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## Where is the local?

### Partial biologies, ethnographic sitings

Emily YATES-DOERR, *University of Amsterdam*

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Where is the local for the ethnographer? A challenge facing anthropological interest in “local biologies” is that both biology and locality are put into practice in different ways. I draw on research with scientists, policy makers, and activists who are all grappling with the influence of nutrition on biological development to illustrate that while biologies may transform from locality to locality, locality also changes form. I juxtapose local biologies of exposure, geopolitics, and global networks to suggest that a strength of ethnography lies in situating materials through practices of translation, attending to the ontological partiality of our objects of concern. Framing “the anthropological perspective” as a care-filled, authored practice of *siting* and not as a view on the world has implications for how nature is conceived and what the aims of ethnography are taken to be.

Keywords: Local biologies, anthropology of science, nutrition, exposure, territory, governance, perspective, ethnography

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*An anthropology of biomedicine would eventually open the door to challenging the first principle of biomedicine: that bodies are everywhere biologically the same.*

—P. Sean Brotherton and Vinh-Kim Nguyen, “Revisiting local biology in the era of global health”

*An indictment of universalism in expert venues is helpful, but not sufficient, for the critical analysis of expert politics. This critique—and its valorization of specificity—has already been internalized by the state and its experts.*

—Timothy Choi, *Ecologies of comparison*



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### Siting 1: Locality of exposure

Where is the local for the ethnographer? It is fitting that I was faced with this question while traveling. I was on a bus heading to the highland province of Quetzaltenango from Guatemala City with Dr. Solomons, a scientist and international nutrition expert who holds only a US passport but has lived in Guatemala for four decades. We were using the five-hour commute to talk through articles on complementary feeding—what mothers feed their still-nursing babies—that his staff had drafted the previous year. Much of their research was conducted in and around Xela, a city in Quetzaltenango where I have carried out long-term fieldwork, and he wanted my reactions—“an anthropological perspective,” to use his words.

Solomons runs a scientific center, the Center for Sensory Impairment, Aging, and Metabolism (referred to by the acronym CeSSIAM), based in Guatemala City. When he first came to Guatemala, Solomons worked at the UN-affiliated Institute of Nutrition of Central America and Panama (INCAP), also based in Guatemala's capital. In 1985, during a period in which the escalating political violence of Guatemala's Civil War stymied INCAP's work, Solomons started CeSSIAM. The year 1985 also marked the first graduating class of medicine from Guatemala's elite Marroquin University. A group of talented, highly educated female doctors found themselves blocked from postgraduate study as potential employers widely believed that they would choose their children over their patients. Solomons, who is a black man and a self-proclaimed feminist, is deeply concerned for social inequalities; from the start, most of the scientists employed by his center have been women.

His center has been involved in shaping scientific knowledge about early life growth and development. Since the early 1990s, Solomons has argued that the link between food and growth is overstated. His research points instead to small cellular infections caused by what he calls “a dirty environment,” ranging from pollutants including microbial contaminants in the water supply (Solomons et al. 1993) or pesticides like HCB, used to grow produce for export in Guatemala from the 1950s until the 1990s, when it was declared toxic to human health. This research was a precursor to the current wave of scientific interest in epigenetics, as it showed that relatively small inputs at one point in time may have physiological effects that are initially undetectable but substantial in the long run. Today, the center's work remains at the forefront of research connecting chronic metabolic imbalances to developmental immunostimulation.

In drawing linkages between gestational development and biological development generations later, he argues that the common units that underpin much public health analysis—“the individual,” “the community,” even “the environment”—lose their intelligibility (see, for example, Uauy and Solomons 2006). As Solomons has written, the research carried out by his center “unravels the chemical nature” of nutrients, bioactivity, and metabolic pathways (Solomons 2009: S13). The “dirty environment” at issue in their scientific endeavors is not, at least not necessarily, one that surrounds us today; it is an accumulation of past environments, now located within us. The nutrient scientists at his center are busy “re-fusing” binaries between subject and object, a project long thought to be the terrain of anthropologists (cf. Salmond 2014: 172).



To collect their data, the researchers make lengthy home visits to Guatemala's rural indigenous communities. They are used to encountering variation in language and custom as well as variation in biomarkers of disease. They are cautious scientists, meeting weekly to discuss the ethical and methodological negotiations they face when tending to vials of blood and spit, or to the people from whom these samples come. A few months before our bus ride, I attended a meeting of nutrition experts in Spain where Solomons gave a scathing critique of the "collectivist" attitude of public health nutrition, decrying its "one-size-fits-all" approach. Since first working with him in Guatemala City in 2006, and throughout our interactions since, I have found he shares my concern, typical in the field of anthropology, for the need to account for diversity in local practices when shaping global agendas.

But in the midst of our bus-ride discussion, we encountered a point of disjuncture. After I suggested that his researchers might provide more information about the "local situation" of their research on complementary feeding, he interjected to say: "We spring together in our critique of the failures of the one world approach to global health. Where we part ways, is in how we understand the local."

