



Perspective

Is the 'obesity crisis' really the health crisis of the food system?: The ecological determinants of health for food system change

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Abstract

Multilateral organizations and research institutions are increasingly calling for transformation of the industrial food system due to its negative health impacts, its contribution to climate change and the fact that the system fails to provide adequate food to more than 800 million people. A common rationale given for food system change is the so-called obesity crisis. This commentary draws from critical weight studies and ecological public health discourses to argue that it is unnecessary to connect the crises of the food system with a rise in overweight and obesity. This approach contributes to fat stigma and further marginalizes a group of people who already suffer from stigmatization. A more inclusive rationale for food system change can be found in a concept articulated by the Canadian Public Health Association termed the 'ecological determinants of health.' These are features of the biosphere such as water, air, food and soil systems that support life on earth and human health. The current industrial food system threatens the ecological determinants of health by contributing substantially to climate change and environmental degradation. A shift in discourse in food policy and practice to focus on the ecological health impacts of the food system is more inclusive and promotes the well-being of all.

Keywords: Ecology; food supply; climate change; obesity crisis

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Introduction

Even before the COVID-19 pandemic exposed numerous food system frailties (International Panel of Experts on Sustainable Food Systems, 2020), international multilateral organizations had begun to compile the evidence on the grave health and environmental consequences of the industrial food system. It was in 2019 that the United Nations' Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Service tied industry generally, and the food system specifically, to catastrophic species loss (IPBES, 2019). The independent, international scientific body named the EAT Lancet Commission (The Lancet, 2019) called for a complete transformation of the way food is produced because the system contributes substantially to climate change and environmental degradation. Not only did organizations make the case that the industrial food system threatens climate stability and future food security but the Food and Agriculture Organization (FAO, IFAD, UNICEF, WFP, & WHO 2019) reported that the system also fails to provide healthy and affordable food to many, at a time when pre-pandemic food insecurity was on the rise. We now know that food insecurity since COVID-19 has worsened for many (HLPE, 2020). This institutional alarm came after decades of academic research calling for food system change in response to its environmental and social impacts (see for example this journal's special issue, Clapp et al. (2015)).

Intertwined in calls to action by these institutions are references to what is typically called the 'obesity crisis,' a term familiar in both the nutrition and food systems literature (Lartey et al., 2018; Winson & Choi, 2017) as well as in the mainstream press. The notion of there being a crisis of body weight, according to Cooper (2010), emerged in the late 1990s. Since then, this 'crisis' has been widely used by academics and journalists to critique the food system (Brady et al., 2019). The 'crisis' commonly frames research in the public health and global health discourse (such as da Silva, 2019). When the EAT Lancet report (2019) was released to much fanfare, it was only the latest publication to offer the obesity crisis as a rationale for changing the status quo. In a YouTube video of a public address titled *Food, Planet Health*, the report's lead author, Dr. Walter Willett, ties environmental crisis to waistlines. He opens his talk stating that "humanity is facing a huge crisis today in terms of environment but also in terms of human health and wellbeing (...). We are facing a massive epidemic of overweight and obesity."¹ The Food and Agriculture Organization of the United Nations (Food and Agriculture Organization, 2019) took a similar tack when reporting on the rise in global hunger. Superimposed on an image of a slum in the Global South, the FAO published, "More than 820 million people do not have enough to eat. At the same time, no region is exempt from the epidemic of overweight and obesity." The World Health Organization also pointed to weight in a 2019 World Food Day statement, labelling rising undernutrition and obesity as a world health crisis, fueled by

¹ This quote has been condensed for clarity in the written form. To compare this edited version to the original video broadcast, visit <https://eatforum.org/learn-and-discover/eat-lancet-explained/> and watch from 1:00-1:25

“dysfunctional global food systems” (World Health Organization, 2019). The discourse inextricably links the ‘obesity-epidemic’ to inequitable food access and to the climate crisis.

It is unnecessary to frame the health crises of the food system this way. Citing obesity as the push factor for food system change shifts blame away from food system actors and contributes to the marginalization of certain groups (Arroyo-Johnson & Mincey, 2016) by promoting fat stigma (Russell et al., 2013). This approach targets one group instead of addressing the fundamental health threat posed by the status quo to all populations through its impact on the ecological determinants of health (EDoH). The EDoH is a public health concept articulated by a Canadian Public Health Association working group (CPHA, 2015) to make explicit the connection between the ecosystems of the biosphere and human health and wellbeing. It is a simple concept with multidisciplinary dexterity that could be adopted in food studies and critical global food studies to guide food system change in the name of health. It is well documented in this journal (Levkoe & Blay-Palmer, 2018) and beyond (Blay-Palmer et al., 2016) that food system change is imperative, considering that industrial food production, processing, and distribution destroys biodiversity, damages water systems, endangers soil health, and contributes substantially to climate change (IPCC, 2019). Rather than condemning waistlines, a truly health-promoting understanding of the problems with the food system would conceive of environmental impacts as health impacts. An ecological determinants of health analysis of the food system broadens an understanding of health impacts and points to structural change instead of behavioural solutions.

