multi-national corporations). In contrast, relational scale encompasses the spatial, temporal, epistemic, and social infrastructure connections among processes within and across different levels. Relational scale can be conceptualized as networks of elements and processes in a complex adaptive system. Such systems exhibit the hallmark features of complexity, including threshold effects, emergent properties, and network-dependent cascades across the system that put it into a different state, potentially undermining dominant power structures.

This process of contingent sovereignty is illustrated in the Parque de la Papa (or Potato Park). This alliance of indigenous farmer communities in the Peruvian Andes aspires to protect its seed

sovereignty and agrobiodiversity through maintaining its traditional farming landscape—but has discovered that it needs to make strategic alliances with scientific research centers, government agencies, and global treaty negotiations at levels ranging from the municipality of Cusco to the United Nations. It has also articulated a concept of biocultural heritage that is at once congruent with Quechua cosmovisions and readily suited to use in political debates, institutional procedures, and across these levels. As a result, the Potato Park has begun exercising sovereignty over its local agricultural terrain but reinforces this power by enlisting the sovereign powers of various other actors and institutions; the latter help legitimate the park through ‘recognition’ and can provide critical resources such as support for traditional markets and livelihoods. As its networks expand, the Park is being recognized more and more readily as a sovereign actor.

Considering relational scale, however, leads to a questioning of the ontology of sovereignty itself. Relational scale, we suggest, resonates with the concept of multiple sovereignties that are now emerging in contemporary societies around the world (McMichael, 2009a; Patel, 2009; Schiavoni, this issue). According to McMichael (2014), La Via Campesina initially invoked ‘sovereignty’ as a trope; it was a cognitive and political maneuver to reclaim state-centered, national sovereignty from the WTO and the global markets in the face of increasing free trade and deregulation. But food sovereignty is now metamorphosing into something more ontologically fertile than nationalist choreography. For example, some movements are recreating sovereignty as non-state-based and grounded in new instantiations of territorial and communal relationships, such as the Brazilian MST movement’s efforts to foster agrarian citizenship through empowering peasant farmers to practice agroecology (Wittman, 2009). The concept of multiple sovereignties sees the growth of many actors, communities, and institutions wielding or seeking sovereign power over things such as seeds, knowledge, and farming practices; parts of food systems; and their cultural and territorial worlds. Equally important, in this view, sovereignty becomes a malleable and ‘negotiable’ power⁴ which particular movements, peoples, or communities can seize, create, oppose, or reshape as against the state, cities, corporations, and other sovereign actors.

We propose that food sovereignty involves (1) creating and sustaining these multiple sovereignties and (2) turning sovereignty itself into a relational form and a process. In this paper, we explore how these developments are intertwined, beginning with a review of how sovereignty has developed over the past few centuries. We then define relational scale and discuss how this can provide analytical optics that analysts can use to understand and act on the multiple dimensions of scale. Finally, we apply relational scale to suggest some practical strategies for realizing food sovereignty, using examples from the Potato Park.

2. The Legacy of Sovereignty

It is critical to interrogate what precisely movements and scholars are doing when they call on one of the most hallowed artifacts of political theory and practice: sovereignty. We begin by revisiting the concept of sovereignty. Sovereignty appears to naturally occur as an immutable part of the political system. Yet, sovereignty is remarkably ambiguous for the conceptual weight it is asked to support. The modern concept of sovereignty is still only 350 years old, having coalesced during the Westphalia era as nations began to demarcate their borders more clearly, and solidifying as national governments acquired new political and economic functions during the industrial revolution period. Sovereignty is now closely identified with the modern state as a form of political organization. According to Hinsley (1986), the state is sovereign because it monopolizes the use of coercive power, controls fixed territory, and can make and enforce laws governing the behavior and lives of the peoples that live within its territory.

Sovereignty therefore has a heavily spatial and juridical character: in principle, nation-states have undivided, supreme legal authority within their territory (Bartelson, 1995).

In most conventional accounts of the emergence of sovereignty, there is a linear progression toward a 'stripped down' sovereignty concentrated in a nation-state that is increasingly bureaucratic, dependent on legal and taxation mechanisms, and supported by military forces. Over three centuries from the 1600s onwards, states 'consolidated control over their territories and then defined social, cultural, economic, and security structures to be coincidental with territorial boundaries' (Ilgen, 2003a). Alternative forms of political organization became much less plausible. Several bases for state-centered sovereignty have developed, ranging from the notion that peoples are making a social contract to form a state, to the argument that states are sovereign in representing the political community of their peoples. Nonetheless, a difficult tension exists between sovereign power and individual freedom, which the framework of participatory democracy is meant to help resolve in some countries (Bartelson, 1995). The assumption underlying these bases is that enabling sovereignty calls for the surrender of power and autonomy to whatever entity is regarded as sovereign. The sovereign itself is then autonomous, largely free from the demands of others, and able to exclude others from participating in its affairs.

