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Neoliberal environmental justice: mainstream ideas of justice in political conflict over agricultural pesticides in the United States

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Numerous scholars have used political philosophy to characterise the US environmental justice (EJ) movement's conception of justice. I build upon that work by identifying and critically evaluating the ideas of justice that manifest in mainstream (non-EJ) environmental politics. I do so through a comparative analysis of two groups of activists concerned with the threats posed by pesticides to human health in California. Mainstream agri-environmental activists' narratives and practices evince libertarian and communitarian ideas of justice that support the neoliberalisation of an already compromised regulatory system, as they motivate and legitimise policies, practices, and discourses that undermine the state's environmental protections and shift environmental responsibility to individuals. In contrast, California's EJ activists, like the broader EJ movement, marshal a pluralist notion of justice as distribution, recognition, participation, and capabilities, which rejects the neoliberal project and explicitly criticises the social inequalities and relations of oppression that help produce environmental inequalities.

Keywords: environmental justice; theories of justice; pesticides; utilitarianism; libertarianism; communitarianism; neoliberalism

Introducing environmental justices

American environmentalism is complex in institutional form, focus, strategy, tactics, and discourse, and scholars have widely debated the consequences of these variations (see Schlosberg and Bomberg 2008 and other articles in that special issue of *Environmental Politics*). California's agri-environmental politics provide ripe fodder for such analysis. California is the epicentre of the organic farming movement and home to the nation's largest pesticide regulatory apparatus, which often sets the bar for the US Environmental Protection Agency (EPA). Yet, the contamination of air, water, and food by agricultural pesticides constitutes a persistent public health threat that raises doubts about such efforts. The use of many of the most toxic and unruly agricultural pesticides has increased,

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new toxic chemicals have been registered for use, and pesticide contamination incidents and illnesses regularly occur in California's agricultural communities. With only 2–3% of US farmland but 25% of the nation's agricultural pesticide use, pesticide problems that occur throughout the world are particularly pronounced in California (USDA 2002, US EPA 2004, tables 3.5 and 4.2, CDPR 2006). The state's regulatory officials claim that pesticides pose only a minor threat to public health. However, toxicological, epidemiological, sociological, and other data indicate that agricultural pesticides contaminate air and water and contribute to a wide range of chronic physical, developmental, and mental health disorders. Grassroots pesticide activists have shown that this is a 'classic' environmental justice (EJ) problem, as poor communities and communities of colour are disproportionately exposed to pesticide-contaminate air and water and disproportionately unable to do anything about it.¹

Pesticide pollution and illness are overdetermined outcomes, driven by many factors. This situation is produced in part by ideas of justice that circulate among mainstream agri-environmental actors in the regulatory and activist arenas. I argue that environmental justice problems stem not only from scientific uncertainty, ineptitude, and corruption, but also from dominant but often implicit ideas of justice. Other scholars have shown that the US EJ movement marshals a notion of justice that prioritises equity, participatory parity, recognition of group-based oppression, and basic capabilities (Pellow 2000, Cole and Foster 2001, Shrader-Frechette 2002, Schlosberg 2004, 2007). I build upon that scholarship by identifying the ideas of justice in *mainstream* (non-EJ) agri-environmental politics. Against the backdrop of neoliberalised pesticide regulation and policy, I compare mainstream and EJ activist responses to the socio-environmental impacts of agricultural pesticides and use theories of justice from political philosophy to theorise activists' responses. I demonstrate that libertarian and communitarian ideas of justice pervade mainstream agri-environmental activism in the United States and show that these mainstream notions of justice are part of the ideological apparatus that supports the neoliberal erosion of an already compromised pesticide regulatory system.

Theorising environmental justice

Although the US EJ movement is more reformist than radical, it nonetheless has forced mainstream environmentalism to acknowledge the roles of race and class in shaping environmental inequalities (Bullard 1990, Cole and Foster 2001, Pellow and Brulle 2005). Using conceptual categories from political philosophy, several scholars have recently characterised what 'justice' means to the EJ movement and have identified those ideas' material implications (Pellow 2000, Cole and Foster 2001, Shrader-Frechette 2002, Schlosberg 2004, 2007).

David Schlosberg's (2004, 2007) work constitutes the most comprehensive effort thus far. Through interpreting EJ actors' narratives and practices,

Schlosberg describes the EJ movement's vision of justice as a pluralistic one that integrates four non-exclusive ideas of justice. First, in line with the distributiveegalitarian arguments pioneered by John Rawls, the EJ movement calls for redistribution to redress undeserved inequalities that prevent all individuals from having an equal opportunity to determine their own fate. EJ activists call for a more equal distribution of environmental resources and hazards, prioritisation of clean-up in the least-advantaged communities, and taking into account the needs of future generations as equally as current society. Second, as Iris Young and Nancy Fraser have observed of other 'new social movements', Schlosberg shows that the EJ movement calls for recognising, accounting for, and combating undeserved cultural relations of group-based oppression and privilege that have long made many exploited and racially marginalised groups bear the burden of environmental hazards while others enjoy the privileges of authority, respect, and freedom from hazards. Third, the EJ movement's vision of justice requires increasing participatory parity, so that all individuals and groups are able to participate as peers in environmental decision making, scientific research, and regulatory agenda setting. Fourth, in line with the work of Amartya Sen and Martha Nussbaum, EJ activists insist that justice requires bolstering the basic capabilities (institutions, resources, freedoms, and opportunities) that people need to be full members of society, such as public transit, affordable housing, adequate food, and scientific literacy.

In recent years, numerous other scholars have utilised Schlosberg's framework to characterise and analyse EJ activists' arguments (e.g. Fan 2006, Carruthers 2007, London et al. 2008, Sze et al. 2009, Walker 2009, 2012, Holifield 2012, Allen 2013, Ottinger 2013). Yet, the work of a few scholars suggests that EJ activists' ideas of justice are not the only ones that circulate among environmental activists. Notably, Melanie DuPuis et al. (2011) have identified some ideas of justice that play a role in local-food politics, though without comparing those ideas to those of the EJ movement. I want to build upon the work of DuPuis et al. and bring it into conversation with the work of Schlosberg and others on the justice politics of the EJ movement. Specifically, I ask: Which ideas about justice manifest in mainstream (non-EJ) environmental activism? How do its justice ideals compare with those of EJ activism? What are the material and ideological consequences of mainstream actors' notions of justice? I address these questions through a case study of political conflict over the socio-environmental impacts of pesticides in California. As I will show, both mainstream and EJ activists in this case are responding critically to a neoliberalised regulatory system, yet these two threads of activism reveal very different ideas of justice. Importantly, mainstream activists' ideas of justice are part of the ideological apparatus that supports the neoliberalisation of an already compromised pesticide regulatory system – and thus help to explain why agricultural pesticide pollution and illness persist in a context of remarkable environmental reform.

