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**‘The right to food is nature too’: Food justice and everyday
environmental expertise in the Salvadorian permaculture movement**

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Abstract

In El Salvador a growing permaculture movement attunes small-scale farming activities to principles of ecological observation. The premise is twofold: close-grained appreciation of already-interacting biophysical processes allows for the design of complementary social and agricultural systems requiring minimum energy inputs. Secondly, the insistence on *campesino* smallholders as actors in the design of sustainable food systems directly addresses decades of ‘top-down’ developmental interventions, from Green Revolution experiments in the 1960s and 1970s to international food security programmes in the 1990s. Permaculture connects food insecurity to the delegitimisation of smallholder innovation and insists that, through sharing simple techniques, *campesino* farmers can contribute toward future-oriented questions of environmental sustainability. This repositioning is brought about through the mobilisation of pedagogical techniques that legitimise the experiences and expertise of small-scale farmers, while standardising experimental methods for testing, evaluating and sharing agroecological practices. Like food sovereignty and food justice movements, Salvadoran permaculture links hunger with longer histories of (uneven) capital accumulation and dispossession and renders *campesino* farmers its protagonists. By modelling a form of expertise premised in intimate involvement with specific environments, permaculture goes still further, seeking to dislodge a pervasive knowledge politics that situates some as knowers and innovators, and others as passive recipients. This grounds human rights in an ethos of caring for the ‘more-than-human’ world and places emphasis on a corollary right as part of food justice, increasingly being demanded ‘from below’: the right to know.

Keywords: post-colonial, food justice, food sovereignty, El Salvador, agroecology, permaculture

Introduction

Food is not abstract, but contextual: food takes place. Rich and specific histories shape the forms of agricultural production and culinary cultures that affect how we eat. Coca-Cola is perhaps the most convenient example of the global entanglement of rural and urban kitchens - indeed, it is often asked to stand in for the problem of commodities in general (Bridge & Smith 2003). But things do not globalise in the same way. In Trinidad the “sweet black drink” takes on social significance according to social and racial lines of stratification that it also transforms (Miller 1998). Meanwhile in Chamula, a village in the Mexican region of Chiapas, Coca-Cola drinking has been incorporated in religious purification ceremonies since the 1980s, when the company advertised its health benefits in contrast with alcoholic beverages in use (Nash 2007). There is, moreover, an (uneven) geography to where manufacturing takes place within such multinational corporations, and who does which kind of work (Atkins & Bowler 2016).

Because producing food entangles particular histories and geographies, there is also a politics to hunger (Heynen 2010). As some baulk at overwhelming food options and others bemoan the streamlining of choice in the supermarket, around 800 million people are without access to basic foodstuffs on a daily basis (FAO 2015). More than 25,000 die every day from hunger-related causes - although current agricultural systems could easily feed the world population daily (Ziegler et al. 2011). The institutions of food security were consolidated between the 1970s and 1990s as part of internationally coordinated efforts to correct this imbalance, and ensure that all people have access to sufficient nutritious food that meets their food preferences (FAO 1996). However, goals set through global partnerships, involving United Nations (UN) organisations, Non-Government Organisations (NGOs) and private foundations, have repeatedly not been met. Moreover, the notion of food security has come under fire for presuming that colonially-grounded, structural inequalities can be solved by solutions based in market-based economics and industrial agriculture. We need

political solutions that address logical contradictions in the global food regime, argues the second Special Rapporteur on the Right to Food, rather than complicated technical solutions (Ziegler et al. 2011). The UN in is the case in point: the the coercive tactics employed by the Bretton Woods Institutions (the World Bank and the International Monetary Foundation) to enforce the liberalisation and deregulation of indebted national economies stand directly at odds with the aspirations mapped out by the Food and Agriculture Organisation (FAO), the UN Development Programme (UNDP) and World Food Programme (WFP) (*ibid.*).

Dissatisfaction with food security has kindled “food justice” agendas connecting social movements, international organisations and policy forums. Gottlieb and Joshi (2010, p.6) define food justice as a collective effort to ensure the benefits and risks of ‘where, what, and how food is grown, and produced, transported and distributed, and accessed and eaten are shared fairly.’ Food justice emphasises hunger as a human rights issue, and underlines the central place of grassroots organisations and small-scale producers in the realisation of fair systems. Here environmental concerns enter dialogue with hunger’s politics, as food injustice is linked with the progressive “decontextualisation” of food: the concealment of environmental and social costs that occur in the mass production of “cheap food” (Carolan 2013). Indeed, it is increasingly patent that the industrialisation of food production across the last century, alongside rapid deforestation and intensive use of fossil fuels, has compromised the very infrastructures that agriculture relies upon: soil, water, and genetic biodiversity. Scholarship connecting hunger with the politics of environmental degradation thus clusters around terms which promise a reevaluation of the hegemony of markets within food production systems, including food justice, but also community food security, and food sovereignty (Heynen et al. 2012, Desmarais 2007). This work makes clear that food production has always relied on forms of labour and expertise that, however disavowed, offer vital understandings of soil health and how to recover it.

There is some ambiguity in the way the term “justice” is meant in food justice scholarship, however. It is not clear through what means such justice is to be decided and delivered, or how histories of violence and appropriation can be accounted for within such mechanisms. Secondly, there is confusion between the need to acknowledge the *perspectives* of actors sidelined in contemporary food regimes, and the search for practicably workable *solutions* that might be co-created. Finally, it remains vague how an agenda based in the articulation of fundamental human rights (such as the right to food) might also lead to greater attention to the agency and rights of the nonhuman (or “more-than-human”) world. Appeals for justice, as to universal human rights, often rely on a shared sense of “wrong”, as well as inherited ideas about heroes and villains, actors and victims. While galvanising a wide base of support, such claims do not necessarily unsettle the complex constellations of knowledge and power that give rise to them. The challenge at stake is, therefore, to take hold of the confrontational dimension of justice without reinforcing entrenched scripts dictating who can speak and who may act, or what counts under the category of protection.

Without claiming to answer each of these large and important questions here, I draw on the example of the growing permaculture movement in El Salvador to suggest tentative tactics for keeping food justice political. Through my data I argue that the notion of the right to food is strategically central, but must not be separated from the right to determine what and how to grow, or from the right to be an expert of one’s own situation. An interrogation of the politics underpinning everyday environmental expertise also reminds us that food justice cannot be settled through food aid programmes alone: sustained engagement is needed with the broader, colonially-anchored politics of knowledge that still shapes the way we talk about poverty, especially in the Global South. The research data informing this argument was collected through two years of participative research (2012-2014) with the grassroots social network whose activities initially centred around an institute for ecological agriculture (the *Instituto de Permacultura de El Salvador* [IPES])

established in 2001. “Permaculture” is an ecological approach to food-growing, whose activities centre on a set of principles for holistic design. These principles centre on learning to observe and imitate biophysical processes, such that systems created to meet human needs (eg. food production) complement pre-existing ecological dynamisms and reduce the need for additional inputs of energy, materials, or water. Such “permanent cultures” are also premised on an ethos (earth care, people care, fair share) that emphasises engagement with traditional agricultural practices, on the assumption that such practices are better adapted to the resources, local climates, and cosmological narratives embodied in particular places. However, this involves considerable interchange between regions, and new techniques are experimentally evaluated *in situ*.