This composition of sovereignty contrasts with what has been described as 'medieval sovereignty'. Ilgen (2003a) explains that prior to the 1600s, sovereignty took a far more multi-layered, overlapping, and multi-directional form in the many city-states, republics, regions, and confederations of West Europe. Crucially, sovereigns existed *in relation to each other*: even though a hierarchy existed, each level was obliged to perform its responsibilities toward lower and higher levels while also having power to rule over lower levels. Sovereigns thus often needed to negotiate with one other, while following customary and religious conventions, and relying on shared social institutions to help manage conflicts. This Euro-centric account, of course, ignores the great variety of political systems across the planet, such as pre-Incan societies in the Andes, the Native American confederations, or the clan-based societies of West Africa. These systems reveal that sovereignty can manifest more diverse and interdependent forms than its modern conception.

Taking this historical perspective, we can appreciate that sovereignty is a social construction that can be challenged and remade, especially during moments of political turbulence. Sovereignty is filled with tensions that need to be negotiated repeatedly over time and space. Even in existing government systems that are ostensibly stable, whether federal or unitary, negotiations abound as a condition of workability. Camilleri (1990) notes usefully that 'sovereignty is not a fact but rather an expression of a claim about the way that political power is or should be exercised'. Over the past 40 years, a conjunction of developments has made national boundaries increasingly permeable. A familiar roll-call includes the historically unprecedented magnitude and pace of economic and technological exchanges, emboldened multi-national corporations trading with each other, the growing realization that environmental problems transgress borders, and the rise of unconventional wars that challenge centralized military forces (Camilleri, 1990; Ilgen, 2003a). Nation-states have been forced not only to acknowledge that they must share sovereignty with other states, international institutions, global civil society movements, and the workings of a capitalist global economy—but that multiple sovereignties are present within their territories and societies.

Two developments within this larger context are of particular relevance to food sovereignty movements. First, sovereignty is no longer simply juridical and territorial. Sovereignty is also being expressed in forms that political scientists have long described as 'soft power'. Second,

as nation-states have become more porous, experimentation with institutional arrangements has increased, particularly in Europe, Latin America, and Asia.

In reviving non-territorial definitions, economic sovereignty or power has led the way, as sub-national regions and cities around the planet seek to integrate themselves into a global economy. Conversely, national governments, whether industrial or developing, are struggling to defend their ability to regulate their economies as banks and companies swiftly move their capital and manufacturing from place to place, creating their own sovereign power. Indeed, corporations arguably have pioneered the practices of multiple sovereignties through their accelerating intra-firm trade, influence over many national legislatures, and supply networks.⁵ In many cases, it has been businesses that have invented key components of agri-food systems, such as industrial-scale abattoirs or standardized grain exchanges.

Ilgen (2003a) defines sovereignty as the capacity to make binding decisions and to oversee their implementation. We would add that sovereignty includes the capacity to act authoritatively (or asserting agency); the ability to influence political and economic processes; and the rights to participate and to be consulted. That is, sovereignty may not be felt in the 'bindingness' of decisions, but be exerted through the active reshaping of cognitive, political, and economic arrangements. Taking broader courses of action and the creation of new interpretative conventions may be as important as making specific decisions. Moreover, we argue that sovereignty can take the form of influence or control over a wide variety of social and ecological goods. These may encompass cultural heritage, scientific and traditional knowledge, technologies, environmental resources such as water, biomass, minerals, and energy, and genetic resources such as seeds. While economic sovereignty is more familiar, especially in the dominant economic frames prevailing in current political systems, these sovereignties also matter and are being asserted by many social movements, indigenous peoples, and localities. It is clear that sovereignty does not have to follow territorial boundaries but can follow flows of energy, genes, knowledge, materials, and peoples.

In turn, regarding the emergence of institutional experimentation, Fosler (2006) notes that, over the past 25 years, there have been many attempts to adapt existing institutions to new flows of capital and political power. Some national governments and the European Union have devolved some authority to lower institutional levels, adopting the principle of subsidiarity (or the idea that decision-making should be matched more carefully to the appropriate scale). Sullivan (2003) argues that in the area of water sovereignty, local and regional governance regimes are taking on greater significance compared to national governments. In turn, Ilgen (2003b) investigates the emergence of some smaller cities in the USA as sites of development as city governments pursue financial investments and technology transfers from the global level. These authorities are often much more cognizant of their local features than more remote government units, which may also be ponderous and ineffectual in their capability to govern. In Europe, Asia, and Latin America, there is a nascent turn toward regional networks that can cross national borders, following geographical, ecological, and cultural commonalities. Even though institutional arrangements and jurisdictions in general remain durable and entrenched, there are many efforts underway to loosen these.