Methods

To understand political conflict over the socio-environmental impacts of agricultural pesticides, I draw on a variety of primary and secondary data that I collected from 2002 to 2010. I conducted ethnographic observation at regulatory and activist events; more than 100 in-depth, qualitative interviews with pesticide regulators, EJ and mainstream agri-environmental activists, scientists, and industry representatives; and countless shorter, informal interviews with those same actors. These qualitative methods enabled me to understand the cultural politics at work within regulatory agencies and activist organisations, and the material constraints within which their members operate. I also reviewed documents from pesticide regulatory agencies, agri-environmental non-governmental organisations (NGOs), and other research institutions. All unreferenced quotes are excerpts from my own interviews and observations.

To identify the ideas of justice at work in this political conflict, I analysed patterns in individuals' articulations of the appropriate role for the state in agrienvironmental problem solving, patterns in institutional practices and priorities, and how these discursive and material patterns reflect ideas of justice. I use conceptions of justice from political philosophy to theorise actors' claims.²

Context: neoliberalisation of agri-environmental policy and regulation

Agri-environmental activism in California unfolds against a backdrop of federal, state, and local environmental regulation and policy. That context conditions the politics of the possible for activists, in turn shaping their practices and claims. Harrison (2011a), Harvey (1996), Low and Gleeson (1998), and others have shown that the US federal government's approach to addressing environmental problems has historically been dominated by a *utilitarian* conception of justice, in which a just state strives to maximise overall (human) welfare and restricts problems (such as pesticide pollution) when the benefits of doing so outweigh the associated costs. Yet, in a context of scientific uncertainty about the health risks posed by chemicals, clear evidence of their immediate utility, a regulatory culture of industry protection, and an underlying imperative to facilitate economic growth, utilitarian forms of decision-making have helped move pesticides to market and keep them there rather than restrict them for the sake of public health.

The environmental regulatory apparatus in the United States, like the liberal welfare state in general, has come under serious attack over the past 30 years and subject to reforms arguably designed to offset the inefficiencies of regulatory institutions and harness the efficiencies of the competitive market system. Starting when Reagan, Thatcher, Pinochet, and other leaders who famously applied the neoclassical ideas of Friedrich Hayek and Milton Friedman in the early 1980s, neoliberalisation continues today (Anderson 1988, p. 164, Ranelagh 1992, p. ix, Harvey 2005). These 'neoliberal' reforms include budget cuts,

deregulation, privatisation of natural resources, shifting regulatory responsibility to the local and international levels, and a preoccupation with market-based and voluntary solutions to environmental problems (Harvey 2005, Castree 2008). These institutional changes in the United States include both 'rolling back' the regulatory state and 'rolling out' neoliberal ideology and programmes to 'mask and contain' the resulting social and environmental fallout (Peck and Tickell 2002).

Notwithstanding the evidence that social inequalities and environmental problems have grown in the neoliberal era, neoliberalisation has been defended with utilitarian arguments that such reforms are the most cost-effective ways to address environmental problems but also with libertarian claims to justice. Principally concerned with state infringements on civil liberties, libertarians argue that justice requires protecting individuals' formal rights of self-ownership ('sovereignty' over oneself and one's property), that the state should do this through protecting private property rights, and that the free market is the only socially just institutional mechanism for exchanging property (Nozick 1974).³ Colin Bird characterises libertarianism as unmatched in its 'contagion with intellectual circles, its (malign) influence on political discourse and public policy and its evangelical vigour' (Bird 1999, p. 139, cited in Lukes 2006, p. 10; see also Brighouse 2004, p. 84, Low and Gleeson 1998, p. 100).

Although pesticide regulatory officials responsible for implementing neoliberal reforms do not usually justify their work by appealing to ideas of justice, pesticide regulation increasingly aligns with the particular strands of utilitarian and libertarian reasoning that dominate regulatory politics.⁴ The US EPA's budget was cut sharply throughout the late 1970s after the agency's inception and has not increased since that time (see Harrison 2011a, pp. 101–102). Those early cuts and the continued inadequate levels of funding for EPA activities limit regulators' abilities to re-evaluate the safety of old pesticides in light of new evidence. Indeed, the EPA was unable to complete its first round of pesticide reevaluations – initially mandated in 1972 – until 2008. Recently, state scientists and other staff vociferously opposed cutbacks in funding for EPA libraries and databases that provided information about toxic chemicals to the public (PEER 2006). In 2008, USDA downsized its pesticide use data collection and reporting, further constraining scientists' abilities to conduct pesticide risk assessments that are already compromised by data gaps (Sass 2008). In California's budget crisis of 2001–2002, CDPR's pesticide risk assessment capacity was cut by one-third, and its already-starved air sampling and analysis funds – essential for identifying where pesticide regulation need to be strengthened – were cut by 60% (CDPR 2003).

In addition to budget cuts, regulatory agency personnel have been increasingly pressured not to regulate during the neoliberal era. Procedural changes made during the Bush Administration shifted decision-making power away from US EPA scientists and increasingly into the hands of politically appointed officials (New York Times 2006). During that time, many regulatory scientists publicly announced that their work was actively constrained by the political interests of top agency officials in ways that directly led to shoddy risk assessments and inadequate pesticide regulation (Harris and Pear 2007, Welch *et al.* 2006).

Regulatory agencies increasingly rely on market-based measures and voluntary agreements with industry. The US EPA and CDPR fast-track the evaluation and registration of new 'greener' pesticides – providing more choices to pesticide users but not translating into a decreased use of the most toxic and unruly pesticides (Harrison 2011a). Agencies promote voluntary programs, such as California's voluntary educational program called Spray Safe, with officials declaring, 'It's far more effective if growers can kind of in a sense police themselves' (Khokha 2009). The neoliberal pressure to shift from *regulation of* to *cooperation with* industry has gained traction in part because it was layered onto agencies already committed to industry protection. Far from challenging that culture, neoliberal reforms have weakened regulatory attention to pesticide pollution.