My research involved ethnographic observation in the two regions of El Salvador where permaculture has been most active (Cuscatlán and Morazán: see Figure 1). Data collection included thirty-six interviews with small-scale farmers; local, national and international NGO representatives; regional and municipal governors, to provide broader perspectives, as well as oral histories with founding members. I observed and took part in a permaculture design course in Suchitoto, Cuscatlán that runs across a year for *campesinos* in the surrounding area, and, after a year’s involvement I co-designed a series of eight four-hour participatory workshops with my research contacts at IPES in both regions. The sessions, involving active volunteers and design course participants, aimed to foster knowledge exchange on the topic of everyday environmental expertise, and to co-explore what the movement contributes in terms of broader understandings of food justice. After gaining the appropriate consents, audio and video capture of interviews and fieldwork also enabled a second translation of data upon return to the UK, as well as the production of a short film. With the remainder of this paper I firstly, give context for this data by showing how everyday environmental knowledge production helps extend food justice as a concept in terms of democratic knowledge production. Secondly I situate the emergence of permaculture practices in El

Salvador historically, tracing emphasising the importance of a broader politics of environmental knowledge to the development of preceding popular education and agroecology networks. This leads me to unpack the specific place of everyday environmental expertise within permaculture practices, with an emphasis on the way agricultural tradition is being reworked, alongside a holistic concept of health. I conclude by suggesting that keeping food justice political will be fundamentally premised on making the *right to know* central to the design of sustainable food futures.

[Insert Figure 1 here]

Food justice and everyday environmental expertise

Recent attention to, and actions by, Transnational Agrarian Movements (TAMs) like La Via Campesina [LVC] offer rich resources for thinking through the place and politics of everyday environmental expertise in food justice agendas (Rudolph & McLachlan 2013). LVC was set up during the early 1990s by agricultural producers from around the world, against a backdrop of global agrarian crisis and the withdrawal of support for domestic agricultural sectors across the Global South (Edelman 2014). Founding members linked the subsidisation of large-scale export crops with the large-scale dispossession of small-scale farmers, as well as endemic forms of pollution (Desmarais 2007, McMichael 2012). In 1996 LVC introduced their counter-concept, “food sovereignty,” to the United Nations World Food Summit, where definitions of food security were being approved. Food sovereignty was presented as a kind of “agrarian citizenship” (Wittman 2009): a basis from which to articulate the constitutive role, and correlative rights, for small-scale farmers. “Security” is meaningless, from this vantage unless it also involves protecting the autonomy of small-scale farmers to choose what and how to grow, as well as the rights to *refuse* to open the best agricultural land to the vagaries of the global food market. Today LVC boasts a

“peasant internationalism” comprising hundreds of thousands of small-scale producers (Martinez-Torres & Rosset 2010) and 200 (sub-)national organisations from more than 56 countries (Borras 2010).

The relationship between food justice and food sovereignty is disputed: some characterise food justice as a reformist approach focused on empowerment, access and better wages, where food sovereignty – which emphasises dismantling of corporate monopolies – is framed as the more radical approach (Holt-Giménez 2011). Others use the two as synonyms. Within the Salvadoran permaculture movement, food justice [*justicia alimentaria*] is used to describe a political commitment to reshaping power and knowledge dynamics within the global food system. LVC are regarded as allies in food justice struggles, although the movement is not part of the network, and food sovereignty [*soberanía alimentaria*] is used slightly differently, referring to the capacities of nations or regions to cultivate the full range of food crops needed for nutrition. On the other hand, Salvadoran permaculture shares LVC’s insistence on the rights of smallholding *campesinos* to select what and how to grow. This a resolutely confrontational notion of food justice that likewise firmly rejects the idea that the “food poor” are passive victims in need of developmental solutions. When I use the term food justice here I articulate this political sense latent within both concepts.

The place of everyday environmental expertise has not yet received significant attention within theorisations of global food regimes and food movements (although see Loftus 2012 in urban environments), although it is implicit within the turn to small-scale agriculture as an important site of knowledge production. Long considered “backward” or peripheral, peasant or *campesino* farming is regarded the locus of agricultural innovation and activism in contemporary TAMs. Indeed, in the surrounding literatures we are asked to attend to the “residualisation” of agricultural knowledges as a long-standing issue of food insecurity: it is not only soils but know-how and rural solidarities that have been eroded. Political ecologists have been pushing in this

direction since the late 1970s by attending to overlooked sites of knowledge production, and revealing the centrality of “peripheral” rural transformations to global economic processes (Dahlberg 1979, Stonich 1993). This is also the premise of Harriet Friedmann (1982) and Philip McMichael’s (2009) work on “food regimes” since the late 1980s, which exposes the entanglement of rural and urban processes in food production from the 1870s onward. Friedmann’s work shows how food aid from the United States to formerly self-sufficient agrarian societies significantly shaped the international food order, leading to the establishment of new (unequal) divisions of labour and urban concentrations of dispossessed people in the 1950s and 1960s. McMichael (2014), amongst others, uses the “food regime” terminology to situate food sovereignty historically, and to highlight contradictions in the transitioning global food regime as important conditions for possibility for LVC’s emergence.

Contemporary research into emerging TAMs also draws on at least two decades of work situating small-scale farming as a locus of innovation in its own right. The landmark study by ecological anthropologist Robert Netting (1993) presents smallholder agriculture as a distinctive cultural ecosystem with the capacity to thrive even producing for growing populations, except where industrialised agriculture is disproportionately incentivised. Netting’s approach is interesting as he insists that this common repertoire of smallholder techniques around the world is *not* primarily transferred through social networks, but is always being reproduced afresh because of the suitability of specific techniques (such as the terracing of slopes) to the scale of practice. The politics of this approach lies in the emphasis on the aptness of these techniques for future food production, and the refusal to doom small-scale agriculture by framing it in terms of exploitative global economic systems. More recently, however, scholars have highlighted that the conduits of knowledge-sharing that allow smallholders to improve practice and connect concerns are an important part of this politics: it is not only corporate capitalism that is characterised by

innovative networks (Van der Ploeg 2014). Moreover, others have emphasised the uneven ways that capital reshapes peasant agriculture over time, fostering the emergence of networks like LVC (Edelman 2014). This unevenness is important because Netting's model tends to romanticise the patriarchal norms in the smallholding contexts he investigates, rather than linking them with economic relations that might also be otherwise. It is important to acknowledge that there are (gendered) power relations in play in the smallholding economy, as also that small-scale farmers are actively redefining broader economic landscapes.