Sovereignty, then, has a highly spatial-temporal character. It is not static or immutable but is historically contingent and dependent on the practices of humans and their institutions. Far from being a linear progression toward a specific state-centric form, sovereignty is better understood as co-evolving with changing societal actors, political processes, and ecological and economic conditions. The scope and characteristics of sovereignty will vary over time and space: sometimes it will be centralized and sometimes decentralized; it can be more or less durable.

Importantly, if sovereignty is socially constructed, there is a politics of making sovereignty. Sovereignty is something that is ‘negotiable’—capable of being built, re-shaped, and fought over—rather than prescribed by institutional writ or frozen in a political community ideal. What sovereignty means and what it empowers actors to do are not fully known in advance or reducible to constitutions. As a result, sovereignty is growing more multi-dimensional again, extending far beyond the traditional state-centric model.

3. Integrating Scale into Sovereignty

Patel (2009) argues:

In blowing apart the notion that the state has a paramount authority, by pointing to the multivalent hierarchies of power and control that exist within the world agri-food system, food sovereignty paradoxically displaces one sovereign but remains silent about the others. (p. 668)

That is, while movements seek to depose the traditional sense of sovereignty, they have not yet figured out how to share, combine, or connect the array of sovereignties that exist at multiple scales within and beyond the umbrella of current food sovereignty movements. Relational scale may offer guidance in this regard, enabling advocates to follow the flows, locations, and processes of sovereign power.

Of utmost importance to fields ranging from ecology to human geography, mathematics to agronomy, scale has recently been defined as ‘the spatial, temporal, quantitative, or analytical dimensions used to measure and study any phenomenon’ (Cash et al., 2006). Cash et al. (2006) suggest that multiple types of scales co-exist—including temporal, spatial, jurisdictional, and knowledge scales—and that it is possible to trace ‘cross-scale interactions’ within nested systems. However, this definition of scale focuses solely on the *epistemology* of scale measurement and observation; it does not consider the ontological aspect of scale, insofar as levels of organization and scalar processes exist in the material world. It therefore leaves aside the notion that epistemological and ontological ‘moments’ of scale (cf. Sayre) can influence one another. It also assumes a fixed hierarchy of levels—a rigidity that may not actually exist, or may not be necessary for organizing a system. Despite the fact that conceptions of scale range across a spectrum of ‘intimidating diversity’ (Sheppard & McMaster, 2008, p. 256), we believe that food sovereignty demands a more careful interrogation of the meaning of scale—both in and for sovereignty. A good place to begin, we suggest, is Sayre’s (2005, 2009) delineation of scale’s three components: size, level, and relation.

Scale as size is the most familiar: it is the carving up of space and time into standardized units of measure—length, volume, velocity, and size, to take common examples. Scale as level refers to organizational groupings such as organism, population, species, and community (in biological systems) or household, village, nation-state, and world (in social systems). Sayre considers both the ways in which elements in nature and society are themselves organized (an ontological view) and how humans group elements together for the purposes of observation (an epistemological view). Scientists tend to classify phenomena into levels based on the scales at which they can be observed and measured. Scale-as-relation is more difficult to grasp, as it requires a sharp break from conceiving organizational tiers consisting of bounded, static units. Relational scale is the spatial and temporal relationship among processes at different levels, as well as the processes connecting elements between levels.

The idea of process is central to relational scale, namely tracing processes at and across levels, and understanding how they are helping configure and constrain food production. Relational

scale also suggests that ‘the whole is greater than the sum of its parts’. Complexity theory has shown 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). Similarly, for three decades, political ecologists have explored how economic, ecological, biological, climate, and political processes can work at local levels but are mediated or caused by institutions, markets, and policies found at other levels and at some spatial and temporal distance (Robbins, 2012). Blaikie and Brookfield (1987), for example, originated the practice of following ‘chains of explanation’ from immediate local phenomena to national and global level developments.

Thus, relational scale can support valuable analytical optics that scholars and movements can apply to better engage with the multiple dimensions of scale. These optics, moreover, suggest how thinking relationally, in both diagnostic and interventionist modes, enables advocates to better tackle the CFR.