Mainstream activism against pesticides

Over the past 50 years, agricultural pesticide pollution and illness have provoked multiple varieties of activism, all of which have been frustrated by the state's ineffectiveness and its cosiness with industry. The predominant form of activism concerned with agricultural pesticides consists of a variety of organisations working at the intersection of the mainstream environmental movement and the agri-food movement. This mainstream agri-environmental activism addresses pesticide pollution and other agri-environmental problems by building alternatives to conventional farming and food systems: developing less-toxic farming practices, disseminating those practices through voluntary educational programs, developing alternative marketing systems that link participating farmers with consumers willing to pay more for sustainably grown food, and boosting information to facilitate consumer choice (Allen et al. 2003, Guthman 2008a). Mainstream agri-environmental activists widely claim to be concerned with justice, promoting environmental sustainability, economic viability, and social justice as the "three legs" of the sustainability stool' (NSAC 2013a). Organisations leading such work in California include California Certified Organic Farmers (CCOF), Community Alliance with Family Farmers, the Ecological Farming Association, and the Organic Farming Research Foundation, all members of the National Sustainable Agriculture Coalition. Their work is supported by many others, including academics, popular food writers, celebrity chefs, and a legion of enthusiastic shoppers. Like the mainstream environmental movement, few mainstream agri-environmental organisations focus on inequalities of race or class, instead taking a colour-blind approach. They are generally staffed by white professionals and serve a white, middle-class consumer and farmer clientele (Allen et al. 2003, Guthman 2008a).

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Akin to the conservative nature of the mainstream environmental movement that others have observed (Speth 2004, Faber 2008, Park and Pellow 2011), mainstream agri-environmental activists' favoured practices have taken a decidedly neoliberal turn in recent years. Organic farming constitutes the primary way mainstream agri-environmental activists have addressed agricultural pesticide problems, relying on consumer demand and organic price premiums to entice farmers to reduce pesticide use. 'Fair trade', 'beyond organic', and 'sustainably grown' efforts similarly seek to reduce pesticide problems through differentiating food in the marketplace with labels touting environmentally sustainable production practices. Advocates also widely promote local-food marketing arrangements such as farmers markets, community-supported agriculture, urban farms, and direct contracts between farms and local restaurants, schools, and other institutions, arguing that buying locally effectively eliminates 'pesticide induced illness suffered by farmers or consumers' among many other benefits (Locavores 2013). Those organisations that approach pesticide issues through policy reform do so by advocating for Farm Bill reforms that help incentivise farmers' (voluntary) transitions to organic agriculture; although valuable, these efforts do not include pressing for restrictions on the use of toxic pesticides (e.g. NSAC 2013b).

The neoliberal turn is also evident in mainstream agri-environmental activist discourse. As one politically active and well-known organic farmer declared in his presentation at a pesticide activist conference in 2010, 'I don't have the patience for policy reform ... How do you capture health? You eat better. You grow a garden. We don't have to wait for Washington'. At the same conference, an activist leader stated in her presentation that to address environmental problems in agriculture, 'We need to turn vacant lots into local gardens instead of going to Washington'. Frustrated with the state, mainstream agri-environmental activist organisations stridently eschew the possibility of reducing pesticide pollution through regulatory reform and instead encourage changes in individual behaviours to reduce pesticide exposure. Similarly, a CCOF newsletter advocates market-based measures as the only reasonable way to solve pesticide problems: 'The only easy solution that seems to work is for consumers to ... vote for the future of farming and vitality of our environment with their dollars and sense, shifting the market toward organic foods and sustainable products' (Bednarz 2007, p. 18).

Allen *et al.* (2003) show that numerous factors compelled agri-environmental and other agri-food advocates to shift towards a neoliberal approach in recent years. With the decline of the civil rights movement, neoliberal evisceration of regulatory agencies, and decline of foundation funding for policy work, activists found the oppositional and confrontational work of regulatory and policy change to be slow, outgunned, unfunded, and emotionally taxing. At the same time, advocates found that collaborative work on alternative farming systems was more pleasurable, effectively helped many farmers transition to less-toxic pest management systems, and was more attractive to state and private funders.

The neoliberal turn in mainstream agri-environmental activism aligns with a *libertarian* vision of justice, where individuals use market transactions to achieve their own desired ends. We do not know the extent to which these activists' neoliberal projects and narratives reflect a concerted embrace of a libertarian vision of justice versus a strategic pursuit of the path of least resistance. Certainly, they display a range of political commitments (DuPuis and Goodman 2005, DuPuis et al. 2011). Regardless, their shared reliance on and discursive embrace of voluntary and market-based measures - and dismissal of pesticide regulatory reform – align with libertarianism by treating the avoidance of pesticide exposure as a personal choice, not as a *right* to be ensured by the state. This libertarian approach is undemocratic, as only those individuals with extra money to spend get to 'vote' and secure protections from pesticide exposure. The protections secured by organics and other market-based efforts are spatially and temporally uneven, as they are tethered to isolated, individualised purchases and contingent upon ever-shifting consumer and industry whims and abilities. Additionally, by promoting the 'carrots' of organics and other marketbased and voluntary measures as effective solutions to the pesticide problem at the same time that it abandons the 'sticks' of regulatory reform, mainstream agrienvironmental activists' libertarian approach effectively absolves regulatory agencies of their responsibility to protect the public from harmful pesticide exposure. In so doing, mainstream activists' libertarian turn ideologically reinforces the neoliberalisation of the state.

In addition to aligning with a libertarian idea of justice, mainstream agrienvironmental activists explicitly invoke a *communitarian* notion of justice, especially in their discourse around local food. Communitarians argue that members of a 'community' possess a shared understanding of the good life, thus are in the best position to identify their own conceptions of justice, and reach these common understandings through tradition, shared experience, familiarity, geographic proximity, and 'relations of trust'. Although local-food systems are generally not explicitly characterised as inherently just, they are framed as fostering justice by enabling personal connections between producers and consumers that combat the inequality-exacerbating and consumer-disempowering nature of globalised food networks (DuPuis and Goodman 2005, DuPuis et al. 2011). Activist organisations are replete with the 'community' meme, as exemplified by the colourful banners flanking the space where my local farmers' market takes place each weekend ('Boulder County Farmers' Markets: Growing Community Since 1987'), by the tagline of a nearby urban garden program ('Growing community, one urban garden at a time'; DUG 2013), and news coverage praising local-food institutions with headlines such as 'Local Food Creates Community' (Hoban 2008).