Either way, the notion of the peasant as "backward" or "passive" is replaced by an understanding of small-scale farming as an evolving and innovative mode of relating with surrounding environments. Following Netting's efforts to politicise the prevailing cultural ecology approaches, "political ecology" has since gained pace as an interdisciplinary field for setting environmental uses and transformations into historical context. Thus early political ecology rejected the association of soil degradation with the incapacity of peasant-farmers or faulty usage, emphasising the formative role of cycles of capital accumulation and population pressures (Dahlberg 1979). Alongside political ecology, awareness of everyday environmental expertise as a contested political field has also fostered the emergence of "agroecology" as a field of agronomy, where small-scale and traditional techniques are systematically aggregated and tested (Cox & Atkins 1979, Gliessman 1990). From this vantage, the politics of environmental know-how cannot be separated from food justice concerns.

Indeed, the knowledge production processes of movements like LVC have, more latterly, been heralded as a potential model for democratic knowledge production (Pimbert 2006), because of the distinctive dialogic practice ("*dialogo de saberes*") that has shaped the movement since its inception (Rosset and Martinez-Torres 2013). The point is that the food sovereignty agenda is so powerful because it emerges from an exchange not only between knowledge content but between

forms of knowledge that derive from diverse world views, cultural contexts, and experiences of neoliberal globalisation (Borras 2010). As such, momentum proceeds from a dialogue between absences: shared experiences of dispossession and colonialism, elaborated through shared experiences in agroecological movements and peasant training schools in the Americas, Africa, and Asia. Meanwhile, much of what is distinctive in this ideologically autonomous and pluralist coalition emerges from the negotiation of internal differences: disagreements over the basic unit of politics (such as the family, community or collective), or the appropriate vehicle for agency (workers, families or militants). This differentiation is internalised within and between TAMs, and shapes their agendas and strategies as they interact with international development institutions (*ibid.*). The “counter-hegemonic globalisation” articulated by such movements, alongside other growing coalitions, including the World Social Forum (WSF) and the Brazilian *Movimento dos Trabalhadores Rurais Sem Terra* (MST), derives its force not from a common starting-point, but from potent processes for managing disagreement.

Keeping food justice political in this sense means attending not only to who does not have food, but to the ways that diverse forms of environmental expertise are configured within contemporary food regimes, such that some appear canonical, and others provincial. This agenda builds explicitly upon earlier feminist and post-colonial scholarship, which, in different ways, have emphasised the agencies and perspectives of “others” systematically excluded from political visibility or speech. However, the terrain of environmental expertise leads us to an expanded notion of food justice, in which not only human rights but the qualities of interspecies and intersystemic relations are at stake (Whatmore, 2006). This ethical consequence is explored by Ferguson et al. (2015) in their study of soil processes and farmer-to-farmer learning in New South Wales, Australia. Emphasising soil as the “material of life,” these authors demonstrate that soil can itself be regarded an actor in food systems and, as such, an important ally in the struggle to shape just and sustainable

food futures (*ibid.*, p.1-2). To acknowledge soil as an actor also means acknowledging histories of collaboration with such actors, in the form of the specific ecological expertise, and widening our sense of what counts under the category of protection. In like manner, the work of Puig de la Bellacasa (2010) explores how permaculture practices in the United States are reframing agriculture as a site of interdependency and mutual relationality, provoking a reevaluation of bioethics that extends an ethos of care to all beings. In my account of Salvadoran permaculture I intend to extend this reworking of ethics as I approach food justice through the politics of everyday environmental expertise.

3 Permaculture and popular education

3.1 Contextualising permaculture

While permaculture emerged as a systematic way of thinking in Australia during the 1970s, it draws on earlier threads of tree ecology (most notably, Smith 1987) and agroecology, both developed as specific responses to the impact of globalising and industrialising processes. Permaculture also mobilises ecological vocabularies to rethink human production systems, but uses systems-thinking principles to create designs that include both biophysical and social elements. The aim is to foster resilient and balanced eco-systems that replenish soil quality and genetic biodiversity, but also nurture mutual aid and interdependency. In some cases, the arrival of permaculture in Global South contexts has led to the development of “enclaves” of volunteerism at odds with surrounding cultures, in others, as in El Salvador, permaculture has played a significant role in politicising everyday environmental expertise, alongside existing agroecological movements.

Essentially permaculture politicises food production by attending to existing micro-climates or eco-systems on an equal plane with the existing agricultural practices that have been used to do the same. The twelve key design principles (see Figure 2) guide this process by deriving principles

of systemic observation from ecological science, with an emphasis on boundary interactions between species (and cultural) systems, and exchange across networks. For example, the eleventh principle, ‘use edges and value the marginal’ encourages recognition of the way that “in-between” spaces such as hedges form productive interfaces between multiple systems. Permaculture trains participants to design agricultural, home, and social systems in relation and to think about know-how immediately available, as well as physical resources. This provides a basis through which to share social historical narratives as people ask ‘how did our ancestors do this?’ and reflect on generational changes. In valuing what I call everyday environmental expertise, observation and experimental testing are thus central to the political edge of permaculture. The basic training allows individuals to assess different growing techniques for themselves, including both “traditional” and improvised solutions, and to develop collective inquiry into the intertwining of ecological and social histories. Learners later become teachers, which keeps the canon open, and future-oriented.

[Insert Figure 2 here]

Permaculture pedagogies, or principles for teaching and learning, centre on the “design course”: a curated series of training sessions in which students become teachers and produce designs for their own settings. In El Salvador this course normally takes place for three days per month over a year, to suit subsistence farming work patterns. In the course I observed at Suchitoto, 33 of 36 participants were small-scale *campesino* farmers, while three were students from the capital interested in making a film about permaculture. Roughly half were under thirty and considered “youth”; and sixteen were women. The emphasis in the course is on learning to experiment - both trying out new ideas, and testing the efficacy of old ones. Activities include learning to make field-maps to show water resources, species populations, gradients, and micro-

climates; sharing agroecological techniques; and exploring local environmental history through videos, dialogue and improvised sociodramas. When run for the first time in a new area, courses also explore capacity to establish a local permaculture association and plant nursery, as well as local farmer's markets to sell products. Such associations aim to become autonomous within three years, running their own design courses.

The recent historical context is extremely important to permaculture's social significance in El Salvador. The participatory workshops I facilitated in El Salvador elicited a strong sense of this significance, with key narratives associated with its arrival of including accounts of colonial dispossession, agricultural development, ecological degradation, and guerrilla resistance. Marc Edelman (1998) has long emphasised that transnational peasant organising in Central America 'raises significant questions regarding social scientific approaches to transnationalism, collective action, and agrarian change' (p74): at this time emergent movements combined elements of the class-based interests of "old" social movements with fresh attention to cultural difference and specificity. This shift was prompted by the consolidation of new loci of decision-making above the national state; the slashing of social services like agricultural extension; the liberalisation of the grain trade in Central America, bringing grain producers into competition with foreign farmers; and growing agrochemical contamination (*ibid.*). The internationalism of the Nicaraguan Sandinista government also served as an impetus for encounters between collectives in different countries.