In diagnostic mode, relational scale helps us in the following ways:

3.1. *Understand Why Capitalist Agriculture Processes Are Difficult to Target*

A fundamental question that academics and activists aligned with the food sovereignty movement is wrestling with how to counter the substantial power of capitalist agriculture in shaping agri-food systems. Some analysts have developed a cogent analysis of power and political economy in the food system; this structural critique is among their greatest strengths (e.g. Holt Giménez & Shattuck, 2011; Wittman, Desmarais, & Wiebe, 2010). Others call for localized, decentralized, and smaller-sized food processes in opposition to anomic ‘globalized’ capitalism and to centralized state authority. Nonetheless, many analysts may not have recognized enough that the CFR is also territorial and local, or that capital is both thing and process (Harvey, 2014). The regime is embedded in countless local places, from supermarkets, contract farms, and processing factories, to trading floors and hedge fund offices. It may depend on flows of abstract and fictitious things (e.g. money, futures, debt obligations) but it also contains material flows such as farmworkers, vegetables, fertilizer, and water. Moreover, the regime contains many friction-generating points of transitions between capital as thing (like physical infrastructure or trucks) and capital as process (like money or work). It takes substantial labor to make such transitions and to turn production into capital: farms and factories must be built and run, workers found, minerals or biomass extracted, and products sold. Many barriers must be surmounted; yet, Harvey (2014) suggests, ‘The continuity of the flow is a primary condition of capital’s existence. Capital must circulate continuously or die’ (p. 73). Capital seeks to accelerate biological, material, and economic processes as a result.

In this light, the CFR is constituted through local/global dynamics, may be located at or across various sectors and levels of the political economy, and has certain needs. Movements need therefore to be ready to collaborate with—and as importantly, to resist—actors and processes at compatible scales. One cannot adopt a fixed, small-scale approach to confront such a flexible, ‘many-headed beast’ as capitalist agriculture. Indeed, capitalism is potent in part because agri-food companies and investors now function as self-anointed sovereigns, freely re-configuring their production and capital worldwide to seize lower cost and labor advantages, or engaging in accumulation by dispossession. Over the past 35 years, agri-food capital has worked to re-frame what ‘the state’ can legitimately do and to define private enterprise as more efficient providers of societal goods. Nonetheless, movements can move beyond dividing between

local and global, find ways to disrupt the transitions of capital between thing and process, target the CFR's roots, and find local crises to amplify to slow down capital's velocity.

3.2. *Appreciate How Path Dependency Can Work to Inhibit Systemic Change*

Path dependency is a fundamental but ill-understood feature of the CFR. In seeking alternative production systems, movements often encounter what appear to be immutable and entrenched pathways that food systems must follow. For example, many CFR actors claim that the only feasible way to feed the planet is to further industrialize production, use GM crops, and rely on pro-poor strategies to integrate smallholders into global markets. We have already seen that capital creates a larger context for agriculture. Within this, various technological, economic, institutional, and behavioral 'lock-ins' may exist (De Schutter, 2014), encouraging farmers, traders, eaters, legislators, and companies to believe that more diverse pathways are not possible. Change may appear implausible because so many processes need adjusting, or are thought too fundamental to a system's functioning to be tampered with. Such lock-ins include technological and infrastructure systems that favor industrial producers; government policies subsidizing commodity crops and cheap processed foods; and consumer preferences for year-round availability of perfect foods.

What is often not appreciated is that path dependency is constituted relationally: a 'feasible' path is the result of multiple processes working together at and across levels. This is less perceptible if we focus on a specific level or size. Looking relationally, how processes reinforce each other becomes more obvious. GM crops are an example: scientific research and corporate plans develop the technology, regulators approve it, food companies require its use through contract farming, and it becomes difficult to segregate GM from non-GM crops. As more farmers are forced to adopt GM crops, a critical mass emerges, where farming norms are reset to a GM baseline, processing technologies are adapted, pesticides are used even more intensely, and consumers are conditioned to expect GMOs in their food supply. In effect, a GM crop culture emerges. These processes of creating path dependency are often creeping but suddenly solidify into a structural constraint. Crops bred for agroecology now initially require much more effort to contemplate, develop, and introduce compared to GM crops. It is this shifting balance of 'activating energy' that is central to whether or not path dependency materializes. Scholars and movements, then, need to think critically about linking processes together in ways that can create alternative pathways by decreasing this activating energy, or by by-passing or loosening existing lock-ins.

3.3. *Map Relationships Across Time, Space, Epistemic Communities, etc. in Terms of Multiple Sovereignties*

Movements and scholars can map where and how multiple sovereignties are developing in their arenas, as well as at other levels that may affect their work. What relationships can they build with those who influence the ecological, political, and economic processes that they are interested in? Where does their sovereignty come from, and does it depend on conventional or other bases of sovereignty? Is their sovereignty likely to be interdependent with those of other actors? Are there, in fact, multiple sovereignties already existing, or do they need to be nurtured?