Mainstream agri-environmental activists argue that food-system localisation can build 'community', and this will address environmental issues. For example, a university extension agent argued on his website that a sense of 'community' compels farmers to become environmentally responsible and honest: 'Local food is safe. There's a unique kind of assurance that comes from looking a farmer in the eye at farmers' market or driving by the fields where your food comes from' (Grubinger 2010). An activist organisation in Vermont claims on its website that locally grown and produced food 'is more honest – honesty in terms of the food source (i.e. organic seeds vs. GMO seeds) and the growing/producing process. It has to be! We are all neighbors' (Mad River Valley Localvore Project 2012). Such claims imply that local-food networks reduce pesticide pollution and other agri-environmental problems because farmers who know their buyers feel a sense of care for them.

Yet, mainstream agri-environmental activists' communitarian vision of justice overestimates the ability of 'building community' to address the socio-environmental impacts of pesticides. Meeting consumers and hearing their concerns does not mitigate the many structural factors – pesticide regulations, quality standards, food and input prices, farm policies, research priorities, advising systems, and dominant norms of 'good farming' - that compel farmers to use pesticides in ways that contribute to pesticide drift, exposure, and illness. Nor does meeting a farmer actually enable a consumer to 'see' the farmer's production practices and thus to vote in an informed way. Even if they could, it would not be practical or sustainable for all concerned consumers to visit all farms. As others have observed, 'local' is not necessarily more just or sustainable than other scales. It depends on who or what it empowers. Local-scale politics often reinforce the power of the elite, and preoccupation with 'the local' can compel people to ignore the forms of social change that require action at other scales or in other places (DuPuis and Goodman 2005, Born and Purcell 2006, DuPuis et al. 2011). The claimed relationships between proximity and care could be tested, but, to date, no empirical studies have evaluated whether farms participating in local-food systems treat their animals, workers, or land better than do other farmers.

Moreover, mainstream agri-environmental activists' communitarian claims constitute part of the ideological apparatus that reinforces the neoliberalisation of the pesticide regulatory state, notably when advocates imply that local-food connections are *superior to* regulations and policies or can replace the need for them. For example, in Michael Pollan's best-selling book, *In Defense of Food*, he echoes the broader communitarian sentiment found among mainstream agrienvironmental activists when he argues that those concerned with environmental and other problems in agriculture should

Shake the hand that feeds you. As soon as you do, accountability becomes once again a matter of relationships instead of regulation or labeling or legal liability ... Regulation is an imperfect substitute for the accountability, and trust, built into a market in which food producers meet the gaze of eaters and vice versa. (Pollan 2008, pp. 160–161)

In this statement, the communitarian promise that close relationships generate care thus seems to solve environmental problems without having to engage in the messy work of 'regulation'. Of course, this statement could be interpreted differently. Pollan has elsewhere lobbied for egalitarian food policy reform, which underscores the point that individual actors' practices align incompletely with different conceptions of justice. Nevertheless, this claim exemplifies a broader trend in which mainstream agri-environmental activists explicitly concerned about pesticides and other agri-environmental problems hail neoliberal practices and gloss over the shortcomings with communitarian claims of care and reciprocity. In sum, mainstream agri-environmental activists' attention to pesticides reflects both libertarian and communitarian ideas of justice, which together ideologically serve to reinforce the neoliberalisation of the environmental regulatory state.

EJ activism against pesticides

Like mainstream agri-environmental activists, California's EJ activists are frustrated by the state's failure to reduce the human health threats posed by agricultural pesticides adequately. Yet, these EJ activists apply their anger through a very different approach: one that reflects the broader EJ movement's vision of justice and rejects – rather than reinforces – the neoliberal project.

EJ organisations addressing agricultural pesticide contamination in California include community-based organisations (including The Committee for the Wellbeing of Earlimart, and Save Our Shafter) and other NGOs (including the Association of Irritated Residents; California Rural Legal Assistance: Californians for Pesticide Reform; Center on Race, Poverty, and Environment; Fresno Metro Ministries; Pesticide Action Network; and United Farm Workers). Many are linked through regional coalitions such as the Central California Environmental Justice Network, California Environmental Justice Alliance, and Environmental Justice Coalition for Water. The core participants are low-income, Latino farmworkers and their kin, who are supported by a racially and classdiverse mix of other agricultural community residents, as well as lawyers, scientists, students, and a few sympathetic regulatory agency staff. Although active statewide, EJ activism around pesticides is most vibrant in California's Central Valley, which produces half of all US fruit and vegetables. To pursue their primary goal of regulatory restrictions on the most toxic and unruly pesticides, they hold press conferences and public rallies, give testimony at regulatory hearings, prepare research reports, bring lawsuits and administrative complaints against regulatory agencies, collect their own original health and pesticide exposure data, do grassroots organising and education, and lead 'toxic tours' to educate the press, regulatory staff, and elected officials about the multiple environmental hazards in contaminated communities.

These EJ activists' statements in regulatory hearings, research reports, and interviews with me reveal a pluralistic vision of justice consistent with that of the broader US EJ movement as Schlosberg has characterised. First, EJ pesticide activism in California foregrounds a concern for distributive-egalitarian justice. These EJ activists focus on the ways that California's low-income, farm-working communities are disproportionately burdened by pesticide pollution through exposures in the workplace, residential proximity to pesticide applications, and contaminated drinking water. The following statement by one EJ activist in an interview with me represents the dominant narrative in EJ pesticide activism:

There are seven hundred thousand farmworkers across the state who are predominantly people of colour ... They are unquestionably disproportionately affected ... At one point, I even heard a comment, 'Yeah, but aside from the farmworkers?' I [replied], 'There is no "aside from the farmworkers!'"