Agroecology and permaculture take on particular social significance in El Salvador, however, in relation to the 1979-1992 civil war. It is not by accident that permaculture and agroecology are most highly concentrated in formerly guerrilla-dominated regions, as the popular education practices that informed the revolutionary uprising also provided the foundation for agroecological farmer-to-farmer learning after the end of the war (Millner 2016). Indeed, Suchitoto, a small colonial town in the region of Cuscatlán, was an important guerrilla hub during the civil war

and today hosts the largest permaculture demonstration site where training and experimentation takes place. Morazán was also an important area for guerrilla activities and suffered some of the worst damages. The regions surrounding these two towns are the most active in terms of permaculture, although there are smaller networks in San Salvador, Chalatenango and La Libertad. Many of those involved in permaculture played important roles in guerrilla movements, although some also fought on the opposite side. Meanwhile, the twelve-and-a-half year conflict meant a complete, or partial, interruption of school education for many young people, such that permaculture plays an important role in providing adult education.

It is important to understand what was at stake in this extended and bloody conflict, which often portrayed in rather black-and-white terms, emphasising the progressive dispossession of the peasantry over the previous century. Recent scholarship portrays a more complex story, but it is clear that the liberalisation of the state and a period of intense capital accumulation in the 1920s led to varying degrees of proletarianisation and dispossession throughout the country (Cabarrús 1983). A massacre of more than ten thousand people in 1932 marked increasingly brutal tactics to suppress growing social unrest, as an oligarchical alliance between fourteen powerful, land-owning families sought to liquidate blacks and Indians whilst establishing coffee as the country's principle export. The continuing advance of agrarian capitalism devastated the material basis of indigenous communities and contributed to a widespread rejection of indigenous markers from this point onward, such as language and dress (Gould & Laria 2008). After World War II, cattle-raising, cotton cultivation and sugar expanded El Salvador's trade repertoire, but saw the coffee elite reassert their dominance through coercive wage-labour relations and military control (Montes & Gaibrois 1979). While evidence suggests that *campesino* insurgency sparked in areas with relative autonomy, Gould & Lauria-Santiago (2008) conclude that a radicalised union movement became revolutionary under the pressure of frustration and the violent abrogation of democratic rights, combined with a rapid

increase in exploitation and dispossession. Pearce (1986) concurs, emphasising that the vast majority of the population at this time were *minifundistas* who had to supplement yields from their small plots with crafts or migratory labour on the coffee and sugar estates of neighbouring departments. The number of *minifundias* rose considerably from the late 1940s until the 1980s, as did the number of *campesinos* renting plots. Moreover, rents were increasingly demanded in advance; elections were tightly controlled, and in some places sterilisation was practiced as an imposed form of birth-control (Roseberry 1991).

Salvadoran permaculture can consequently be explained partly by the conjuncture of land politics, democratic repression, and food insecurity in this moment, and partly by the mobilisation of popular education practices that enabled guerrilla resistance. In particular, the liberation theology movement, sparked by calls at Vatican II (1962-4) for resistance to authoritarianism throughout Latin America (Smith 1991), was an important vehicle for adult education in many parts of Central America, especially El Salvador (Pearce 1986). From the late 1960s a peripatetic network of priests and other active intermediaries provided pastoral support for covert bible study cells in *cantones* and parishes across the country. Wood (2003, p.206) claims that the feeling of equality created was critical to subsequent sustained uprisings, as it created the sense that ‘we are capable of managing these properties’.

Permaculture initially reached El Salvador, however, through a series of “brokers” who encountered it overseas. Juan Rojas, a Salvadoran man exiled to Australia during the civil war, discovered permaculture in Australia, and returned in the late 1990s, sponsored by churches sympathetic to the liberation theology movement, to become a “permaculture missionary.” Karen Inwood, a community development worker from the United Kingdom, met Rojas at a permaculture course at a Scottish eco-village in 1999, and subsequently spent twelve years in El Salvador supporting the development of incipient permaculture networks, run today by *campesino* men and

women. The new networks differ from existing agroecological movements in the high number of women and young people in leadership roles; the strong discourse of health that connects growing and social activities; and the framing of sustainable practices in relation to inequalities in access to food and land.

3.2 From agroecology to permaculture

The conflict over access to land in the revolutionary uprisings was also critically tied to the introduction of Green Revolution technologies into El Salvador, set to “modernise” agriculture in the region. Salvadorian permaculture highlights the progressive alienation of everyday environmental expertise in this moment, through the machinery of industrial productivity on one hand, and state geopolitics on the other. This is extremely important to the way that food justice is formulated as a collective response.

In Central America, the well-known Mexican Agricultural Program (MAP) was set in motion after United States Vice-President Henry Wallace, an experienced Iowa corn breeder, expressed astonishment at rates of low yield he witnessed on a tour of Mexican farms in 1940 (Mangelsdorf 1951). Wallace entered talks with the U.S.-based Rockefeller Foundation, leading to the creation of the semi-autonomous Office of Special Studies in 1943, to carry out research on Mexican strains of wheat and corn (Edelman 1980). Early projects were of limited success despite huge investments, but the major “Plan Puebla,” which began in 1967, was considered successful enough to form a prototype for other regions in Central and Latin America (*ibid.*, p.33). Such projects are contextualised, however, by a deliberate policy on the part of U.S. and quasi-U.S. aid organisations at this time of directing their assistance primarily to countries featuring in the global strategy of the United States and its allies (*ibid.*; Paré 1990). Such biases were also expressed through an anti-communist rhetoric pervading the discourses of the Rockefeller Foundation and agricultural research institutes in this enterprise. Thus national governments were persuaded that

failure to introduce “modern solutions” would lead “underdeveloped” countries to accept communist promises and systems (Carey 2009). From the 1960s onwards, projects based on the Mexican model were rolled out in Guatemala, El Salvador, Venezuela and Brazil, mostly under the auspices of the U.S Department of Agriculture. Meanwhile, the “miracle” high-yielding varieties required higher and higher inputs of fertilisers as soils became impoverished. “High-yielding” hybrid seeds were distributed freely at first but subsequently had to be purchased anew each year, breaking traditional patterns of seed-saving with no annual costs.

Memories of this moment of agricultural dispossession have been pieced together in contemporary *campesino* movements and form a strong impetus for “bottom-up” organising. During the permaculture design course I observed, five groups produced sociodramas to illustrate the problem of agrochemicals and pollution in the country, with four focusing on the arrival of “miracle seeds.” One group used the metaphor of heroin-pushing to convey the emotion of the narrative: a healthy corn plant is nurtured by an entrepreneurial *campesino* family, until a seed company representative comes along in a lab-coat labelled “MONSANTO”, promising a double in yield. A second corn plant grows up, but the soil - another actor - enters progressive convulsions, leaving the *campesinos* running back to the salesman for help. The salesman offers fertiliser as a temporary solution, but only at a price... The short play - devised in two hours - concludes with successively rapid cycles of fertiliser injection until the soil dies, and all the corn plant dies as well (see Figure 3). Discussing the plays afterward, Julio Guardada, a young permaculture volunteer from a *campesino* family said he had been very moved by this play in particular:

The play was extremely funny. The play made me laugh - we all laughed a lot. But it’s extremely serious to me because it’s my grandfather who I remembered when I saw [the *campesino*] in the play. And the soil actor - he was very good! But it is this soil that is now like that, dying out like that. And so that’s why for me permaculture is important¹.