For example, movements may not realize that their power 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. Indeed, movements may run into entrenched conflicts, where the institutional architecture forces them into not only struggles against government agencies but also into complying with standardized analytics such as cost–benefit analysis just to participate in government processes.

These struggles for recognition notwithstanding, 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 legitimacy 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.

Relational scale also allows us to evaluate the differences that exist within and between ‘alternative’ food systems, rather than presuming that solutions are homogenous. Far from acting as benign agents to democratize a concentrated and centralized system, multiple sovereignties can create many inequalities in their own right. Localism, for example, has received much constructive criticism from authors who point to the potential for ‘the local’ to play into neoliberal governance strategies (Guthman, 2007) and to reinforce racism, sexism, xenophobia, and other forms of inequality historically embedded in locales (e.g. DuPuis & Goodman, 2005; Hinrichs, 2000). Yet if there is no guarantee of justice or equity in the local, movements must develop ways to provide the higher level oversight and monitoring (e.g. anti-discrimination rules) needed to diminish local power abuses. The state remains central to the governance of agri-food systems and economies more broadly, and movements can work with and through its authority.

In the interventionist mode, relational scale can help us.

3.4. *Mobilize Power, Resources, and Knowledge Across Scales, as Expressions of Sovereignty*

Relational scale can aid analysts in thinking more creatively about how sovereignty is being exercised at and across levels. What does sovereignty mean, and what forms does it take? How can sovereignty exert an effect on actors and levels that are seemingly ‘distant’ geographically, culturally, or politically? What conditions are needed for making sovereignty more ‘negotiable’ (rather than fixed and immutable)? Instead of limiting sovereignty to conventional power resources (such as institutional, military, and juridical) and to specific territories or arenas, movements can appraise how they might wield new kinds of power reaching across levels into processes that can support their efforts.

A particularly intriguing form of sovereignty is epistemic. Often, food sovereignty movements desire to affirm knowledge that Scott (1998) calls *metis*—that is, grounded in local and lay knowledge, experiential data, indigenous or farmer practice, and other forms of situated 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, which either do not recognize, or do not validate alternative knowledge. Yet knowledge politics—if understood in relational terms—are 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. Similarly, technical knowledge does not need to be generated and imposed from the top-down: it can also be produced in ‘grassroots’ and local 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. Movements can extend the parameters of knowledge to include other forms of data and reasoning, and can develop concepts, norms, and practices that are taken up into discourses and institutions at other levels, influencing their cognitive processes and knowledge. Yet explicit discussion of the politics of making and using knowledge is frequently absent from movements and academic work.

3.5. *Create and Work Through Rooted Networks as Influential Actors in Agri-Food Systems*

Relational scale is especially relevant to explaining why networks are influential in changing parts of agri-food systems. In recent years, much research in network theory has grappled with multi-scalar dynamics (e.g. Barabasi, 2002). A network can comprise a set of peoples, institutions, technologies, geographical locations, or ecological functions being interconnected through nodes and ties of varying strengths.⁶ Networks can be effective because they are ‘a specific flexible, dynamic, and self-organized manifestation of much deeper and wider webs of relations’, both cultural and natural (Rocheleau, 2011). Rocheleau speaks of ‘rooting strategies’, in which actors in a network can create connections to places and territories, but also of network-building strategies in which these actors reach out to new nodes. She shows that in the Dominican Republic, a rural development federation consciously ‘link[ed] with myriad other actors in the organizational landscape (as allies, in solidarity, as clients, or in bargaining mode)’. The federation was, then, able to persuade government agencies to provide public services and missing infrastructure in its rooted locations. Its power came from its roots but was reinforced by sovereign power from elsewhere.

These networks are potentially capable of by-passing institutions, points of lock-ins, and re-distributing power, knowledge, and resources through much ‘faster’, non-hierarchical processes across many levels than established political and epistemic institutions may allow. They can enable plucking off actors from inside dominant institutions to become collaborators and allies. They can also operate as processes of rescaling, from particular sizes or levels to larger or smaller ones. Sayre notes: ‘It is precisely by rescaling processes that networks have the potential to bypass or subvert conventional hierarchies of power’ (2009, p. 105). We have already witnessed this in the CFR: firms and governments have increasingly understood how to build networks that differ markedly from traditional Fordist production and political structures. As a consequence, they have helped rapidly diffuse a neoliberal economic ideology and undermined previously powerful welfare or nationalist states.

