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# Food Policy

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## Tackling the new materialities: Modern food and counter-movements in Ecuador



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### ABSTRACT

Faced with rising non-communicable diseases (NCDs), the Ecuadorian Government has proposed a model health program targeting individual and environmental level determinants. Drawing on cosmopolitan social theory, the experiences of counter-movements and concerns over food policy, the authors explore how mass pesticide poisoning and obesity can be viewed as the product of the 'success' of the modernization policy as well as a specific range of global phenomena configuring civic activity and policy situations. Through the study of NCDs as an emergent social field, the authors examine historical developments and heterogeneity in peoples' practices for insights on more practical and effective public policy responses. The rise of the consumer-citizen in counter-movements represents a paradoxical, but promising dynamic capable of reconstituting economies, culture, and society. In Ecuador, social action appears to be a largely neglected and under-utilized resource for tackling NCDs and perhaps other highly pressing and seemingly intractable food policy concerns.

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### Introduction: The new materialities

Forty years ago, Omran (1971) noted an 'epidemiological transition', in which the pattern of disease moved away from infectious diseases towards chronic, degenerative non-communicable diseases (NCDs), such as those associated with food and nutrition, tobacco and the environment. In Ecuador, there is growing evidence of rising rates of overweight and obesity (hereafter referred to as 'obesity') among urban youth, raising concerns over future health consequences, such as cardiovascular disease and diabetes (Yepez et al., 2008a). National studies find 54.5% of the women in the country overweight or obese (BMI > 25) (ENDEMAIN, 2004) and 38% of adolescent children are malnourished, with 16.8% underweight and 21.2% either overweight or obese (Yepez et al., 2008a). Poor, urban women have the highest rates, but rural women and men are also at risk (Waters, 2006). While critical weight studies question automatic assumptions of secular weight gain and health benefits of leanness (Flegal et al., 2005), prominent, yet largely preventable risk factors such as increased blood pressure or cholesterol concentrations are associated with unhealthy diets,

physical inactivity and obesity (Cecchini et al., 2010). Five of the top seven causes of death in Ecuador (ischaemic heart disease, hypertensive diseases, Diabetes mellitus, cerebrovascular diseases, and other heart diseases) are either directly or indirectly associated with or attenuated by poor quality diets associated today's food trends and living practices (ENDEMAIN, 2004).

Despite a growing consensus on the global rise of obesity (Eberwine, 2002; Prentice, 2006; Cecchini et al., 2010; Walpole et al., 2012), there is far less international agreement on the appropriate public policy response. A systematic review on the state-of-the-art in obesity interventions in *The Lancet* concluded (Swinburn et al., 2011: 804), "Unlike other major causes of preventable death and disability, such as tobacco use, injuries, and infectious diseases, there are no exemplar populations in which population-level obesity has been reversed by public health measures." Meanwhile, a recent exploratory study on obesity in Ecuador (EkoRural, 2011) as well as earlier work on the highly prominent, though commonly neglected non-communicable disease of pesticide-induced poisoning (Cole et al., 2007) offer fresh perspective. This experience suggests that NCDs are due less to a lack of information and knowledge and more to the establishment of certain relationships among people, acting as citizens and consumers and involved in the activities of daily practice. In addition, the research found that far from behaving as passive victims, the harmful consequences of modernization in Ecuador has led to multiple, creative civic

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protests and family- and community-level re-organizations, representing a potentially promising and largely unexplored resource for change (Sherwood, 2009; Paredes, 2010).

Based on studies in Ecuador as well as the literature on the deepening socio-environmental consequences of cosmopolitan society (Delanty, 2006; Beck and Grande, 2010), we posit that obesity can be viewed as a reflex generated by 50 years of agricultural modernization and emergent forms of industrial food (summarized as 'modern food'<sup>1</sup>), thereby creating strange new self-constituting nature-cultures and materialities. We ask: What social processes are involved in modern food and the relationships between public health and local co-productions of NCDs? How is consumption involved in reflexive and relational roles in food issues, leading to the rise of obesity as well as civic counter-movements as a potential resource for public policy?

### Obesity, policy and counter-movements

Here, we view obesity as part of a substantial modern social process transforming life and living practices, in which the obese consumer has been publicly characterized as dupe or dope – an individual who fails to live up to contemporary standards of health knowledge, reason and autonomy from market, marketing and media influences as well as the influences of fashions and trends (Meijer, 1998). Is this obese consumer the product of a failure to live up to a public health policy standard or the result of the exclusionary nature of the modern food policy orientation?

Beginning with land reform and agricultural industrialization in the 1950s, agriculture and food policy in Ecuador has prioritized rapid growth in productivity to solve what is described as chronic food scarcity (Barsky, 1988). This ambitious, unprecedented project of 'agricultural modernization' introduced a language of food producer, retailer and consumer. In the process, it created new social relationships, such as the dichotomy between a marginalized rural producer and centralized urban consumer, dependent on a diet that is exogenous to agrarian trajectories (Firat and Schultz, 1997). Agricultural modernization is organized around the notion that progress depends on retailing intermediaries and consumers whose task it is to behave selfishly in the market as a means of driving national production efficiency and market responsibility, with no to little regard for peoples' other possible roles and societal utilities, such as stewards of social relationships, health and environment.

When linking the historical processes of modern food with the production of NCDs, the 'externalities' of development policy become 'second-order' products. According to this reasoning, pesticide poisoning and obesity in Ecuador are not mere policy accidents or oversights but what has become the expected outcome of a deliberative process put into place some 50 years ago – in a sense, the extraordinary 'success', if unwanted, of government.

In arguing how NCDs, have become a social and material fact of modern Ecuador, we take a critical social perspective on *policy* as 'course of action'. Thus, policy is not limited to the explicit, deliberative bureaucratic processes of organizations or government

(e.g., public policy). It also is understood as how actors in civil society internalize, inform, organize and influence the use of resources in favor of certain purposes – even when undesirable, expensive and arguably self-harmful, at the cost of other possibilities. These courses of action in part emerge as a result of the entrepreneurship of people working as individuals as well as in collectives.