These EJ activists attribute this environmental inequality to an unequal distribution of social power. Poverty, competition for jobs, and/or legal status issues diminish the abilities of most farmworkers and their families to do anything about pesticide exposures and the associated illness, medical bills, and fear. For example, one woman explained to me why officials did not accept her report of pesticide exposure: 'They said they need sufficient proof. How do you prove it with no money? No money, no doctor!' An activist explained to me that farmworkers who express to their supervisors concerns about pesticide exposure are told, 'You want to protect yourself? Stay at home or get another job'. At a public hearing on proposed changes to pesticide violation fines, a farmworker testified that his peers do not report pesticide exposures because, 'We don't want to cause any problems. We don't want to be deported'. Limited social power exacerbates the likelihood that farm-working families and other poor agricultural community residents experience pesticide exposure, renders those exposures relatively invisible, and limits their abilities to redress their grievances. At the same time, these EJ activists also emphasise how pesticide and farm industry corporate actors' extraordinary financial resources enable them to treat fines associated with regulatory violations as a minor cost of doing business and devote tremendous resources to scientific research, lobbying, and advertising to maintain sales, keep pesticides on the market, and otherwise shape regulatory science, policymaking, and public opinion in their favour (see PAN 2013).

EJ activists advocate solutions that foreground distributive justice, insisting that justice requires first protecting those who bear a disproportionate burden of the pollution. Because most agricultural community residents are unable to buy their way out of a contaminated environment, EJ pesticide activists in California prioritise regulatory restrictions on the most toxic and unruly pesticides and display ambivalence about the alternative markets that mainstream agri-environmental activists advocate. For example, in response to a question about whether she recommends organic food and personal care products as a way to reduce exposure to endocrine-disrupting pesticides, one EJ activist told me, 'Personal choices can do a lot, but it can't do everything. You have to get political'. Another told me in an interview, 'Is the best way to do that through individual purchasing? No. It's all about policy'. These EJ activists prioritise regulatory reform as a way to protect *all* residents from pesticide exposure, not only those who can afford organic produce and move away from industrial agriculture. In contrast, mainstream agri-environmental activists have largely abandoned pesticide regulatory reform in favour of developing alternative markets. EJ activists also call for distributive justice in the form of curtailing industry power over the regulatory process. For example, like other EJ organisations, PAN recently protested the appointment of top executives from two major industry organisations – Monsanto and CropLife America – to leadership positions in federal agencies (PAN 2010).

Second, EJ activism against pesticides in California reflects the broader EJ movement's vision of justice that requires recognition of group-based oppression. For example, EJ pesticide activists point out that regulatory meetings held at times when working-class residents are at work, or without translation equipment for Spanish-speaking residents, systemically exclude those groups from participating in the regulatory process. Additionally, these EJ activists argue that the ways regulatory officials treat residents who raise concerns about pesticides reveals a widespread oppression of non-'experts' and of people who do not embrace the pesticide paradigm of agricultural pest management. Many victims of pesticide exposure told other activists and me that they felt ignored or disrespected for reporting their experience and expressing concerns about the safety of pesticides. EJ activists also repeatedly told me that regulatory officials are slow to respond to pesticide exposure incidents or fail to respond at all. My own interviews with local regulatory officials substantiated these claims, as many responded to my questions about residents' concerns about pesticide toxicity by sighing, rolling their eyes, and otherwise physically expressing their frustration and disdain. These forms of oppression are often gendered, as many regulatory and political officials invoked veiled sexist stereotypes by dismissing concerned (female) residents as 'emotional', irrational, uninformed, and suffering from 'chemiphobia'. Such dismissals discourage victims from reporting exposures and thereby minimise the known consequences of pesticide use. As one activist told me, 'If people see that the officials do not do anything when other people report pesticide exposure, then they say, "Why should I report this? Nothing will be done". Regulators' own records validate these claims, showing that county agriculture commissioners rarely issue fines for pesticide violations (only about one in eight statewide; CDPR 2009a), and those fines tend to be small (on average, just a few hundred dollars; CDPR 2009b). By minimising the repercussions of regulatory violations, such practices absolve careless application practices that cause pesticide pollution of air and water.

EJ pesticide activists' preoccupation with group-based oppression stands in stark contrast to mainstream agri-environmental activists' conception of justice that ignores it. The two activist groups' competing notions of 'community' underscore this point. Local-food advocates claim to have created a universally appealing and colour-blind sense of 'community' (Guthman 2008b). In contrast, EJ pesticide activists build solidarity around an explicitly *relational* nature of

'community' that calls out group-based oppression and the fact that racially marginalised and other groups experience environmental hazards differently than do middle-class whites. The EJ movement's slogan, 'we speak for ourselves', is an explicit critique of relations of oppression along lines of race, class, indigenity, and gender that have historically silenced some groups in the realm of environmental decision making and created environmental inequalities. Localfood advocates' brand of communitarianism ignores that history of oppression and implicitly dismisses the critique and struggle as unnecessary.

EJ pesticide activists' proffered solutions reflect a vision of justice that includes combatting group-based oppression. For example, they insist that regulatory hearings be structured in ways that enable all residents to participate – held in evenings or weekends in locations accessible by public transit, advertised widely in ways that reach community residents, and with translation provided. They also insist on the validity of non-scientific, lay knowledge and the importance of normative discussion. Two EJ activists highlighted this set of convictions in their letter to the editor of a local paper in 2007: 'The question of what [pesticides are] safe enough for children and others is a question of both science and policy. It is rightfully answered by society as a whole, and in particular by those at risk of exposure' (Dansereau and Kegley 2007).

These solutions designed to combat group-based oppression also reflect the third idea of justice that Schlosberg and others have observed in the broader EJ movement: justice as participatory parity. EJ pesticide activists demand the ability to participate in the regulatory process and actually influence material outcomes. They participate in formal opportunities to provide input (e.g. providing testimony at regulatory hearings, submitting written comments, and serving on agencies' citizen advisory groups), and also publicly criticise regulatory agencies' public participation efforts that do not enable participants to actually have an impact. EJ pesticide activists also pursue participatory parity in the processes of collecting and interpreting scientific data, as evidenced in the Drift Catcher lay air-monitoring program (Harrison 2011b).

Fourth, EJ activism against pesticides reflects the broader EJ movement's concern with capabilities. In their reports and statements, EJ activists highlight the lack of capabilities that directly exacerbate the consequences of pesticide exposure in many agricultural communities, such as emergency responders' lack of pesticide incident response protocol, insufficient Spanish-language staff in regulatory agencies, and inadequate pesticide exposure knowledge among health clinic staff. Accordingly, they advocate improving these institutions. Certainly, some important capabilities that many residents do not possess (e.g. legal status) exacerbate pesticide exposures in farm-working communities but extend well beyond the realm of pesticide regulation. Therefore, many EJ activists are also politically engaged in addressing such problems (e.g. through immigration reform advocacy).