Sovereignty is often seen in terms of ‘how to grow food’, ‘who we will obtain food from’, or ‘what foods we will eat’. Yet sovereignty also pertains to the ability to *connect together* technologies, knowledge, peoples, and institutions into networks that can leverage sovereign power much more. That is, networks do not just comprise people but material things/flows and shared cognition. In the case of social learning, as Holt-Giménez (2006) has shown, the *Campesino-a-Campesino* movement comprises many networks of farmers and small-scale farms that are linked together in larger scale networks of sharing agro-ecological learning and practice. Each unit is small in size and scale of food production, but the broader network

effectively rescales the production of knowledge and technological innovations across farms and territories, thus creating new sovereignty over farming methods and crops. Such rescaling can help create social infrastructure, new commons, and collective actions that are authentic alternatives to the CFR.

3.6. *Work Toward Nonlinear Change Rather than Simply Gradual or Incremental Change*

Relational scale emphasizes that agri-food systems are complex adaptive systems, in which changes may take nonlinear and non-hierarchical forms. The creation of feedback loops, for example, means that changes at one level can re-configure processes and elements at other levels, in turn driving further changes at the initial level. Further, such feedbacks may not be limited to levels ‘above’ and ‘below’. Of particular importance for food sovereignty, we suggest, is the implications of nonlinear behaviors for theories—and strategies—of transition and change. A key feature of complex adaptive systems is their ability to self-organize along a number of different pathways with possible sudden shifts between relatively stable states. A freshwater lake, for example, may be stable in a state full of oxygen and diverse life, or in an algae-dominated, de-oxygenated one. Conventionally, we have tended to view the transition between such states as gradual. But there is increasing evidence that systems seldom respond to perturbations in a smooth way: The clear lake seems hardly affected by fertilizer runoff until nutrient loading reaches a critical threshold at which the water goes turbid. Driven by biofuel production and financial speculation, booms and busts in food prices often exhibit similar nonlinear effects, creating dire material consequences for farmers and eaters worldwide (e.g. Lagi, Bar-Yam, Bertrand, & Bar-Yam, 2011).

Finally, like economies and ecologies, social movements can themselves be seen as complex adaptive systems. Movements may be working and working, and not ‘seeing’ observable change because they are focused on only their part of the food system (whereas the broader system, seen relationally, may be in flux). It may take a certain buildup of pressures, influences, and resources over time until there is a sudden shift to a different stable state. The same could hold true for a buildup of smaller movements coming together across space to reach a critical threshold. Described by Simon Levin as ‘made up of lots of individual agents that act together in smaller scales’ (Phelan, 2009), such systems can settle into a number of stable equilibria (opening up potential for regime shifts), and can also propagate ideas and information virally depending upon how actors are linked together. As Levin puts it, contagion behavior depends on the topology of network interactions.

Using these optics, scholars and movements can develop practical strategies to foster food sovereignty.

4. **Developing Multi-Scalar Sovereignty in Practice**

Scholars and movements can work to integrate relational scale into food sovereignty and engage more effectively with the multiple dimensions of scale, rather than idealizing a particular sense, such as the local, the small farm, or the peasant collective. We have suggested that food sovereignty entails (1) creating and sustaining these multiple sovereignties and (2) turning sovereignty itself into a relational form and a process. Finding institutional, epistemic, economic, and ecological processes to bridge across multiple scales can enable movements to gain greater traction in changing food systems. These processes work, in part, by turning sovereignty into something that is ‘negotiable’ and whose terms can be challenged and remade; allowing the growth of

multiple sovereignties within and beyond established institutional structures; and building new networks and relationships to foster greater interdependence rather than stressing autonomy. We examine two brief examples; further work is needed to identify and explicate more such processes.

The first process is the creation of *multiple bases of sovereignty* that exist alongside state-centric sovereignty. The conventional ontology of sovereignty is founded on the state's exclusive control over territory, ability to govern its people, and monopoly over coercive force. This authority is grounded in the state's political representation of its people or in the people's consent to the state having power over them. Yet this basis reflects a 'stripped down' understanding of what (or whom) sovereignty comes from. It is the result of mass acquiescence over 300 years to the processes of solidifying modern states around more rigid hierarchies of levels and sizes compared to the heterogeneous, complex, and irreducible cultures they govern (Scott, 1998). In addition to state simplifications, it is also the production of scale through the definitions and measures through which states have come to define their relations with their peoples. Sovereignty, then, appears non-negotiable beyond the limited room that institutional arrangements may permit to manage inevitable frictions. To expose sovereignty as ontology—not natural phenomenon—movements can create more diverse bases of sovereignty.