(Fieldnotes, 14th April 2014).

¹ Translations are author’s own, from audio transcriptions.

There is an important point here for thinking through food justice, as, from a food security perspective, the development of hybrid seeds have been part of solutions made possible through international collaboration. The topic of bioengineering aside, there is clearly a justice issue for this group of Salvadoran *campesinos* beyond that of having enough food, which relates, firstly, to the ideological way that traditional technologies were devalued and replaced; and secondly, to the erosion of land and narrowing of genetic resources in the region as a result of accumulative strategies in another part of the world.

[Insert Figure 3 here]

Despite the struggles it provoked, liberation theology did not really promote solutions to such environmental justice issues, although it offered a latent grammar for other popular education movements, especially the *campesino-a-campesino* (CaC) [farmer-to-farmer] movement that travelled through Central America during the 1980s and 1990s. First in Guatemala, and later in Nicaragua, small NGOs arranged for *intercambios* [exchanges] between indigenous farmers and other small-scale farmers, promoting agroecological knowledge exchange in response to increasing interest in inter-regional co-operation² (Holt-Giménez, 2006). Informal visits focused on traditional principles for agriculture that demonstrably improved the life of soil and quality of crops, without the need for bought fertilisers - such as recycling biomass, soil autoregeneration, and restoring degraded soils (Gliessman 1990). *Campesinos* were trained as farmer “extensionists”, and used simple instruments - a machete, a tape measure and an A-frame (a simple apparatus for measuring land gradients) - to communicate with other farmers, even across language divides. The

² In Nicaragua the main clearing ground was the UNAG (Nicaraguan Unión Nacional de Agricultores y Ganaderos) founded in 1983 by smallholders, cooperatives and medium-sized landowners who felted underrepresented in Sandinista dominated rural workers’ unions (Edelman 1998, p58). The UNAG received visitors from abroad and assumed a central role in the CaC program.

intercambios were so successful that a number of *encuentros* [encounters] were organised, extending into Mexico, Honduras, and further afield. The model grew rapidly during the late 1980s when heavy flooding exposed the difference between traditionally terraced farms, and modern farms, which were stripped of topsoil. INGOs subsequently supported village-level projects through into the early 1990s throughout Central America.

The CaC movement entered El Salvador at this time, as leftist coalitions broke apart under the pressure of organising without the unifying mission of guerrilla warfare, and a rush of charitable investment from abroad sponsored a raft of new projects in the new language of food security. Many of these were “quick-fixes,” however, and tended to be abandoned after the duration of funded projects. The CaC movement was distinct for its “bottom-up” models of development: several meetings were organised for Salvadoran *campesinos*, who brought back practical ideas to their own regions, including Cuscatlán and Morazán. This led to the development of first an Eastern Commission, and later a Western Commission for the CaC movement in El Salvador. Permaculture was first encountered in Guatemala, although it did not really take off in El Salvador until Rojas and Inwood began collaborating with the emerging CaC network in 2000. With the support of para-church and international development organisations, the group formally founded as the *Instituto de Permacultura de El Salvador* [IPES] in 2001.

For many Salvadoran permaculture practitioners, the ends of permaculture and agroecology are synonymous. However, key actors in the movement highlight that permaculture design principles take the basic assumptions of agroecology into a finer grain of knowledge practice, allowing broader social issues to be addressed. In an interview with two early members of the network, Regino Hernández and his father Leoncio Hernández Argueta, the two explained why they had been attracted to permaculture when they had already been involved in agroecology networks:

Regino: *Campesino-a-campesino* began in the experience of people - an experience maintained in

Guatemala, Mexico, Nicaragua... and then it came here to El Salvador, after the war. This was a war that was linked to the same problems addressed by the movement, like access to land, the lack of basic services that a government should provide for its citizens. And this saw the beginning of a series of *encuentros*, where people exchanged their practical knowledge, their experiences and expertise, for example, how to cultivate, how to conserve the soil, how to provide food for the community...

Leoncio: I was already part of *campesino-a-campesino* in the '90s, but got my first permaculture diploma in San Lucas Tolimán, in the department of Sololá, Guatemala. I studied there in '97. And afterwards I did my second course along with Regino, my son. And so I learned to capacitate people, to cultivate the soil and earth and how to plant [*sembrar*] for health - and that's what we brought back here.

Naomi: And was there any difference in what you found in permaculture than in the *campesino-a-campesino* network?

Leoncio: It was more advanced in permaculture. We learned more about connection with nature, harmony with nature...

Regino: It was from the *campesino-a-campesino* experience that came a seed which made it possible to set up the permaculture institute and to start building an impact that is growing in its national and international recognition. [...] With agroecology we learned techniques, we learned the traditional ways. With permaculture we learnt a process to build an organisation. And we learnt how to create connection between the way that you grow the seed and the way that you grow social change. [...] The question is how to build your life in a sustainable way - one which is self-sustaining and which feeds you. These are ideas that bring autonomy for people, which is very tied up with ideas of food sovereignty.

Here both men acknowledge that, for them, permaculture provided a guiding structure for setting up an enduring organisation, and addressing structural issues of inequality in society. However it did this by a deeper engagement with “nature” - by bringing observation to bear on the way that social and ecological issues are intertwined. In the discussion workshops, participants also affirmed that it was the deeper sense of “connection with nature” in permaculture that made it socially powerful, as well as its greater capacity of to engage issues of healthy living. Health, interestingly, was also raised as the number one topic that participants would like to learn more about in future, and was mentioned by 80% of interviewees as the most important aspect that permaculture offers to food justice. I discuss this further in the next section.

Meanwhile, permaculture additionally provided a platform for women and young people to

develop as leaders. This was critical as, despite commitments to the equality of all learners, early agroecology networks in El Salvador had established older, male *promotores* [promoters] at the centre of a large number of internationally-funded projects, with young people and women notably sidelined. In 2001, for example, the Eastern Commission for the CaC movement was made up of ten men, including Juan Rojas, and one woman. The same issue has also shadowed the development of the movement. IPES was originally founded by a group of predominantly older men. With support from Karen Inwood, who acted as Director from 2004 to 2014, IPES prioritised the involvement of women and young people and encouraged the development of local, independently-run permaculture associations as a way of expanding the CaC approach across the country. The trustee group too was expanded to involve more women, young people and representatives from the new local organisations. However, this development caused discomfort amongst some founding members and led to growing conflict. Finally, in 2014, a small group of the original founding members decided to expel the new members and distance themselves from the local permaculture associations, taking control of organisation's assets and legal status. In response the local associations formed themselves into the Salvadoran Permaculture Movement – a loose alliance of legally constituted local permaculture associations and individuals. This Movement now has a membership of more than 100 qualified permaculture leaders. Young people make up approximately 40% of this membership, with women taking up leading positions in the movement and forming some of its most active members. The developing movement continues its practice of cultivating regionally autonomous associations that run design courses and in turn create new educators, albeit in a more decentralised way. In doing so it continues the original vision of supporting *campesinos* to be “protagonists for change” (interview with Karen Inwood, 12th December 2012).