These EJ activists thus differ from mainstream agri-environmental activists in terms of their conceptions of justice, which in turn reveal divergent relationships to the neoliberal project and distinct ideas of community. Additionally, EJ activists fighting pesticide pollution in California, like the broader EJ movement, *explicitly* name justice as their central concern and thereby frame the issue as a normative one deserving public debate. In contrast, mainstream agri-environmental activists do not frame their decisions as moral ones, instead explaining their priorities and practices in terms of scientific efficacy, as difficult decisions that have been forced upon them by other actors such as the legislature, or as the only option. Doing so positions the conversation outside the realm of democratic, subjective debate and allows mainstream actors to shirk responsibility for the vision of environmental justice their practices embody.

Conclusions

As positions on rightness and fairness, dominant ideas of justice carry particular ideological weight. They serve as the basis for judging past actions and for justifying recommendations for change. I have identified the ideas of justice displayed by two groups of activists concerned with the human health threats posed by agricultural pesticides in California. Although both groups of activists are critically responding to and frustrated with a neoliberalised pesticide regulatory context, they evince divergent ideas of what justice looks like – differences with significant consequences.

Mainstream agri-environmental activists' discourses and practices reflect libertarian and communitarian ideas of justice. Their libertarian tendencies lend credence to market-based and voluntary ways of addressing environmental problems and shift environmental responsibility to individuals, while their communitarian claims assert that a universally welcoming 'community' will fill the void left by the neoliberal evisceration of the environmental regulatory state. Together, these claims to justice normalise neoliberal problem solving, constituting part of the ideological apparatus that supports the neoliberalisation of an already compromised pesticide regulatory system. Although mainstream agrienvironmental activists might not think of themselves as supporting neoliberalisation, they are, by virtue of the claims they make and the practices they prioritise and endorse. Thus, actors who normally are not seen as allies – such as Republican legislators and local food activists - together convey the same message about the right or best way to solve social problems. This outcome holds true regardless of whether the actors are genuinely motivated by a particular idea of justice or whether they simply invoke those ideas to rationalise practices motivated by other interests.

In contrast, the EJ activists interviewed for this study, like the broader EJ movement, explicitly marshal a combination of distributive-egalitarian, recognition, participation, and capabilities notions of justice that explicitly rejects neoliberal tactics and instead foregrounds the unequal and oppressive social relations that uphold environmental inequalities (Schlosberg 2007). These EJ activists reject the idea that neoliberal practices can address environmental

inequalities, emphasising that poverty and racism exclude many people – including those most burdened by pesticide pollution - from 'voting with their dollars' or otherwise standing on equal footing in social life. Despite the popular imaginary of markets as spaces in which individuals trade property to their mutual advantage, EJ activism and its attention to environmental inequalities underscores the way that property itself is an accumulation of racist exclusion and privilege (Harris 1993). At the same time, EJ pesticide activists' concern for the ways that group-based oppression contributes to pesticide pollution, exposure, and illness casts doubt on the potential for mainstream agri-environmental activists' idealised ideas of 'community' to effectively address these environmental problems. By calling out mainstream agri-environmental activists' ideological positions in this way and comparing them to EJ pesticide activists' explicit claims to justice, I seek to make mainstream actors accountable for the justice ideals they implicitly support – and for dismissing, in Jenny Reardon's terms, 'the other possible worlds ... that might still be enacted' (Reardon 2013, p. 192).

It should be noted that some mainstream agri-environmental actors comply with dominant ideas of justice only partially, potentially signalling a partial shift in mainstream agri-environmental politics towards the EJ movement's ideas of environmental justice. For example, regulatory agencies' efforts to institutionalise EJ display some promising attention to participatory justice. The success of such efforts will depend on the extent to which agencies can meaningfully accept and apply the critical observations coming from EJ activists and scholars and ensure that public participation can actually reduce environmental harms rather than reinforcing neoliberalisation (Holifield 2004, London et al. 2008, Sze et al. 2009, Lievanos 2012, Ottinger 2013). Increasing the participation of historically marginalised groups in regulatory decision-making processes has some downsides, as it reduces activists' time for family and other obligations, often corrals them into reformist engagement, and pulls them away from confrontational and radical practice. Given that EJ activists argue for the precautionary principle, honouring lay knowledge, prioritising pollution prevention, and other principles that fundamentally challenge extant regulatory and scientific norms, they are met with strong pushback from industry and regulatory officials alike. Thus, doing justice to EJ activists' participation in regulatory decision-making processes will require strong leadership to implement and defend such changes, education to change regulatory culture away from industry protection, and funding for EJ activists to be able to guide regulatory change over the long term.

Some threads of activism similarly display partial support for the EJ movement's conceptions of justice. The burgeoning local-food movement may bolster basic capabilities (Schlosberg 2013, p. 49) – *if* activist efforts focus on the communities most in need, follow the guidance of community residents rather than imposing their own ideas of the good life, and otherwise engage in a 'reflexive' form of localism (DuPuis and Goodman 2005, Guthman 2008b, DuPuis *et al.* 2011). Community food security organisations and others evince an egalitarian vision of justice when pressing for reform of food entitlement programs for the poor (Poppendieck 1998, 2010, Gottlieb and Joshi 2010). Additionally, farm labour and immigrant advocates press for egalitarian policy reforms that would bolster the rights of immigrant farm workers and redress material inequalities. It remains to be seen whether these efforts can gain predominance over the utilitarian, libertarian, and communitarian rhetoric and practices that variously dominate mainstream agri-environmental regulation and activism, and to what extent they explicitly take on environmental problems like pesticide pollution that cannot be abated by individualised and market-based measures.