The ecological determinants of health and problematizing the ‘obesity crisis’

The three foremost ecological determinants of health are water, air, and food. The other ecological determinants include: soil systems that support food production, such as the cycling of phosphorus, nitrogen, and potassium; water systems; and a life-supporting climate. Food and the ecological systems that support food production, as well as the systems that provide the fuel and resources that allow for the processing and distribution of foodstuffs, are all dependent on the features of the biosphere and its processes that are called the ecological determinants of health. Health is produced by ecological systems and relationships. Thus, in the same way that the social determinants of health shape individual and population health, so too do the ecological determinants of health.

The EDoH are a convenient concept—simple to explain and to apply (Elton, 2018). The concept builds on decades of scholarship in subfields such as Ecohealth and One Health (Zinsstag, 2012), that have foregrounded the health-supporting role of nonhuman nature. Yet, the insights provided by these decades-old scholarly interventions have not yet been fully realized—not in public health, nor in food studies. As Hancock (2015) and others have argued, since the 1990s, public health has eschewed focus on health threats posed by environmental crises in favour of the social determinants of health, which has informed public perceptions about food

and health too (Rail et al., 2010). In the fields of nutrition, dietetics, and public health as well as in food and food system studies, the health of food typically is understood in one of three ways: in a biomedical frame (how healthy is this food for the body?); a food access frame (who does not have access to affordable, healthy food?); or a food environment frame (how healthy is the food provided by the retail landscape and is it an obesogenic environment?). The ecological determinants of health offer an alternative way to conceive of health in terms of the entire food system—from the seed and the soil to the waste produced in production and at the end of the meal. If the way food is produced, processed, and transported damages ecosystems and contributes to climate change, the healthiness of that food, when viewed through the lens of the EDoH, is diminished because the food production systems harm the ecological determinants of health, which threatens human health. Substantial research in food and food systems studies has explored the ecological benefits of agroecology (Fernandez et al., 2013) as well as other ecologically-grounded approaches to food systems. The EDoH provide the language and the theoretical concept that makes explicit how these systems—be they agroecological, organic, biodynamic, et cetera—are human health supporting. Rather than human health being a state, it is conceived of as something that is produced by interspecies relationships and dependencies, inextricably connecting human wellbeing to nonhuman nature. Following an EDoH logic, human health, when it comes to food, is not produced only by eating well, having enough money to buy food, or living in a neighbourhood where there is access to healthy foods such as fruits and vegetables. Rather the wellbeing of people is produced at every step in the food system, from soil to plate to waste.

The idea that human health vis-à-vis food is interconnected with environmental conditions is not new. Indigenous peoples in Canada have long recognized food in the context of what are now being called the ecological determinants of health (such as Geniusz, 2015). Indigenous food sovereignty work in Canada and Indigenous resurgence includes enabling connection between Indigenous peoples, and what is known in a Euro-Western ontology as nature, in sovereign food systems (Wendimu et al., 2018). Also, the notion of food sovereignty, arising from the Global South in solidarity with Indigenous people and peasants, recognizes the connection between food systems and wellbeing (Patel, 2009). It is not even new in a Euro-Western context. Carlsson, Mehta, and Pettinger (2019) write that in the late 19th century in Canada, a woman named Ellen Swallow Richards, an “ecological nutritionist,” promoted thinking about ecology in the context of what was then called home economics. More recently, Lang (2009) put forward the idea that food policy be aligned with ecological public health goals, including consideration for the “physical and material world” (p. 325). In this journal, Seed and Rocha (2018) have suggested that dietary guidelines can help to connect food systems with human and ecological health. Still, ecological approaches to healthy food systems have not garnered deep interest in mainstream institutions as the recent spate of reports by multilateral organizations demonstrates, despite their attempts to document the environmental impact of food systems.

Conversely, the notion of the ‘obesity crisis’ has had traction in the public discourse and has shaped policy (Bombak, 2014). The data show that a higher number of Canadians than ever before, as well as people in other countries, have an excess of what the medical literature refers to as ‘adipose tissue,’ or body fat (Wharton et al., 2020). The data also tell us that certain amounts of this tissue—called excessive adiposity—can render a person vulnerable to Type 2 diabetes, nonalcoholic fatty liver disease, as well as cancers of the colon, esophagus, and kidney among other ailments (Wharton et al., 2020). Certainly the connection between these health issues and the food system, including its governance, necessitates continued exploration (see Lang & Rayner, 2007). However, it is also important to consider that the medicalization of body size has been unpacked by many (including Bacon & Aphramor 2011; Bombak, 2014; Guthman, 2013). Bombak (2014) and Bacon and Aphramor (2011) in their reviews of the scientific literature argue that a person’s metabolic health, rather than their appearance, is a better predictor of wellness. They advocate for a “health at every size” approach to focus health promotion on regular physical activity, healthy eating and the countering of fat stigma (Bombak, 2014; Bacon & Aphramor, 2011).