Such perspective brings people into processes of enactment, in which the self, lifeworlds, agendas and interests are inseparable, for example, from the incorporation of technology in people's everyday lives. The research of Paredes (2010) on heterogeneous patterns of appropriation of the technologies of agricultural modernization in Ecuador found that family members do not simply assimilate the procedures in government legislation. They enact creative new forms of policy in terms of their unique beliefs, knowledges, and most substantially, their practices. In the context of pesticide poisoning, Paredes found that people actively translate and reframe institutional policy based on what they already believe, know or do in their homes, fields and places of work and leisure. The result is a remarkable *mélange* that is neither traditional or modern, lay or expert, old or new, but subtly nuanced and original.

The trends of modernity are seen to underpin the notion of policy as part of willful and concerted processes in which individuals are charged the task of constructing the 'consumer-self', while building the communities and social networks needed for what Meijer (1998) describes as the 'consumer-citizen'. Normally 'consumer' and 'citizen' are viewed at opposite poles of the political spectrum. The *consumer* is understood as inward looking, individualistic and self-serving, while the *citizen* is understood as an agent of the public good – forward thinking and civic-minded. Meijer views consumption as simultaneously a search for individual distinctiveness as well as a social construction. Far from a passive actor, the consumer is understood as owning degrees of freedom and responsibility. Thus, through an ability to consume (i.e., a purposeful orchestration of commodity meanings), he or she can seek forms of self-realization and empowerment (or their antitheses). In addition, consumption is not necessarily an atomized, isolated or private activity. It also is a public performance in which people, acting on force of need, passion or will, relate to one another through interactive processes of reflexivity and choice (Slater, 2001). Returning to Meijer (1998), consumption can be highly purposeful and even a form of emancipation; it can become a transformative civic force. Hence, consumption becomes a form of governance, operating outside the boundaries of official government policy and public institutions.

In his work on post-industrial 'risk society', Ulrich Beck (1992) argues that the unwanted 'bads' (as opposed to the 'goods') of technology and government give rise to 'sub-political' movements, what we generically refer to here as counter-movements.<sup>2</sup> Wittman et al. (2010) and Altieri and Toledo (2011) describe how food counter-movements represent a civic response to more institutionalized and bureaucratic forms of democratic governance. While diverse food movements exist in Latin American and beyond, each locality has had its own defining history, cultural nuances, serendipity, leadership, creativity and flair. Born from the contradictions of modern food in Ecuador, we draw on the experiences of the *Colectivo Nacional Agroecológico* (the National Agroecology Collective or *Colec-*

<sup>1</sup> 'Modern food' is used to summarize the historic discontinuities with pre-industrial era food production, circulation and consumption. It is a generic term built on the idea that the "quick rise in obesity in middle-income countries reflects the speediness of urbanization, modernization, and entry to global markets" (Brewis, 2011:33). In short, modern food implies an awareness of past and present food patterns to which people can link and, at the same time, distance themselves. The concept of modern food qualitatively differs from 'food regimes', as described in regulations and world systems theory literature (see Otero, 2012) in questioning the highly abstract political economy framework of global economy. In contrast, a modern food perspective places its analytical lens on locally distributed and resolved nuances expressed in peoples' daily practices.

<sup>2</sup> 'Counter-movement' is commonly characterized as a cultural response to global hegemonic forces (see for example, Holt-Giménez and Shattuck, 2011). In contrast, here we use the term to problematize the notion of globality and modernity 'from the centre', thus emphasising how locally situated actors receive, translate and re-work communicated messages, material resources, technologies, and cultural repertoires and relations as means of re-positioning themselves in relation to 'macro' influences and frameworks. In this view, counter-movements pose and promote alternative agendas for change, which under certain circumstances can come to challenge seemingly dominant and highly intractable forms of authority and order.

tivo), an informal, though influential network of over 200 individuals and organizations that is playing a major role in reforming the country's agriculture and food policy, as articulated in Ecuador's 2008 Constitution and subsequent legislation (Colectivo Agrario, 2009).

## Methods

Our task was to describe and explain contemporary patterns of food policy in Ecuador and the discursive associations with food production and family-level health, with special attention to the modern onset of NCDs. In particular, we needed to describe relationships between the historic formulation of public guidelines and the processes in which policy materializes and enters the life-worlds, households and eventually individual men, women and children, as peasants and consumers acting in families, neighborhoods, and networks. We drew on literature review, key-informant interviews, and household ethnography on two interactive food contexts: (1) pesticide poisoning as a product of modernizing agriculture and (2) how urban and rural people link through individual and inter-relational activity (i.e., their co-productions) diverse patterns of food production, distribution, and consumption. Following initial insights on the sociality of Ecuadorian food trajectories, we provided attention to how emerging contexts have generated forms of collective agency (counter-movements) that effectively operate outside the authority of formalized institutions of government.

### Data collection

#### Literature review and document analysis

The analysis of the arrival and proliferation of pesticide technology in the context of wider agriculture modernization policies was based on two decades of research already conducted and summarized in Crissman et al. (1998), Yanggen et al. (2003), Sherwood (2009), and Paredes (2010). Between February and August 2010, we studied the literature on obesity and food counter-movements in Ecuador, as present in the country's 2008 Constitution and subsequent public debates (Peña, 2008; Colectivo Agrario, 2009).<sup>3,4</sup>

The *Colectivo* membership generates many forms of texts, such as electronic mail correspondence, project documents, magazine articles and electronic bulletins as well as calendars, posters, and T-shirts. The lead author of our study is a co-founder of the *Colectivo* and provided access to over 2000 pages of email correspondence since its foundation in 2005. Through text analysis we explored how discourses, ideals, identities and other subjectivities were publicly expressed in language and symbols as well through artifacts.

#### Key informant interviews

Selected through snowball sampling, between March and July 2010 we interviewed 18 key actors from communities and private industry as well as governmental and non-governmental organizations. In interviews we prioritized the recent arrival and proliferation of obesity in the public discourse as well as the emergence of food counter-movements in Ecuador. Sessions were recorded and

analyzed qualitatively in search of descriptive, structural and comparative explanations of the country's history of modern food.