We suggest that the ontology of sovereignty can expand to reflect a greater 'medieval' character adapted to contemporary conditions (Camelleri, 1990). That is, sovereignty is more interdependent than autonomous, more emergent through how peoples and communities decide to collaborate than prescribed in advance. Power sharing (not appropriation) is implicit in this concept of sovereignty. Importantly, movements may find that they can only become sovereigns by networking with others to support their respective sovereignties. This move is already seen in countless sovereignty-seeking movements, from La Via Campesina's global network, to Native American tribes, to worker cooperatives in Spain. Going a significant step further, sovereignty could also be grounded, for instance, in ecological relationships and the stewardship of socio-ecological processes (e.g. Wittman, 2009). Socio-ecological systems emerge from the processes through which humans and natural systems co-evolve. Movements can claim biocultural sovereignty through managing and sustaining these interdependent relations. Efforts to support biocultural sovereignty are currently isolated; yet as more and more such efforts gain support, they may also connect to one another and achieve synergies, and suddenly change the norms of sovereignty. Though difficult to predict, there may be emergent properties, in which these movements become more than the sum of their parts. The very meaning of sovereignty may tip toward more fluid, interconnected forms, and create new space for alternative social arrangements.

Both kinds of broadening sovereignty can be seen in what a consortium of potato farmers in the Potato Park is accomplishing near Cusco in the Peruvian Andes. In 1998, six indigenous communities began creating a community-based conservation area called Parque de la Papa, or Potato Park. Over 4000 villagers jointly manage their agrobiodiversity and traditional knowledge according to indigenous philosophies of equilibrium, dualism, and reciprocity (Argumedo & The Potato Park Communities, 2011). Instead of adopting a hierarchical sovereignty, the Potato Park villages have revived their traditional pre-Incan *ayllu* system, which they understand as a socio-ecological cosmivision that integrates biological and cultural spheres of three types: domesticated plants and animals; wild animals, plants, and crop relatives; and the community of the sacred. The biocultural *ayllu*, moreover, provides customary norms for sharing land and labor 'ownership'. Based on a model that combines this customary law and Peruvian state law, the villages in 2010 negotiated an intercommunity agreement for Park governance and

sharing the benefits of their agrobiodiversity resources (including potatoes, medicinal herbs, and other knowledge based-resources). As such, the Potato Park is not simply struggling against established institutional architecture; it is also insisting that its traditional sovereignty prevail alongside government authority as part of a longer term process of negotiating sovereignty. In turn, the Potato Park has helped develop the concept of indigenous biocultural heritage areas that legally acknowledge the role and power of indigenous communities as managers of complex biocultural systems (Argumedo & The Potato Park Communities, 2011; Argumedo & Wong, 2010). Invoking their knowledge and ability to manage Andean vertical farming processes, the villagers and their NGO supporters have worked to promote 'biocultural heritage' as part of ongoing biodiversity negotiations at the global level (such as the Convention on Biological Diversity) and vis-à-vis Peruvian authorities.

The second process supporting rescaling is seeking *recognition as a sovereign*. Traditionally, a state's sovereignty comes in part from having its authority recognized by its own population and by other states. Yet, a people, community, collective, or organization can also be recognized by both their constituents and outsiders as having and exerting sovereignty. Here, recognition does not simply have its juridical meaning: something is recognized as sovereign because of its practical authority over territory, a supply chain, a pool of germplasm, and so on. Recognition also includes political and existential affirmation that the sovereign is worthy of acceptance as such. Schlosberg (2004) 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). In Brazil, for example, agricultural laborers insist that they be recognized as legitimate farmers and holders of land they have seized, rather than as landless peoples without rights (Wittman, 2009).

In most situations where actors are claiming food sovereignty, they are not recognized as being sovereign by governments, corporations, or societies. Individual farmers, a rural landless movement, a farmer peer-to-peer learning network, or a cooperative business are not seen as 'sovereign' in terms of state-centric sovereignty. Lack of recognition may hamper greatly their efforts to create and propagate alternatives in agri-food systems. It may limit the ongoing emergence of multiple sovereignties across these systems, and can demoralize people over time as they realize that they are not taken seriously by powerful institutions.

Yet movements can seek recognition from their own peoples, and from powerful government and corporate actors as well as publics at other scales. Recognition can happen though many mechanisms and processes, as seen in the Potato Park's experience. Remarkably, the Potato Park appears to be navigating the hostile Peruvian state with an assemblage of mechanisms that effectively 'bypass' the national level for now (Argumedo & The Potato Park Communities, 2011; Argumedo & Wong, 2010). Since 2004, the villagers have forged partnerships with organizations such as the London-based International Institute for Environment and Development and with the United Nations University headquartered in Japan. The park is also accepted as a participant in the Nagoya biodiversity protocol negotiations to define how benefits from genetic resources may be shared more fairly. At the sub-national level, the park has successfully built a relationship with the Cusco government, resulting in a ban on transgenic crops and an anti-piracy law at regional level. Indeed, the park is enhancing Cusco Province's authority within