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Notes

- 1. For official pesticide illness data in California, see CDPR (2012). For summaries of alternate data that establish pesticides as a widespread air and water pollution problem, see EJCW (2005), Heavner (1999), and Harrison (2011a).
- These characterisations necessarily gloss over exceptional nuance and debate in political philosophy. Readers interested in greater depth should see Kymlicka (2002).
- 3. I use the term 'libertarianism' to refer to the political philosophy typified by Nozick's early work. In terms of environmental politics, this conception of libertarianism coincides most closely with the 'Right libertarianism' of the Libertarian Party in the United States. I recognise that some 'Left libertarians' hold very different political perspectives. However, to the extent that they ignore inequality or dismiss it as irrelevant to justice, they are consistent with the way I have defined libertarianism here. Some Left libertarians prioritise equality but, frustrated with state welfare efforts to date, advocate alternative institutions for redistributing resources more equitably; such a position overlaps partially with an egalitarian conception of justice.
- 4. This is not to imply that all libertarians and utilitarians would support the specific neoliberal reforms noted here. Some argue that popular libertarianism in practice entails an anti-regulatory 'piling on' of arguments against the state as subject to a slippery slope of intervention into people's lives, but without the rigorous philosophical demand that the state protect private property rights in a way to protect all individuals' rights of self-ownership (see Kymlicka 2002, pp. 154–156). Although neoliberalisation does not align perfectly with a philosophical libertarian's policy prescriptions, it nonetheless *aligns* with the prescriptions of popular libertarianism, which is my focus here.

References

- Allen, P., et al., 2003. Shifting plates in the agrifood landscape: the tectonics of alternative agrifood initiatives in California. Journal of Rural Studies, 19, 61–75.
- Allen, B., 2013. Justice as measure of nongovernmental organization success in postdisaster community assistance. *Science, Technology, and Human Values*, 38 (2), 224–249.

Anderson, M., 1988. Revolution. San Diego, CA: Harcourt Brace Jovanovich.

- Bednarz, C., 2007. Protecting sustainable resources: voting organic with your dollars and sense. California Certified Organic Farmers Magazine. Winter.
- Born, B. and Purcell, M., 2006. Avoiding the local trap: scale and food systems in planning research. *Journal of Planning Education and Research*, 26 (2), 195–207.
- Brighouse, H., 2004. Justice. Cambridge: Polity.
- Bullard, R.D., 1990. *Dumping in Dixie: race, class, and environmental quality*. Boulder, CO: Westview Press.
- Carruthers, D., 2007. Environmental justice and the politics of energy on the US–Mexico border. *Environmental Politics*, 16 (3), 394–413.
- Castree, N., 2008. Neoliberalising nature: the logics of deregulation and reregulation. *Environment and Planning A*, 40, 131–152.
- CDPR, 2003. Funding California's pesticide regulatory program: a report to the legislature. Sacramento, CA: California Department of Pesticide Regulation.
- CDPR, 2006. Summary of pesticide use report data 2004, indexed by commodity [online]. Sacramento, CA, California Department of Pesticide Regulation. Available from: http://www.cdpr.ca.gov/docs/pur/pur04rep/04_pur.htm [Accessed 14 January 2011].
- CDPR, 2009a. California statewide pesticide regulatory activities summaries [online]. California Department of Pesticide Regulation. Available from: http://www.cdpr.ca. gov/docs/enforce/report5.htm [Accessed 9 July 2009].
- CDPR, 2009b. County civil penalty and other administrative actions [online]. California Department of Pesticide Regulation. Available from: http://www.cdpr.ca.gov/docs/ enforce/admnacts/cvlpnlty.htm [Accessed 31 December 2009].
- CDPR, 2012. Pesticide illness surveillance program data [online]. California Department of Pesticide Regulation. Available from: http://www.cdpr.ca.gov/docs/whs/pisp.htm [Accessed 13 January 2012].
- Cole, L.W. and Foster, S.R., 2001. From the ground up: environmental racism and the rise of the environmental justice movement. New York, NY: New York University.
- Dansereau, C. and Kegley, S., 2007. Letter submitted to editor of the Seattle Post Intelligencer.
- DUG, 2013. Denver Urban Gardens [online]. Available from: http://www.dug.org [Accessed 20 April 2013].
- DuPuis, E.M. and Goodman, D., 2005. Should we go 'home' to eat?: toward a reflexive politics of localism. *Journal of Rural Studies*, 21, 359–371.
- DuPuis, E.M., Harrison, J.L., and Goodman, D., 2011. Just food? *In*: A.H. Alkon and J. Agyeman, eds. *Cultivating food justice*. Cambridge, MA: MIT Press, 283–307.
- EJCW, 2005. *Thirsty for justice: a people's blueprint for California water*. Oakland, CA: The Environmental Justice Coalition for Water.
- Faber, D., 2008. *Capitalizing on environmental injustice: the polluter-industrial complex in the age of globalization*. Lanham, MD: Rowman and Littlefield.
- Fan, M., 2006. Environmental justice and nuclear waste conflicts in Taiwan. *Environmental Politics*, 15 (3), 417–434.
- Gottlieb, R. and Joshi, A., 2010. Food justice. Cambridge, MA: MIT Press.
- Grubinger, V., 2010. Ten reasons to buy local food [online]. University of Vermont Extension. Available from: http://www.uvm.edu/vtvegandberry/factsheets/buylocal. html [Accessed 19 April 2013].