The broader culture of *machismo* is thus a further axis of institutional violence that situates

permaculture practices. However, as such violence is pervasive and difficult to disentangle (see Hume 2009), this dimension reinforces permaculture's philosophy on grounding change in relationships that already exist, rather than designing abstract or "ideal" solutions. Reina Mejia, Coordinator of IPES between 2006 and 2014 and General Coordinator of the Movement today, echoes this point, highlighting multiple forms of violence in the country as part of the framing context that permaculture seeks to address:

Today an issue which is affecting us on a large scale is delinquency - gang violence. And this violence isn't just located in the gangs [*maras*] but also in the groups who menace those who don't pay tribute. And this is an insecurity which grips the country... the life of each person is threatened. When you go about your day, when you travel you feel yourself unsafe... [...] And while in permaculture we are working to create resilient eco-systems, towards the co-integration of nature, humans, and animals, we are also we are working in the most unprotected areas in our country, where you cannot escape the bigger insecurities... they even come into the daily running of the site. [...] You asked the young people about what they know about food security: For us food security is about healthy food, it's about remembering ancestral traditions, it's about healthy soil and seeds, but... it's also about creating the kind of world we want to live in. But we have to begin with the world we already have. (Interview with Reina Mejia, 10th April 2014).

In identifying how permaculture seeks to work with such difficult gender relationships, both women articulate a key point for this paper: ecological observation remoulds food justice by treating the social world as part of the natural world, and the natural world as comprised of interconnected systems, situated in space and time. The right to food becomes inseparable here from a process of naming and healing historical processes of violence.

4 Keeping food justice political

El Salvador is the smallest and most densely-populated country in Central America, with a population of 6.4 million, between 32 and 35% of whom live below the poverty-line. The country ranks 39th in the world in 2015 for undernourishment, at 12.1% of the total population (Knoema 2016). For, although the country is technically "lower-middle-income," wealth distribution is still significantly unequal. An estimated 16.3% of rural families cannot cover the costs of the basic food

basket, with chronic under-nutrition among children under five at 18.9% nationally, reaching 25.6% in rural areas and nearly 50% in the most vulnerable locations (WFP 2016). Morazán is considered one of the most “food insecure” regions: Torola and Perquin, where permaculture is centred, have among the highest malnutrition levels in the country (between 24 and 24% in 2014), although this compares with 7-8% in other municipalities in the same region (Sistema de Integración Centroamericana (SICA), in La Prensa 2014). Here I show how permaculturists have been responding to such issues *in situ*, emphasising the mobilisation of reanimated ideas of “tradition” and holistic articulations of “health” as key strategies for actualising food justice.

4.1 Tradition and food futures

Traditional and indigenous practices are highly valued in permaculture because they have been developed in perpetual dialogue with specific climactic and soil conditions, and evolving seed varieties. However in El Salvador, indigenous practices were significantly marginalised during the first half of the twentieth century, and this process relies on memories transmitted between generations, from indigenous groups elsewhere. Thus, in one design course session, students shared herbal remedies learned from grandparents or at home. At the session’s close, Angélica Gonzalez, a regular permaculture volunteer in her 40s, remarked on what was striking for her:

...we’ve forgotten how to see what living things can do. We see food in the shop and we think of the taste, or we look at a seed and we imagine a tree. But once our ancestors [*nuestras indígenas*] looked and saw: this one, good for the stomach. That one, good for bad lungs. This one, good for my stew! (Field notes, April 19th 2014).

Angélica highlights a joyful sense of reconnection with the agency of her environment through traditional know-how - although participants also explored in this session how to differentiate between practices forgotten because others work better, and those that actually work. A refreshed notion of tradition is central to how permaculture negotiates this tension: in general practitioners apply principles of experimental methodology to test long-standing practices, such that anyone else

can re-evaluate their value for themselves. This makes tradition future-oriented: rather than what we used to do, tradition means *what we will continue to do now*.

What we will continue to do rests on two factors: an ethical evaluation based in the capacity of a practice to nourish human and nonhuman wellbeing, and a pragmatic assessment of this capacity *in situ*. This interplay of experimental testing with an ethics of care is striking in Angélica's contribution to a later participatory workshop, as groups created timelines showing changing food resources in their local communities:

There was deforestation before the civil war, due to the large population. In Palau Grande there were 600 families [there are now about 60] living from where we live right up to the Pacayas river.... from the time of the 1932 uprisings. Now there is *more* vegetation there than before the war. [...] But the large forests have gone... The traditional practices were like the tree-roots holding the land together, all the way down, and they've almost disappeared. We can't go backwards... but we have to make solutions that go all the way down like that - like the tree-roots. (Fieldnotes, May 5th 2014).

There is a certain pragmatism to tradition reimagined in this powerful metaphor of the forest landscape, populated by living eco-systems and infrastructures of intricate know-how. Principles of careful observation are applied to evaluate long-standing agricultural practices, as part of rebuilding a repertoire for redesigning food systems an an integrated way. If they do not work, they will not be revived. If they only work for one part of the system, they will be discarded. Of course there is disagreement, especially where cultural memory is concerned. However the emphasis is on *what works*, and *for whom*, with ecological observation as the principle means for evaluation.

This pragmatism is evident in way that the production of bio-active compost has come to be regarded one of the most important "traditional" practices to the recovery of food security. There are several words used for compost on a Salvadoran farm: *abono* describes decomposed vegetable matter, while *fertilizante* denotes chemical fertilisers. *Bocashi*, on the other hand, is active, fermented organic matter. Surprisingly, this term entered the permaculture lexicon via Japan, where agroecologists learned to mix "Efficient Microorganisms" (EM) – cultures of naturally-occurring

microorganisms – into compost matter to increase the microbial diversity of soils and plants. Today *bocashi* is produced by agroecological farmers throughout Central America according to local recipes, and is considered “traditional” in that it enhances local methods for creating fermented compost; it demonstrably improves soil quality; and it supports the autonomy of *campesinos* because it costs nothing. Oscar Lopez, Suchitoto’s Community Environmental Officer, who was enrolled on a Permaculture Design Course, explains how this contributes to the kind of integrated environmental recovery plan that Angélica invokes:

In introducing homemade organic fertiliser to people we are also creating an economy that allows people to save money and get away from the hybrid seeds. Because people are dependent on those hybrid seeds; they are the standard programme available. But this is a better kind of food security. It makes people more independent, and they can see how it works for itself.