#### Household-level and group studies

Household-level ethnography provided access to the food and health discourses situated in family practices. This material was utilized to complement and conceptually 'unpack' existing national and global health discourses as well as the constructed knowledge of experts and policymakers. We had access to the data generated by Paredes (2010), who conducted her field research with rural families facing pesticide health problems in 2004. In addition we draw on Bekkering (2011), who studied urban-based families belonging to a national wholesale purchasing movement called the *Canastas Comunitarias* (*Canastas*), selecting the two longest standing groups: *Vida Solidaria* in Quito and *Utopia* in Riobamba. She conducted her field work between August 2010 and January 2011, including the documentation of 14 two-week *Canasta* cycles: seven in Riobamba and seven in Quito. In addition, we use material from the van Ongeval (2012), who between December 2011 and February 2012 conducted in-depth participant observation of the activity of the *Colectivo* membership operating within their individual organizations as well as in the network's meetings.

In both Paredes (2010) and Bekkering (2011), household stays lasted at least 10 days, providing access to inner family social dynamics. The researchers observed the routines, practices, and actions of daily family life. Qualitative attention was placed on how actors view themselves with regard to production and health issues – specifically, how are people, their families and communities experiencing, for example, pesticide poisoning and the growing rates of obesity in youth. The researchers noted public narrative and private discourse as well as exercises of inclusion and differentiation, thus providing insight into subtle power relations and processes of legitimization.

Bekkering's (2011) research on the *Canastas Comunitarias* was strategic. As summarized in Garcés and Kirwan (2009), the *Canastas* played a central role in the qualitative shift in the agroecology movement from food production to food sovereignty, thereby creating space for an influential new actor: the consumer. A *Canasta* group is composed of between 20 and 80 families. Every other Saturday is 'Canasta-day', when members purchase, assemble, organize and distribute food items among membership. The 'Canasta-day' is a good opportunity to observe ethnographic details about how a particular group works and how members create the material object of the food basket as well as how people interact. Follow-up interviews explored topics that had not been sufficiently revealed through participant observation, such as the political meaning of the sovereignty movement in the everyday food consumption of the group's membership.

#### Analysis

Drawing on McGee's (2004) approach in 'unpacking' public policy practice in Uganda, we employed a reflexive analytical framework to facilitate the description and analysis of the co-production of socio-environmental change and human embodiment of modernities. Following Arce and Long (2000), we looked at interactions among: knowledges, actors and sites.

By *knowledges*, we do not mean just cognitive knowledge but also the affects, experiences and skills gained through life and stored in the physical landscape and built into the environment and social interactions. This is encapsulated in people's understanding of their social categories, such as family, community, and institutions. For example, in Ecuador, the practice of eating out generates social interactions in the 'streets', allowing one to observe peoples' food-knowledge as most concretely expressed in the actions of food-practices. Research can provide insights on

<sup>3</sup> The 2008 Ecuadorian Constitution diversely defines 'food sovereignty' in the multi-dimensional context of agricultural production, emphasizing the 'social purpose' of land as a means of equitable, democratic social development and natural resource conservation and in favor of biodiversity (articles 276, 282, 334 and 400), equitable food distribution and commercialization (article 335), and ample access to culturally appropriate food and a healthy diet, in particular by means of native crops, animals, and other food sources (articles 13 and 281). (available at: <http://www.mmrree.gob.ec/ministerio/constituciones/2008.pdf>)

<sup>4</sup> Ley Orgánica del Régimen de Soberanía Alimentaria: La propuesta campesina e indígena. 2009. Asamblea Nacional: Republica del Ecuador Comisión Legislativa y de Fiscalización. ([http://asambleanacional.gov.ec/blogs/soberania\\_alimentaria](http://asambleanacional.gov.ec/blogs/soberania_alimentaria)).



the continuities and discontinuities in existing diets, while observing how specific social communities (e.g., schools or clubs), through everyday routines, generate access to particular foods and foodstuffs. By *actors*, we do not just mean individuals acting in self-interest. Individuals are not isolated from the social world of which they are part. By *actors*, we wish to call attention to the activity of groups of people in pursuit of collective interests in social networks. *Actors'* actions are important agency resources for new identities and re-imagining ways of life within the modernities that constitute the contemporary world. It is here that politics that center on the identity of livelihoods converge with issues of health and food quality. These agency resources, locally situated and disembodied from institutional and political realities are (re)-located in a diversity of sites, where they can bring to bear varying degrees of influence on contemporary institutional decision-making processes. *Sites* refers to the multiple contexts of human co-existence: the physical (towns) and even imaginary places (such as the virtual world of television and the internet) where social practices happen, for example, in home, school and on the street.

The interactions between knowledge, actors and sites are not viewed as a simple, linear relationship of cause and effect but as endlessly dynamic and complex. Thus knowledge, actors, and sites are not approached as independent domains, nor are they simply determined by externally based structural knowledge conditions and abstract characterizations (e.g., the existence of international acceptance of data sets and their categories). Instead, we address these interactions methodologically at their intersection as particular converging courses of action. This framing helps to reveal relationships between NCDs and health alternatives and choices with human, physical and material co-existences, which is part of constant (re)constitutions of a myriad of colluding and competing, convergent and divergent modernity pathways (Arce and Long, 2000).

## Results

### *Pesticide-induced public health epidemic*

Ecuador's on-going food sovereignty debates are rooted in the country's policies of agricultural modernization dating 50 years (Peña, 2008).<sup>5</sup> Extensive multi-disciplinary studies in the Province of Carchi, a regional model of agricultural modernization, found that policies led to heavy reliance on a series of dangerous pesticides, including the lowly toxic but carcinogenic dithiocarbamate fungicide mancozeb (87% of all fungicidal active ingredients applied) and the highly toxic insecticides carbofuran and methamidophos (together 90% of all active ingredients applied), measurably affecting two-thirds of rural populations (men, women, and children) (Cole et al., 1998a). Chronic and acute exposure to pesticides in Carchi results in considerable health impacts, ranging from sub-clinical neurotoxicity (Cole et al., 1997 and 1998b), poisonings with and without treatment (Crissman et al., 1994), to hospitalizations and deaths (Cole et al., 2000). Antle et al. (1997) found that pesticide exposure in Carchi decreased farm productivity. In an ex-post analysis of the political development, Sherwood (2009) found that a consolidation of power around business interests and ideology led major stakeholders, including government, to become dangerously locked into a non-adaptive and lethal system of food production. Similar, though less severe patterns of pesticide use, exposure and poisoning have been documented elsewhere in the country (Orozco et al., 2007; Gaybor et al., 2006).