- Guthman, J., 2008a. Neoliberalism and the making of food politics in California. Geoforum, 39 (3), 1171–1183.
- Guthman, J., 2008b. If they only knew': colorblindness and universalism in California alternative food institutions. *The Professional Geographer*, 60 (3), 387–397.
- Harris, C., 1993. Whiteness as property. Harvard Law Review, 106 (8), 1707–1791.
- Harris, G. and Pear, R., 2007. Ex-officials tell of tension over science and politics. New York Times, 12 July.
- Harrison, J.L., 2011a. Pesticide drift and the pursuit of environmental justice. Cambridge, MA: MIT Press.
- Harrison, J.L., 2011b. Parsing 'participation' in action research: navigating the challenges of lay involvement in technically complex participatory science projects. *Society and Natural Resources*, 24 (7), 702–716.
- Harvey, D., 1996. Justice, nature, and the geography of difference. Malden, MA: Blackwell.
- Harvey, D., 2005. A brief history of neoliberalism. New York, NY: Oxford University Press.
- Heavner, B., 1999. Toxics on tap: pesticides in California drinking water sources. San Francisco, CA: Californians for Pesticide Reform and California Public Research Group Charitable Trust.
- Hoban, T., 2008. Local food creates community. The Chapel Hill News, 29 July.
- Holifield, R., 2004. Neoliberalism and environmental justice in the United States Environmental Protection Agency: translating policy into managerial practice in hazardous waste remediation. *Geoforum*, 35 (3), 285–297.
- Holifield, R., 2012. Environmental justice as recognition and participation in risk assessment: negotiating and translating health risk at a Superfund site in Indian country. *Annals of the Association of American Geographers*, 102 (3), 591–613.
- Khokha, S., 2009. Reporter's notes: catching the drift. KQED Radio [online]. 16 October. Available from: http://www.kqed.org/quest/radio/catching-the-drift [Accessed 31 October 2009].
- Kymlicka, W., 2002. Contemporary political philosophy: an introduction. 2nd ed. Oxford: Oxford University.
- Lievanos, R., 2012. Certainty, fairness, and balance: state resonance and environmental justice policy implementation. *Sociological Forum*, 27 (2), 481–503.
- Locavores, 2013. Top twelve reasons to eat locally [online]. Available from: http://www. locavores.com/how/why.php [Accessed 20 April 2013].
- London, J.K., Sze, J., and Lievanos, R., 2008. Problems, promise, progress, and perils: critical reflections on environmental justice policy implementation in California. UCLA Journal of Environmental Law and Policy, 26 (2), 255–289.
- Low, N. and Gleeson, B., 1998. Justice, society, and nature: an exploration of political ecology. London: Routledge.
- Lukes, S., 2006. Individualism. Colchester, UK: ECPR Press.
- Mad River Valley Localvore Project, 2012. Mad River Valley Localvore Project [online]. Available from: http://www.vermontlocalvore.org/learnmore/whatandwhy.html [Accessed 11 January 2012].
- NSAC, 2013a. What is sustainable ag? [online] National Sustainable Agriculture Coalition. Available from: http://sustainableagriculture.net/about-us/what-is-sustainable-ag/ [Accessed 26 August 2013].
- NSAC, 2013b. Conservation, energy, and environment. [online] National Sustainable Agriculture Coalition. Available from: http://sustainableagriculture.net/our-work/conservation-environment/[Accessed 26 August 2013].

New York Times, 2006. Muzzling those pesky scientists. *New York Times*. 11 December. Nozick, R., 1974. *Anarchy, state, and utopia*. New York, NY: Basic Books.

- Ottinger, G., 2013. Changing knowledge, local knowledge, and knowledge gaps: STS insights into procedural justice. *Science, Technology, and Human Values*, 38 (2), 250–270.
- PAN, 2010. Monsanto and CropLife men have no place in government [online]. Pesticide Action Network. Available from: http://action.panna.org/t/5185/petition.jsp? petition KEY=2150 [Accessed 1 January 2010].
- PAN, 2013. Pesticides and profit [online]. Pesticide Action Network. Available from: http://www.panna.org/issues/pesticides-profit [Accessed 29 August 2013].
- Park, L.S. and Pellow, D., 2011. The slums of Aspen: immigrants vs. the environment in America's Eden. New York, NY: NYU Press.
- Peck, J. and Tickell, A., 2002. Neoliberalizing Space. Antipode, 34 (3), 380-404.
- PEER, 2006. EPA begins closing libraries before Congress acts on plan [online]. Public Employees for Environmental Responsibility. News Release. 21 August. Available from: http://www.peer.org/news/news_id.php?row_id=731 [Accessed 14 January 2011].
- Pellow, D.N., 2000. Environmental inequality formation: toward a theory of environmental injustice. *American Behavioral Scientist*, 43 (4), 581–601.
- Pellow, D.N. and Brulle, R.J., eds., 2005. Power, justice, and the environment: a critical appraisal of the environmental justice movement. Cambridge, MA: MIT Press.
- Pollan, M., 2008. In defense of food: an eater's manifesto. New York, NY: Penguin.
- Poppendieck, J., 1998. Sweet charity? Emergency food and the end of entitlement. New York, NY: Viking.
- Poppendieck, J., 2010. Free for all: fixing school food in America. Berkeley, CA: University of California Press.
- Ranelagh, J., 1992. *Thatcher's people: an insider's account of the politics, the power, and the personalities.* London: Harper Collins.
- Reardon, J., 2013. On the emergence of science and justice. *Science, Technology, and Human Values*, 38 (2), 176–200.
- Sass, J., 2008. USDA cuts budget to its pesticide use data program [online]. Switchboard: Natural Resources Defense Council Staff Blog. May 20. Available from: http://switchboard.nrdc.org/blogs/jsass/_a_coalition_of_public.html [Accessed 7 May 2013].
- Schlosberg, D., 2004. Reconceiving environmental justice: global movements and political theories. *Environmental Politics*, 13 (3), 517–540.
- Schlosberg, D., 2007. Defining environmental justice: theories, movements, and nature. Oxford: Oxford University Press.
- Schlosberg, D., 2013. Theorising environmental justice: the expanding sphere of a discourse. *Environmental Politics*, 22 (1), 37–55.
- Schlosberg, D. and Bomberg, E., 2008. Perspectives on American environmentalism. Environmental Politics, 27 (2), 187–199.
- Shrader-Frechette, K., 2002. Environmental justice: creating equality, reclaiming democracy. Oxford: Oxford University Press.
- Speth, J.G., 2004. *Red sky at morning: America and the crisis of the global environment.* New Haven, CT: Yale University Press.
- Sze, J., et al., 2009. Defining and contesting environmental justice: socio-natures and the politics of scale in the Delta. Antipode, 41 (4), 807–843.
- US EPA, 2004. Pesticides industry sales and usage 2000 and 2001 market estimates [online]. Office of Prevention, Pesticides, and Toxic Substances. Available from: http://www.epa.gov/opp00001/pestsales [Accessed January 15, 2011].
- USDA, 2002. California state level data [online]. In vol. 1, Census of Agriculture. Available from: http://www.agcensus.usda.gov/Publications/2002/Census_by_State/ California/index.asp [Accessed 15 January 2011].

- Walker, G., 2009. Beyond distribution and proximity: exploring the multiple spatialities of environmental justice. *Antipode*, 41 (4), 614–636.
- Walker, G., 2012. Environmental justice: concepts, evidence, and politics. London: Routledge.
- Welch, D., et al., 2006. Letter to US EPA Administrator Stephen Johnson from local presidents of EPA unions representing scientists, risk managers, and related staff [online]. 24 May. Available from: http://www.panna.org/resources/fqpa [Accessed 30 December 2009].