(Interview with Oscar Lopez, 20th April 2014)

Here Oscar emphasises another key dimension to food justice reimagined through permaculture. Besides “healing” ecological landscapes by restoring soil and biodiversity, food justice recreates rich infrastructures of know-how as part of meaningfully establishing the autonomy of small-scale farmers to determine what and how to grow.

The emphasis on the senses as part of practical and ethical assessments of future life also reflects the biological principle at work in permaculture, which, writes Puig de la Bellacasa (2010) is fundamentally based in ethos and doings. Permaculture design does not revolve around human selves and actions, but principles of collective interdependency, worked out in relation to nonhuman beings and communities. In this sense, learning to make *bocashi* compost is also part of the process of learning to see and relate to microbial matter and communities. In my research journal I wrote of the “permaculture eyes” that were part of this training. Driving around Suchitoto we would stop suddenly when someone spotted *zompopo* – the organic matter which tumbles out of termite mounds, useful for making *bocashi* – although I saw only red earth. Meanwhile, 18 year-old Beatriz, from Palogrande, Cuscatlán explained that the permaculture course she was taking was

changing her perspective more generally:

I am implementing these principles in my family and my community. And the group has really changed my view on life, and it has changed my way of thinking as well. I've been surprised about what we've been able to achieve [...] For me it contributes to a sense of life being more fulfilling. Since getting to know about permaculture I can say that I've learned how to live my life in a fulfilling way. (Interview with Beatriz Hernández Riviera, 15th April 2014).

From the permaculture perspective, if the design process is effective, the experience should also be joyful, in that it opens up the capacity to connect with other people; with one's history and context; and with the animate environment. This idea was also supported by Flor Bouilla de Flores, an agricultural technician from San Vicente, who explained that technicians are often viewed as those who implement governmental strategies in El Salvador. Rather than making the technician redundant, Flor concluded that:

permaculture offers hope for our farmers in El Salvador, because there's a crisis happening in the agricultural sector. I think it would be great to take the practices to the farmers we work with so that they can get their food sovereignty back, and that it can be healthier, cheaper form of agriculture, and, the most importantly, one that cares for the environment for future generations. In my opinion this work would bring much more satisfaction to other technicians, as they would not only be delivering the bad plans of the government, but being part of creating solutions. (Interview with Flor Bouilla de Flores, 20th March 2014)

Emphasising the notion of health at stake in this alternative form of food security, Flor emphasises the empowering feeling of being part of the design process, rather than delivering ready-made solutions. It is also important that she highlights the future-orientation of the ethics at work here, which considers the health of coming generations as well as those living now.

Central to food justice in these terms is consequently a legitimisation of personal experiences and capacities. *Campesinos* are experts of their own experience, and protagonists for social and environmental restoration, while learning to experiment as an essential part of training. As in the CaC process, each *campesino* is encouraged to test proposed techniques by constructing twin plots [*parcelas gamelas*] and measuring differences in production. However, traditional practices are taken as a starting point for such experimental processes, rather than being considered

outdated. I was particularly struck by the empowering nature of this training one day when I found Lucy Flamenco, a regular permaculture volunteer at the Suchitoto demonstration site in her 40s, busy with trays of seeds. I asked Lucy what she was engaged in and I was caught by the comment of Cesar Ramírez, a young volunteer who had just attended the workshop:

Lucy: I'm making up an *almácigo* [a seed tray for germinating seedlings] of fresh tomatoes as an experiment, to see how many seeds sprout, and how long it takes...

Cesar [*Laughing*]: Naomi, it's like what we are doing when we look back at the traditional practices, no? Watching the seeds planted by our ancestors... waiting to see which ones can still grow again, even in this same soil...

Lucy: But you still have to plant the seeds to see! (Fieldnotes, 24th April 2014)

Cesar's words in relation to Lucy's experiment emphasise the forms of environmental intimacy at stake. On the one hand permaculture trains individuals to create and test new hypotheses based on observation, while on the other, groups of permaculturists create fresh narratives integrating environmental pasts with the present. In terms of recalibrating the demands of food justice, these forms of expertise position *campesino* practitioners, along with a revived sense of tradition, at the forefront of international food politics.

4.2 Health and environmental healing

Besides tradition, health is being rethought in Salvadoran permaculture for food justice futures. Health is usually connected with food justice through issues of nutrition, although historically it was also a key term for enabling the "moral improvement" of the poor. However these abstract senses are refused as health is grounded in the pragmatic ethos discussed above. The emphasis on designing in the context of interrelated eco-systems asks participants to explore what agricultural technologies, social spaces, and forms of production promote vibrant inter-relationships between humans and other life-systems. In the process, what counts as health comes under much discussion. In articulating the end-goal of the design process the notion of health [*salud*] is also associated with the process of healing [*sanar*] food systems from within.

This notion of health/healing as the integrated goal of permaculture was highlighted in two comments made in the final workshop in Suchitoto, where participants selected health as a key theme for future participatory inquiry. When I asked one group what they meant by health, Evelio Alos, a permaculture volunteer in his early 30s, who often helped organise others, remarked:

Health is everything: a good body, a good mind, a good corn plant, a good soil, a good place to rest, a good society. You cannot have a healthy human without all these other kinds of health. [...] Look at the diagrams we made about seed preservation [*Indicates the five-part diagram of traditional seed-saving his group made previously*]. The corn is healthy because inside it is the whole process that made it. And so it makes the *campesino* healthy. If we know better what makes us healthy we can really make change in our communities (Fieldnotes, May 8th, 2014).

Evelio's incisive reflection on the relational context of healthiness is vital to the notion of food justice: the point is that you cannot meet nutritional needs without also engaging the broader social context. The point is that food *is* its context. This idea was reinforced by Nelson Garcia, a young man in his 20s, during the same session, as each person selected an object to express something learnt during the knowledge exchange process. Nelson presented a pumpkin seedling he had planted after an informal seed exchange:

A plant is synonymous with hope. It's synonymous with life. And why is there life in this plant? Because of the relationship it has with the earth. [...] What I've learned is that the right to food is nature too. You know the plant is natural because it's in the earth, but so it is with food. And we say that health is for humans, but food can be healthy too, and so can plants. So I think that the right to food is in nature, because we are all in nature, and what permaculture means is keeping it all connected (Fieldnotes, May 8th, 2014).

Nelson makes a sophisticated point here: what we call "culture" and "nature" are socially constructed ideas that in fact have no easy separation. Meanwhile food justice, often treated as an issue of human poverty, is vitally connected to environmental processes and environmental politics. Nelson's sense of hope is very much grounded in holding food justice connected to the wider environmental context while exploring the possible meanings of healthy living.