In response to criticisms over agri-chemical technology, groups of social actors (farmers, chemists, agricultural researchers, extension agents, salespeople, and regulatory officials) organized

around vested interests in the proliferation of pesticide technology collaborated, colluded, and strategized to sustain harmful technology well beyond its effective shelf-life (Sherwood and Paredes, 2014). Nevertheless, over time the harmful effects of pesticides on human health and production became an accepted 'truth' of public perception, ultimately placing into question the social value of pesticide technology and this type of agricultural modernization in food production.

The increasingly obvious and knowable inter-relations between pesticide poisonings, modernity and disease has generated a pesticide-induced public health epidemic, which in turn has provided new imperatives for scientists around how to make visible and track pesticide-induced risks to people's health and wellbeing (Yanggen et al., 2004). Nevertheless, when research made explicit this reality (for example, through quantitative measurement of neurological damages due to chronic pesticide exposure), an unfolding class of native and foreign brokers sharing concern over the vulnerability of this pathway of modernization, began a process of claims and counter-claims against the socio-technical regime (Sherwood and Paredes, 2014). This growing civic opposition no longer prioritized economic rationality or efficiency goals. Instead, it became organized around new values, in particular 'agroecology' and 'food sovereignty', centering discourse on the health and environmental costs borne by the citizenry.

Modern techno-economic progress is generating reflexive feedback on communities, thereby altering public perceptions, interests and definitions of what was desirable (Sherwood and Paredes, 2014). Over time the sheer violence of pesticide technology has captured the imaginations of the public, spurring public challenges to established regimes of thought and practice and a confrontation of seemingly all-powerful and impervious ideologies and business interests. In 2010, the activity of the food counter-movements in Ecuador culminated in legislative measures for the elimination of highly toxic pesticides.<sup>6</sup>

### *Social embedding of modern food*

Ecuador has undergone three policy developments related to the contemporary food supply. The first is to make food accessible to the whole population of the country, which has been widely cited as a success of agricultural modernization. Second is the arrival of energy compact food-like products, commonly of high sugar and high fat content (Waters, 2006). Industrialized food is of special concern because its prevalent use of high fructose corn syrup as a sweetener and its health effects on diabetics. Thirdly, industrialized food production has made affordable and readily available to consumers food of high sugar and fat content, presented as new market commodity products to consumers' demands. The food industry has made an intensive effort to remain competitive in an era of affordable foods by marketing new fast food commodities and targeting selected populations with confounding food messages. The industry and the government are seen as having used a set of policies to redefine meanings food quantity to quality and by stressing moderation and balance without a clear explanation of what constitutes quality, moderation or an appropriate and healthy balance.

Meanwhile, new retailing sites, especially supermarkets, have changed the formulation and presentation of food as well as provisioning styles in neighborhoods in Ecuador (Reardon and Berdegúe, 2002). This tendency is displacing open street markets, which in turn has led to a decrease in the availability, in terms of diversity and price, of affordable fresh fruits and vegetables by local residents, compared to the residents of the more popular

<sup>5</sup> See for example statements by the Agrarian Roundtable during the constitutional convention in 2008, as reported in 'Si A La Soberanía Alimentaria', Daily Motion ([http://www.dailymotion.com/video/x7arkj\\_si-a-la-soberania-alimentaria\\_news](http://www.dailymotion.com/video/x7arkj_si-a-la-soberania-alimentaria_news)).

<sup>6</sup> Article 1, Chapter 29, Registro Nacional, No. 224, 29 June 2010, Quito, Ecuador.

neighborhoods that continue to have ready access to open markets with more emphasis on pre-made and processed products instead of primary and fresh products. In this context, the media are employed to provide conflicting information through its images and messaging, generating a greater acceptance of the desirability of being inactive and obese (Yepez et al., 2008b).

In addition to these trends, studies have pointed to other changes in the everyday context and work environments of families, such as growing urban violence and the lack of safe playgrounds as well as increased sedentary lifestyles that come with living in cities and working in service industries (Yepez et al., 2008a). Likewise, the development of communication infrastructure has favored the use of cars and buses for transport, rather than walking or riding bicycles. Meanwhile, studies show that the arrival of new 'virtual sites' has had a determining impact on youth and their families. The popularity of television and computer games, internet-cafes and electronic gaming parlors have replaced more physical activities, such as playing football/soccer in the streets. The developments are a consequence of interactive technological and market changes tied with the 'benefits' of public policy designed to deliver a certain modernity.

#### *Ecuador's public health response to obesity*

Ecuador has been quick to organize a public health response to its growing concern over obesity. Following consultations and the official recommendations of the Pan-American Health Organization (PAHO) and the Ecuadorian Society of Food and Nutrition Sciences (SECIAN), the government's approach has come to focus on what has been internationally determined as the biophysical pillars of the disease: poor diet and physical inactivity of youth (as summarized in OPS, 2007; WHO, 2009).

According to the expert consensus in Ecuador (MCDS et al., 2010), poor diet refers to the growing tendency of consumption of food containing saturated and trans-saturated fatty acids of industrial origin and sugars. Meanwhile, physical inactivity is a correlate of increased time spent watching television (Doak et al., 2006) and decreased access to parks and playgrounds as a result of growing urbanization and violence (Dunton et al., 2009). Based on studies elsewhere that establish a relationship between childhood dietary and (in)activity patterns and subsequent health in adulthood (Lytle, 2002), the government is targeting youth and adolescents. Based on an explicit determination of obesity as a societal epidemic, the proposed policy emphasizes the implementation of an 'integrated', 'non-vertical' and 'preventative' strategy, centering on what is understood as the primary source-environmental loci of obesogenic behavior: home, school, and community (MCDS et al., 2010). Recommendations include the creation of a network of publicly supported watchdog organizations, information campaigns on the associated risks of obesity, and support to needed action in governmental and non-governmental agencies, local governments, schools, private business, and other civic organizations.