an increasingly restive Peruvian nation-state by bringing new global prestige to the area. Many of these acts of recognition stemmed from a dramatic development in 2004, when the park made an unprecedented agreement with the Lima-based International Center for the Potato to repatriate hundreds of potato varieties back to the villagers (Indians in Peru Regain Potato Rights, 2005). By entering the authority hub of the CGIAR's global agricultural science research network, the park gained new legitimacy for regional and national policymakers as well as potential donors and collaborators. These developments illustrate that the most socially robust forms of recognition are relational: recognition of a movement does not simply occur at a particular level but emerges through how multiple acts cumulatively take place at multiple levels. Moreover, increasing recognition can mean that a certain threshold is reached, or a particularly important node in the network recognizes the movement, thus suddenly creating much greater legitimacy in a nonlinear way.

5. Conclusions

For multiple sovereignties to flourish and help create far more egalitarian agri-food systems, movements and academics can take a relational scale view of the processes and objectives/goals for which they are striving. Thus far, they have had an oddly impoverished vocabulary for making institutional changes. Yet, as seen in Schiavoni's (this issue) discussion of the emergence of *comunas* in Venezuela, some movements are developing a number of 'mediating' multi-scalar institutions/networks. These often urban-based communal councils are 'local, self-organized governing bodies through which communities determine their own priorities, manage their own budgets, and interface with the government'. While *comunas* have diverse goals and projects, many are beginning to organize their local food production and distribution, and to collaborate with other *comunas*, and crucially, to link to rural producers. Understood in terms of relational scale, food sovereignty becomes as much a practice of creating connectivity as of creating autonomy.

Relational scale can also help movements and the many people struggling for substantive change in agri-food systems to better understand the dynamics they confront. At the heart of capitalist agriculture is a potent scalar force: ideologies and practices geared toward ever larger scales of economy. These mono-dimensional scales of production and consumption economy demand compound growth and deny the value of rootedness in places, communities, and socio-ecological realities. The example of GM crops suggests just how quickly and relentlessly capitalist pressures can 'tilt' human practices and technological systems toward particular pathways, creating apparent lock-ins that deter experimentation with alternatives. Instead of scales of economy, we can pursue multi-dimensional scales of sufficiency (cf. Princen, 2005) that are far more matched to rooted places and communities. Movements can work toward lowering the activating energy needed to engender more egalitarian and diverse agri-food alternatives to emerge—with this work depending fundamentally on many levels, sizes and relationships. Progress toward achieving sovereignty, in the end, must bind the epistemic and the ontological in order to both create and perceive how 'another world is possible'.

Notes

- 1 Many definitions exist. A commonly cited one is the 2007 Nyleni Declaration definition crafted by diverse social movements, including the transnational peasant movement La Via Campesina (LVC), as 'the right of peoples to

- healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems' (Nyleni, 2007 cited in Wittman et al., 2010).
- 2 The contours of the corporate food regime are sprawling and complex. Summarizing McMichael's extensive work, Fairbairn (2010) explains that the CFR aims at 'removal of social and political barriers to free flows of capital in food and agriculture and is institutionalized through international agreements such as the WTO's Agreement on Agriculture.' For Southern agricultural production, she offers, this regime portends 'increasing focus on export-driven agriculture, increasing dependence of farmers on transnational agrifood corporations for their means of production, and the ongoing dispossession and displacement of peasant populations and their cultures of provision'.
 - 3 As Robbins (in press) points out, localization as an approach needs to be critically interrogated. Local food systems are not a uniform category and need to be differentiated from each other. They contain tremendous diversity in their composition, cultures, production and consumption practices, justice, and sustainability.
 - 4 By 'negotiable', we do not mean that movements and communities are undertaking negotiations or compromising with powerful agri-food actors such as Cargill or FAO to make agreements. We mean that the concept of sovereignty is 'up for grabs'.
 - 5 It is important to realize that multiple sovereignties are not limited to civil society, government, or community actors: they may feature businesses and financial networks. The nature of multiple sovereignties may neither be benign nor malevolent in itself: much depends on the power relations and politics of specific sovereign actors. Fostering multiple sovereignties alone is not necessarily conducive to greater democracy. Indeed, neoliberal economics and policies have encouraged the selective devolution of state functions to private authority over the past 30 years. The broader philosophical and political context of multiple sovereignties matters greatly.
 - 6 As many activists and scholars have emphasized, food sovereignty movements frequently take a network form, building relations between diverse actors at and between local, regional, and national levels (e.g., Desmarais & Wittman, 2014). This work, however, may not adequately integrate sovereignty over technology, resources, knowledge, distribution, or infrastructure.

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