It is beyond the scope of this article to weigh in on debates about “health at every size” and the problematization of obesity as a crisis. I raise these critiques to draw attention to the ways that, as Guthman (2013) argues, the scientific apprehension of obesity is shaped by social values. One cannot separate out the medical data from the social worlds in which they are produced. For this reason, Patterson and Johnston (2012) suggest that obesity is a “hybrid construction” that is biophysical and that has socio-economic and cultural dimensions. One impact of the discourse is that the social construction of the ‘obesity crisis’ has shaped contemporary understandings of food and health. To start, the social construction of obesity stigmatizes those who are categorized as obese or overweight by casting them as unhealthy people who have a bad relationship with food (Cooper, 2010). As Brewis, Wutich, Falletta-Cowden, and Rodriguez-Soto (2011) found, this fat stigma, along with the prejudice it produces, is spreading around the world as a result of the globalization of these social norms around body type. Secondly, the obesity discourse has shaped contemporary understandings of food and health as it has merged with calls for food system change. In the food security discourse, the world is often described as being made up of the “stuffed and the starved” (Patel, 2013). This contrasts obesity with food insecurity, as if the two conditions are mutually exclusive. The data, however, show that people who are obese can also be food insecure (Stowers et al., 2020). Also, the obesity discourse has shaped health-based calls for food system change, such as in the EAT Lancet Report (2019) that points to body size as a reason for fixing food systems. But the social construction of obesity as a health crisis of the food system thus far has not led to structural change but rather has marginalized a group of people with fat stigma.

Towards a health-supporting food system

There is a stronger human health rationale for overhauling the food system: the health impacts of the industrialized food system on the ecological determinants of health. Here I use red meat to illustrate how the ecological determinants of health shift analysis when considering the health of a food, since red meat—the burger—is so often singled out as an unhealthy food that promotes obesity. Apply the ecological determinants of health to red meat and the problem identified is not some people’s waistlines but rather the health of everyone. An EDoH approach evaluates the impact of the meat in question on ecological determinants of health, such as water systems and climate. In applying this concept, one would evaluate the impact on water systems of how the cattle were raised. Did the cows graze on irrigated pasture or was the grass rainfed? How was manure handled to prevent nutrient runoff from polluting water systems? In terms of climate, what is the greenhouse gas burden of the meat’s production? An EDoH approach would judge the health impacts of the red meat based on the methane gas emitted in production, as well as carbon emissions along the production lifecycle of corn and other grain, typically fed to cattle in feedlots. Further, an EDoH approach would not consider all red meat equally, since livestock can be raised in different farming systems that have different environmental impacts (Broom, 2019). In this way, an EDoH analysis broadens an understanding of health impacts. By evaluating the healthiness of food based on these criteria, an EDoH approach does not separate human health from environmental degradation and rather sees human health as inextricably tied to the wellbeing of nonhuman nature. If a supposedly healthy food, like kale or quinoa, is produced in a way that damages the ecological determinants of health then the food is not in fact healthy. To reduce the environmental harm caused by the food system is to support human health.

The EDoH not only highlight how the health of all people is affected by food production systems, they also point to different solutions. As Guthman (2013) writes, focus on an ‘obesity crisis’ can “foreclose other problem conceptualizations and thereby affect [stet] the range of solutions” (p. 264). Tying food system crises to body size is a simplistic rationale that ignores complex sociopolitical and economic problems. Rather than limiting analysis to behavioural solutions that put the onus on the individual to eat better and trim up, the EDoH point to structural change in the food system in the name of health. To fix the parts of the food system that damage the EDoH requires the system itself to change, a critique common to the food systems literature. It is in this way that the language and rationale of the ecological determinants of health can help food and food systems studies to ground their critiques in health discourse and hopefully persuade policy makers, the health industry—as well as the authors of reports published by international multilateral organizations—that the impact of the food system on all our health is the best reason for change. This approach to food systems also raises many questions and opens numerous avenues for study. How might thinking about the ecological determinants of health contribute to a deeper understanding of equity in the food system? How might this lens inform understandings of supply chains, for example, and reconsider food prices, food waste, and other issues? Where these questions may lead is not yet known, however, I argue

that an EDoH approach to assessing the healthiness of the food system can be a conceptual tool for food scholars looking to shape policy and practice and to push structural change that promotes the resiliency that is missing now in the food system.

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