Embedded in this logic is the belief that obesity is not just the result of individual behavior but also complex socio-environmental relationships shaping obesogenic conditions. In so doing, public policy proposals are advocating strategies designed to influence a series of microphysical and socio-cultural environment changes towards more salutogenic conditions, as widely prescribed in the health literature<sup>7</sup> and generally consistent with 'state-of-the-art' international recommendations (Cecchini et al., 2010).

<sup>7</sup> Normally applied to psychology, a salutogenic perspective emphasizes health generation over pathogenesis in addressing disease (Antonovsky, 1987 and Antonovsky, 1996; Bronfenbrenner, 1999; Becker et al., 2010, among others). For example, Koelen and Lindstöm (2005) applied this approach in analyzing the potential role of individual and social empowerment in overweight/obesity prevention.

#### *Rise of agroecology and civic food movements*

Beginning in the 1970s, a number of civic-led sub-political food surfaced in Ecuador as a result of concerns over the country's agriculture modernization policies, especially the shift towards industrial-era technology, such as synthetic fertilizers and pesticides.<sup>8</sup> Although the reduction or elimination of dependence in agri-chemicals continues to be a rallying point for agroecology in Ecuador, over time social movements have evolved to address different aspects of farm management, such as soil conservation, integrated plant and animal health management, and agri-biodiversity.<sup>9</sup> Following some 35 years of activity, the national platform was strategically broadened to include 'food' – not just its production, but also its distribution, circulation and consumption, thereby opening up space for new actors and their resources.<sup>10</sup>

Faced with the aftermath of the worst financial crisis in Ecuador's 200-year history and declining international support for rural development, in 2005 five national actors in Ecuador's agroecology movement came together to form the *Colectivo*.<sup>11</sup> In search of new resources for their collective cause, in initial meetings members debated alternative opportunities, leading to the realization that the Ecuadorian public spends over USD 8 billion on food and drink (Prado, 2004) – roughly equivalent to the country's oil revenues at the time and about 20 times the aggregate investment of international development cooperation in the country (SETECI, 2010). Commissioned studies found that Ecuadorian consumers play a central role in determining agricultural outcomes over retailers, supermarkets and wholesale markets (Ortiz and Flores, 2008). As a result of its growing appreciation of the wealth in the hands of consumers, the *Colectivo* re-organized to broaden its rallying thematic from agroecology as 'production' to 'food', thereby opening up spaces for the involvement of 'those who eat', in particular the urban-based consumer.<sup>12</sup> Of the *Colectivo* membership, the national network of *Canastas Comunitarias* was uniquely positioned inside of families in marginalized urban neighborhoods in six cities in the country, leading it to play an increasingly influential role in the *Colectivo* as well as national policy.

Founded in the late 1980s by a group of women working with the Catholic Church in the city of Riobamba, over time the *Canastas* have materialized in over 50 neighborhoods in six cities, involving more than 1500 resource poor families (Kirwan, 2008; Dillon-Yépez, 2006). Commonly, individual groups are initially attracted by the financial advantages of purchasing commodities in large quantities, resulting in savings of 30% or more. Over time, however, groups tend to diversify agenda to include such matters as food quality, environmental sustainability and social equity. Leaders explain that the *Canastas* movement is not simply based on the principles of solidarity; it is founded on 'reciprocity' (i.e., complementary economic and social relationships and mutual gain among all participants).<sup>13</sup> This latter principle encourages members to organize collectively around positive-sum opportunities, leading to reflexive thinking and creative new relationships around food production and distribution as well as forms of exchange (Garcés and Kirwan, 2009).

<sup>8</sup> Personal interview with F. Gangotena (12 August 2010), an organic farmer regarded as the founder of the agroecology movement in Ecuador.

<sup>9</sup> Personal interview with F. Gangotena (12 August 2010), an organic farmer regarded as the founder of the agroecology movement in Ecuador.

<sup>10</sup> Internal email correspondence of the *Colectivo*, 2005

<sup>11</sup> The founding members of the *Colectivo Nacional Agroecológico* were people in: *Coordinadora Ecuatoriana de Agroecología* (CEA), *Cooperación PROBIO*, *Guardianes de Semilla*, *UTOPIA* and the *Canastas Comunitarias*, with the support of the international organizations Heifer Project International, VECO, and World Neighbors (internal email correspondence, *Colectivo*, 2005).

<sup>12</sup> Internal email correspondence of the *Colectivo*, 2005

<sup>13</sup> Personal interview with R. Gortari, 19 August 2010.

In broadening its agenda from production to food, the *Colectivo*, and in particular the *Canastas*, brought new networks of actors and activity to its cause, thus opening up multiple new economic, health and environmental sites of debate and interaction. Beginning in 2008, the *Canastas* membership formed the *Red Mar, Tierras y Canastas* (Network of Sea, Land and Food Baskets), a lively and influential actor within the broader *Colectivo* (Bekkering, 2011). This activity led to the creation of an even more influential spin-off: the *Movimiento de Economía Social y Solidaria del Ecuador* (MESSE), organized for the purpose of strengthening 'short-circuit' economies between rural-based producers and urban-based consumers, alternative means of exchange, such as barter and local currencies, among other interests.<sup>14</sup> Working with the *Colectivo*, these organizations have played a highly influential role in Ecuador's pioneering food sovereignty and 'economic solidarity' policies, as articulated in the 2008 Constitution. In 2009 Ecuador's National Assembly selected two leaders from the *Colectivo* – a representative from a coastal farmers' union and a consumer representative from the *Canastas* – for the country's nine-member Intercultural Food Security and Sovereignty Board (COPISA), charged with eliciting and writing national policies as a means of setting in motion food sovereignty.<sup>15</sup>

As part of its contributions to COPISA, the *Colectivo* has introduced new social sites of interaction and debate (van Ongeval, 2012). For example, by bringing to bear consumer opinion on agri-biodiversity, it championed groundbreaking policy in declaring Ecuador free of transgenic crops – something that the agroecology movement was not capable of addressing from its earlier rural-production bias. Most recently, the *Colectivo* has united around laws to strengthen "responsible consumption", as per a national campaign on "Eat in Health, Security and Sovereignty" (*Come Sano, Seguro y Soberano*), aimed at providing equal attention to "sustainable, regenerative, and equitable" forms of food production, circulation, and consumption. At the time of the close of this research, the National Assembly was in heated debate over a series of proposed legislation governing agrobiodiversity, seeds, agroecology, responsible consumption, water and land rights. Through the creation of new spaces of encounter and debate, food movements in Ecuador are generating new expectations and political possibilities, leading to claims on different aspects of food production, provision and consumption, thereby opening up pathways to healthier, more promising modernities.