One major advantage of the emphasis on "healthy living" in Salvadoran permaculture is that it is strategically interesting to regional and national policy-makers who may be interested in small-

scale farming. The value of this interconnection was made particularly tangible in the case of Torola. As one of the two members of the Nuevo Amanacer Health Association of Torola emphasised:

Morazán is one of the areas that was most devastated by the civil war. Since then, the worst problems we've faced have been housing, education, health and food. [...] The problem for us is that organisations come in and they just want to deal with one of these things. They want to help, but they don't want to think about how these things became connected. [...] Permaculture is having an impact here because it starts to connect these things together. Plus it gives people the tools to understand what food is made of and what makes it better for bodies and why. And also what makes it better for *Madre Tierra* [Mother Nature] [...] So we are looking for holistic solutions that mean that people can also take back control over their lives. (Interview with Nuevo Amanacer, March 18th 2014).

Two things stand out in this insightful analysis of “food insecurity” in the region. Firstly we learn that local people want solutions that integrate the various dimensions of poverty, without losing sight of the historical and environmental context. This was something that Salvadora Sánchez, a permaculture practitioner in her 30s, also emphasised strongly in a workshop on food justice:

Food insecurity here [in Morazán] is about importing goods from faraway as exporting them to richer countries. People like to blame poor people, but imagine how these things affect us. [...] And it's true that it's hard to name the problem. We are less and less connected to how food is grown because we buy things from a shop, not even a market. And we see less and less clearly the reasons behind the ways things are changing. [...] When we enter this world of consumerism, we see our families become poorer at every step. (Fieldnotes, March 21st 2014).

For Salvadora, it's important that food poverty is not only connected with local histories, but with international economies and politics. Meanwhile, *Madre Tierra*, mentioned in Nuevo Amanacer's interview, forms a key way that a holistic ethos of health is imagined that can heal these complicated disconnections. *Madre Tierra* in the Salvadoran movement is the concept that the earth is one living system of which we are a part, that gives us life, and that we must care for as we would our own mother. Rather than reflecting a distinct cosmology, this notion signals a plurality of ways of knowing the world, as well as a plurality of living eco-systems, which have both been progressively sidelined by typically western knowledge systems (Millner 2016). Both the subject

and object of healing, the articulation of *Madre Tierra* reminds us that issues of human rights cannot escape being issues of nature too.

In terms of “scaling up” this ethical approach into political solutions, what permaculture demands in terms of food justice is a redefinition of the problems and solutions at stake. Rather than a problem of food insecurity to be solved by international actors, the problem is a monocultural agricultural system premised on a monocultural notion of environmental knowledge. On the small scale *campesinos* become experts of their own contexts, leading to connective solutions that require little money and cultivate rich senses of place-based health and healing. This leads to tangible changes through the cultivation of solidarity economies, such as the restoration of the farmers’ market in Torola, which had had no functioning market for more than 20 years. Meanwhile, the regional governor and vice-governor of Morazán emphasised that permaculture practitioners were increasingly being invited to participate in rural development strategies because of their expertise in “healthy eating” and “health education,” as well as the way they were catalysing interest in regional history, which was also potentially good for tourism (interview with Luis Enrique Salamanca and Michael Gusman, 19th April 2014). Whilst understanding the movement differently than it understands itself, here the vocabularies of tradition and health again demonstrate their capacity to broker exchange between diverse actors.

On the other hand, this presents an important tempering point on the question of scaling up the permaculture ethos, because it is easy for outside observers to seek to mimic momentum, without appreciating the sense of holistic connectivity in play. For example, Karen Inwood recalled a moment where the Dutch charity Cordaid, who have previously funded IPES, rejected a book she had prepared. ‘Although they saw the benefits,’ points out Karen, ‘they got permaculture wrong. It’s about the capacity to plan and make decisions, not about implementing a practical manual. They fund us but they don’t realise that *that’s* what makes it work’ (Interview with Karen Inwood, 15th

March 2013). The challenge, Karen explained, is to believe that poor people can really run their society, rather than middle-class professionals, or western development experts. ‘The actual idea is nothing new,’ she continued in the same interview, ‘it’s a pedagogy premised in fundamental equality. The problem is that it’s very uncomfortable to take this seriously.’

Conclusion

In this paper I have argued that food justice risks becoming depoliticised where the human right to food is emphasised to the exclusion of environmental and knowledge politics. Food, constituted through material histories of human and nonhuman collaboration, meets justice when the right to know becomes central to the design of food futures. In practice this means foregrounding the histories of struggle, dispossession and collective organising in contexts considered food insecure, and rejecting the notion of the “passive poor” that can accompany invocations of human rights. It also means acknowledging new sites of knowledge-production, knowledge-sharing and authority emerging from such sites, and their role in contributing to the design of sustainable food futures. This is not the same as saying that hunger can be solved by doing nothing, or that anyone who has experienced dispossession knows how produce healthy food. Rather, in specific regions, networks of knowledge production are emerging that offer microcosmic examples of how to model food *and* environmental justice into social organising practices. Such questions of justice cannot be settled through food aid programmes alone but call for engagement with the broader, colonially-anchored politics of knowledge that still shapes the way we talk about poverty, especially in the Global South.

While struggles to maintain the future of the movement with insecure funding persists for the Salvadoran permaculture movement, the importance of everyday environmental expertise for questions of global justice is echoed on the global scale within growing TAMs, including LVC. In

particular, the notion of *Madre Tierra* has been mobilised by diversely situated indigenous and *campesino* groups to denote principles for ethical decision-making that keep questions of food, justice, and environmental politics connected. Such groups do not share one world view, but they do share a common objection to the reduction of the “environment,” together with the animate systems of life and knowledge it articulates, in terms that count for everyone else. Like food sovereignty (see Martinez-Torres & Rosset 2010), the term itself consequently carries something of a “strategic essentialism” without itself being an essentialist concept. Holding this space open makes room for knowledge production that empowers communities to devise their own solutions, and resists the notion that a one-fits-all solution - for example, to global hunger - could be possible, or desirable. It also asks us to reevaluate the universal community of rights that can be presumed by a notion like food justice. Resisting the temptation to “speak up” for the food poor, we are invited instead to *listen* and to learn to apprehend, the new kinds of expertise that are being experimentally devised as solutions, at sites we have been taught to consider “backward”.

I have suggested that Salvadoran permaculture models a vibrant ethos for performing this politicisation of food justice in practice, by deriving agricultural designs from dialogue with specific ecological and social histories. Permaculture principles treat tradition as a vehicle of future change, but also empower individuals and groups to evaluate whether such traditions work and what their effects are on contextual species and cultural ecologies. In this translative sense, permaculture is also significant in the Salvadoran context because it has made *in situ* problem-solving audible to other regulative institutions, especially through connective concepts of health. A further move might entail collaboration in the production of forums which can articulate this authority in relation to other shared “problems,” such as the effects of climate change, the conservation of water and the protection of biodiversity. Meanwhile, such incipient forms of organising point toward demands that might be made by food justice at other scales: the right to be

an expert, the right to decide what and how to grow, the right to know.

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Figure Captions

Figure 1: Map showing key research sites. [Image credit: author's own reworking of map in public domain]

Figure 2: Permaculture principles. [Image credit: <https://permacultureprinciples.com/> Available under commons license]

Figure 3: "The soil has died" [Image credit: author's own]