### Discussion: Re-thinking food policy

As documented in Sherwood (2009), the unique experience of bringing forth modern food in Ecuador exemplifies how globality (i.e., the end state of globalization) is not about universality – singular truths arriving to local contexts. Household level practices do not generate a pure form of agricultural modernization, for example as described by technology adoption, but rather unique and creative manifestations as a result of peoples' creative and continual translations in practice.<sup>16</sup> We describe this simultaneous, often times contradictory local–global experience as a 'singular plurality'. In the process, what was once a 'lack' (e.g., in pest control and pesticide use or nutrition), eventually became an 'excess' (in the use or abuse of pesticides, food consumption or (in)activity), uniquely organized family by family and neighborhood by neighborhood across

geographies. Over time, seemingly clear and bounded policy provisions led to previously unimaginable change, both for good and bad.

### Questioning obesity intervention designs

Focusing on issues of individual cognitive knowledge and behavior, Ecuador's official strategy for tackling obesity, not unlike the health policies of other countries (see, Cecchini et al., 2010), emphasizes illness and the primacy of a person's capacity to act on self-determined interests of food intake, exercise and health. As such, the individual child or adult is the primary preoccupation of targeted interventions, implying that people operate independently from historic, cultural, or present-day social environments. Including elements of this design, Ecuador's policy for addressing under-nutrition and obesity also incorporates a socio-environmental perspective, as promoted by the WHO's action plan for addressing NCDs.<sup>17</sup> More recently, Schneider and Hoffman (2011) prescribed a similar approach, emphasizing the importance of external forces in determining individual behaviors. By design, such context-oriented approaches involve strategic interventions across abstract notions of 'environments' and 'levels' or socio-physical structures in society. These 'environmental' interventions explicitly aim to tackle obesity through the re-engineering of what are understood as relationships between 'externally based' determinants and people, implying that a person's well-being can be primarily explained as a product of public policy. While creative and potentially insightful, such abstractions and generalizations do not explain how family-level generation of obesity happens in the first place.

Concerns have been raised over the effectiveness of a binary individual–environmental framework in explaining and managing obesity (Brug et al., 2005 and van Brug et al., 2006). The identification of the state of obesity and the collection of information are mainly limited to biological/medical and economic considerations, focusing on problem generalizations and what are understood as causal factors and social determinants. The simplicity of the proposed intervention model is attractive to public representatives because it assigns definable causes to traditional social domains, such as home, school and community. As per this line of reasoning, the ameliorative response to reconnecting people and their health becomes a matter of delivering 'adequate information' that will logically align people's actions and their food practices. Nevertheless, the research on pesticide poisoning in Ecuador leads us to emphasize how seemingly global trends undergo continual transformations in the hands of users and their networks, and rarely, if ever, are they reproduced in local practice in original form.<sup>18</sup>

While potentially useful for visualizing specific contexts involved in the construction of the obesity epidemic, the Ecuadorian model neglects the locally distributed and resolved self-organization embedded in the heterogeneity of practices, the diversity of knowledge, and the ever-changing interactions of actors operating in networks, continually generating food relationships. The official understanding of the phenomena is removed from the everyday life of producers, consumers and their varieties of forms of food provision and other activities. Largely relegating health strategies to binary individual–environmental levels, such approaches leave little room for human creativity or the politicized spaces of counter-movements in reversing harmful health 'externalities'.

In Ecuador, we find that obesity is fundamentally the result of simultaneous transformations of actors' consumption of food and social organization against a backdrop of troubling food production, distribution and consumption associated with the achieve-

<sup>14</sup> See: [www.messe.org](http://www.messe.org).

<sup>15</sup> This activity is summarized at the website of the publically supported, civil society organization Plurinational and Intercultural Conference on Food Sovereignty (COPISA): <http://www.soberaniaalimentaria.gob.ec/pacha/>.

<sup>16</sup> For an example in household-level production practices see Paredes (2010) and in household consumption practices see Bekkering (2011).

<sup>17</sup> WHO. 2008–2013 Action Plan for the Global Strategy for the Prevention and Control of Non-communicable Diseases. Geneva: World Health Organization, 2008.

<sup>18</sup> For a general explanation of translation processes in action, see Callon (1999), and for an application in Ecuador, see Paredes (2010).



ment of policy goals centering on productivity and economic growth. By fragmenting peoples' experiences with food, the prescribed solutions effectively blind government to a multitude of opportunities surrounding obesity-in-practice, thereby limiting the potential contributions of policy in effectively addressing a seemingly intractable concern. We find neglected opportunities in linking bureaucratic simplification of policy to the rich complexities of peoples' daily practices.

#### *Lessons from NCDs*

Our analysis of the experience with NCDs in Ecuador leads us to three insights for food and health policy: (1) the limits of individual, rational behavior, (2) food as contested space, (3) the need for new citizenry and more democratic governance.

#### *Limits of individual, rational behavior*

Initially, interventions designed to address NCDs emphasized knowledge-based approaches built on the assumption that people are largely autonomous actors that essentially behave according to highly rational cost-benefit analysis. When not associated with a psychological or metabolic disorder, obesity may appear to be the outcome of relatively rational and instrumental influences on individuals, where both objective and subjective conditions guarantee that external material-organic entities, such as the human body, are sustained by actors' practices. Nevertheless, relationships and interfaces among people, markets and other institutions around food continually shape patterns of continuities and change (Geels and Schot, 2007). In other words, individuals affected by obesity (or pesticide poisoning) do not act alone in their choices. Instead, preferences, habits and (in)activities are also the result of co-constructions, involving individuals operating in contexts of evolving cultures, social networks and political-biological environments.

A concrete lesson from the pesticide case is that a preoccupation with individuals and their knowledge-based activity is not sufficient in itself to re-direct social change and overcome unwanted externalities of development (Cole et al., 2007). The lesson for obesity is that strategies for healthier nutrition will need to include the individual, but also his and her relationships and their affects and utilizations of modern knowledge and technology. At this point in the analysis, we want to attribute at least partially to actors the capacity and ability to create social sites of influence, such as a new 'consumption' or 'health' site, where meanings and priorities are negotiated and conflicts created and resolved, thus forging socio-technical continuities and change. The collective policy achievements of the *Canastas* and the *Colectivo* represent a concrete example.

#### *Food as contested space*

The political consensus in Ecuador is that obesity is fundamentally the product of global commoditization and transformation of food systems (Waters, 2006). While perhaps generally true, provided the rich heterogeneous context of family-level practices, we find such abstractions specifically misleading. In fact, favorable conditions, such as access to healthy food and physical exercise alternatives, exist in Ecuador, as evidenced by the concurrent exponential growth in affordable organic markets (Estrella, 2004; Ortiz and Flores, 2008) and gymnasiums and health centers (Willer et al., 2011). Consequently, we believe that the government's proposals for further information on healthy diets and physical exercise are unlikely to re-direct obesity towards healthier futures.

Healthy food production is not a puzzle to be solved through public policy, but a heavily contested, often chaotic context characterized by high rates of uncertainty and vulnerable to competing beliefs and ideals over infinite desirabilities. Pesticide manage-

ment, for example, is not just a collection of routines that can be corrected through fitting together aggregates of information and 'best practices' (Sherwood and Paredes, 2014). It also is an expression of peoples' boundless creativity in mobilizing public policy for family-level purposes. Paredes (2010) shows that a farm is in a state of continual flux in terms of climate, the chemistry in the soil, pest populations, and markets as well as people and labor involved in decision-making and production. Hence, each time a farmer drops a seed, it falls into an ever-changing, unpredictable world. Similarly, Bekkering (2011) found that urban families were endlessly creative in resolving their food procurement and consumption needs.

The increasingly apparent 'bads' of modernization have given birth to civic counter activity in the form of growing and diversifying food movements that over time have shifted agenda from the agronomy of food production to processes of food circulation and consumption, thereby forging new, more nuanced understandings and practices in ecology, economy and health. We believe that such counter-movements born from long-ago established concerns over highly toxic pesticides are linked to the present-day civic efforts to overcome obesity. In other words, it is difficult to talk meaningfully about obesity without critically assessing the co-generation and proliferation of industrial-era technologies in Ecuador and the opening up of local perspectives onto international health dynamics, which have given birth to new possibilities of grassroots democratic action and public policy, such as that generated by the *Colectivo*, *MESSE* and *COPIA*. We view the evolution of the agroecology movement as part of an iterative and ever-changing process of social actions and re-actions. Hence, the effective address of NCDs requires public policy that invests in the question of how to increase consumer-citizen engagement in struggles for healthier living and being, however politically problematic for present-day institutions (Sherwood et al., 2012).

#### *Rise of the consumer-citizen*

Bekkering (2011) presented a group of *Canasta* housewives that described the 'consumer-citizen' as the "ultimate expression of care", both in term of cooking and food provision as well as meaningful participation in family and community. Garcés and Kirwan (2009) found that the different *Canasta* groups had successfully inserted themselves into how a household procured food, and over time they had begun to address concerns over the relationships and environmental consequences associated with food production and provision. One of the greatest benefits is the establishment of a shopping routine that is subsequently carried into eating practices. Although members might not always embody all of the ideals of the national food counter-movement in their household food practices, membership affords them certain immediate benefits: they obtain fresh produce for discounted prices and the meetings themselves are opportunities to socialize consumer experiences as well as to network around emerging ideas and opportunities, such as short-term employment or the cleaning up of a local playground for their youth. The development of a more 'responsible' shopping routine has done much to continue the consumption of whole, home-cooked meals that are generally quite healthy. Organization around 'good food' to counteract the surge of obesity represents a tangible, socio-technical outcome, and highlights the potential of social relationships. The *Canasta* experience arguably represents a source of empowerment for low to middle class families in improving the household budget and procuring safer, healthier food for families.

Originally, the *Canasta* movement was comprised of lower class urban dwellers interested in saving money on food purchases (Kirwan, 2008). Over time, however, it evolved to include the health concerns of members as well as broader social equity of marginalized indigenous farmers in Ecuador – what has become a central



tenet of the movement's ideology. The growth and diversification of the *Canastas* has been tied with the rise of discourses around agroecology and more recently food sovereignty. Today, the members of the *Canastas* are outspoken about their "roots in Andean culture", and they advocate food as a means of social change for the disenfranchised (Bekkering, 2011). In particular, the movement positions its interests vis-à-vis the rise of industrial era agriculture and food as well as the rise of supermarkets. Most recently, the *Canastas* is leading the *Colectivo's* call for keeping Ecuador transgenic-free, understood as a means of protecting consumer health and markets for smallholders as well as conserving the environment.<sup>19</sup>

Although our research of family-level food practices represents just a snapshot, it begins to reveal a lively movement that is ever changing and is continually creating potentialities and actualizing reflexivity around the multiplicities associated with food. In short, the reflexive, self-expressive consumer is essential to the onset of what Giddens (1991) calls "lifestyle politics", characteristic of late modernity. According to Cornwall et al. (2007), consumption can be seen as a form of representation on behalf of certain individual and collective realities at the costs of other possibilities – i.e., a form of democracy quite active in Ecuador's modern-day food movements.

#### *Repositioning food policy*

The very issue of citizenship in food policy is in active debate in Ecuador. We find that the situation is rooted in both the developments of science and technology as well as evolving expectations and patterns of governance. Technological advances and the deepening of consumer society are opening up new spaces for citizen action and democracy, while at the same time conflicts with conventional institutions of expert-led development and government are generating heated public debate and reflexivity, placing into question categories of science and government as well as scientist and citizen.

In a democratic society, this rich social dynamic around technology and its consequences is part of an increasing process of politicization within peoples' rights and claims to health care, but it is also due to societal responses advocated by many researchers to confront malnutrition, obesity and its co-morbidities. Resulting policies have important financial implications for private and public healthcare costs, civil rights and for business practices. In this case, it is especially important to mention its implications for children's immediate and long-term health. If not dealt with immediately and effectively, the social weight of obesity will be borne by future generations. In this regard, obesity is comparable to pollution and global warming. Nevertheless, as part of an increasing politicization at the grassroots level, obesity offers a critical window into the uncomfortable realities of daily life and the increasing awareness of the dichotomous nature of progress and modernities. This is manifested, for example, in the growth and influence of sub-political food movements in Ecuador, organized for the purpose of uprooting established regimes of thought and practice, but also in the fact that there continues to be a substantial silent, growing population that has so far proved either disinterested or powerless in claiming access to healthy choices and overcoming the dominant discourse that there is only one acceptable modernity for the country.

Pesticide poisoning and obesity in Ecuador are not due to any single set of factors, but rather they are the cumulative effect of

endless, self-organizing processes of change and transformation, such that their interactive combined effects constitute specific types of modern health outcomes. In repositioning the debate over NCDs, we find the need to combine the effects of multiple, presently neglected localized embodiments of globalization – i.e., the singular-pluralities. These changes have to do with the establishment of a specific modernity and with politics or public policy of consumption of modern food. Clearly as the trends concerning NCDs and their related co-morbidities and -mortalities indicate, a large and increasing proportion of private and public healthcare spending is being directed toward the consequences of disease, placing them on the policy radar screen. The demographic and economic variations in disease patterns have the potential for generating political differences in how certain groups choose to understand and respond to the demands of the affected populations. These differences may also be reflected in the courses of action and strategies that social groups generate to educate and to take the political steps necessary in mobilizing people as citizens to forge greater responsibility in their daily practices, in defense of their neglected agenda and unmet needs and desires in a simultaneously localized and globalized world.

#### **Conclusions: Tackling the new materialities**

In this article we have explored the social production and evolution of non-communicable diseases in Ecuador from two perspectives. The first one concerns the conceptual explanations of the causes of health issues and their implications for an appropriate understanding of the consequences of specific modernity pathways and actor participation. The second perspective focuses on the interface between knowledge, actors and social sites/spaces in terms of addressing actors' practices and to methodologically locate the nature of proposed interventions and peoples' involvement in overcoming health issues. What insights does this research provide and what lessons does it hold for strengthening the public policy response to the onset of NCDs?

Modern food policies in Ecuador have explicitly sought to reduce food security and malnutrition by making food abundant and inexpensive. In so doing, the country has manufactured unwanted, yet highly durable second order problems – the new, previously unimaginable materialities – in the forms of population level pesticide poisonings and overweight/obesity. In response, civic movements pursuing their own courses of action have grown to become an influential democratic force, capable of redefining certain relationships involved in food production, procurement and consumption.

It is not entirely clear how co-developments tied with the rise of NCDs have both shaped and been shaped by the changing meanings of food and technology and other relationships embedded in people's food practices. Following Beck and Grande's (2010) work on cosmopolitanism, in order to begin to address such concerns, the multiplicity of social and political connections of the singular-pluralities inherent in modern society need to be recognized in terms of the broader political contexts in which they are born and borne. Ultimately, we find a need to shift the orientation of conventional food studies and further demonstrating the effectiveness of state, science and technology, but also that any scientific orientation requires an endorsement from peoples' grounded realities in order to legitimize researchers' observations and 'new' information in explaining health practices and their outcomes.

Faced with the gulf between 19th century notions of the State and Science and peoples' daily experiences, the utility of present-day institutional arrangements in agriculture science, food and development policy is in doubt (Sherwood et al., 2012). In particular, we question the dominant thinking on citizenry and public

<sup>19</sup> See comments of Roberto Gortaire in: Los cultivos transgénicos: alivio a crisis alimentaria? El Comercio, 1 January 2013 (available at: [http://www.elcomercio.com.ec/sociedad/cultivos-transgenicos-crisis-alimentos-agricultura-organica-ecologia-Ecuador\\_0\\_841715932.html](http://www.elcomercio.com.ec/sociedad/cultivos-transgenicos-crisis-alimentos-agricultura-organica-ecologia-Ecuador_0_841715932.html)).

administration, which centers on how to bring the public into line with techno-administrative decision-making, thereby neglecting or denying the roles that people already play in the enactment of policy. In order to overcome the contradictions of modern food, emphasis needs to be placed where it belongs: strengthening new forms of democracy where peoples' rights, roles and obligations, imaginations, and capacities indeed steer the course of change of public institutions to multiple shared visions of the future. This view of citizens as authors necessarily re-positions people in the center of their families, neighborhoods and communities, where they are not merely subjects of government, but also central agents of government and governance.

At the close of this research, the consumer–citizen has moved further to the center of efforts to tackle the new materialities in Ecuador. The country is embroiled in a heated debate over proposals to introduce Genetically Modified Organisms and in particular transgenics crops in agriculture, despite an explicit constitutional provision prohibiting this activity. Following two decades of experiences in North America, there is growing international consensus that GMO technology holds limited promise for sustainably increasing food production, while posing serious risks to ecologies and consumer health (Benbrook, 2012). On one side is the food sovereignty movement, led by the *Canasta* leadership, and at the other side is President Correa. Interestingly, it is the consumer–citizen and not the government that is organized in defense of Ecuador's constitution and arguably the interests of the public good. Tackling the new materialities of modern food ultimately requires attention to a form of democracy that makes transparent and meaningful the responsibilities of the consumer–citizen as well as the very purposes of government.

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