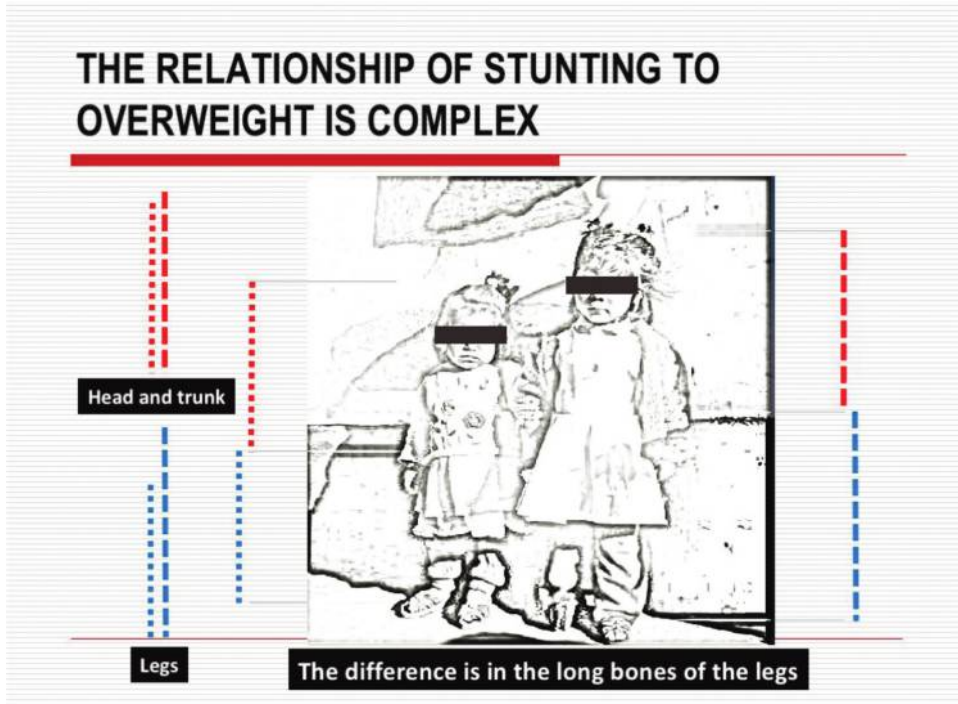
In our conversation he positioned anthropological locality to be a town or region—the field site, classically conceived as the geopolitical territory where one works. Meanwhile, the relevant locality for his center was something different. He explained: "Our research shows that heterogeneity of exposure, including something as obligatory as seasonality, combines to differentiate and vary outcomes from neighbor to neighbor in the same community and ecosystem."

By way of clarification, he showed me a slide from a recent presentation he had given (see fig. 1). Under the heading "The relationship of stunting to overweight is complex" it showed two young girls standing side by side, both squinting at the camera, wearing lacy white dresses with thick leggings to protect them from the high-altitude chill. Superimposed over their bodies were colored lines used to disaggregate their height: red correlated to "head and trunk," blue to "legs." Though one girl was a full head taller than the other, the colored lines showed that this was not because of the length of her torso or head. Instead, as clarified by text at the bottom of the slide, "the difference is in the long bones of the legs."

Solomons pointed out that the two girls were the same age and from the same community, and advised me that framing "the local" in terms of region would not account for their different biologies—as they were then, and what they would become. The idea that groups were constituted by region—the premise of the epidemiological "population"—was getting in the way of his analysis. The local at issue in his research on development and growth was instead shaped by "heterogeneity of exposure" that could happen over generations, such that events far in the past might materialize in bodies today (see also Landecker 2011).

### **On method: Influence and interferences**

This conversation serves to introduce the central argument of this article: that "the local" is ontologically partial. This claim responds to disciplinary interest in what Margaret Lock has phrased "local biologies," a concept that "poses a challenge to the first principle of biomedicine: that bodies are everywhere biologically the



**Figure 1:** This is a sketched rendition of a photographic image originally created and circulated by Dr. Mary Penny of the Institute for Nutrition Research (IIN) in Peru, which juxtaposes two age-equivalent peers. CeSSIAM scientists have used the image in their scientific presentations to illustrate how short stature may be caused by a “specific defect in elongation of the lower extremities.” Dr. Solomons showed me the image to emphasize how biology will be shaped by developmental heterogeneities, with intergenerational implications. CeSSIAM scientists commonly black out the eyes of the children whose photographs they use in publications, which they do out of ethical respect, and which they asked me to do here.

same” (Brotherton and Nguyen 2013: 288). When Lock brought the phrase into the anthropological canon some years ago, she was carrying out a comparative study of menopause in the United States and Japan, and had found that physiological condition in addition to social experience differed between the two countries (Lock and Kaufert 2001). In an inventive move, she posited local biologies to shift anthropological analysis away from social constructionism and toward materiality, while simultaneously showing that the treatment of the human body as a universal object “was a serious error leading to inappropriate practices of standardization” (Lock 2015: 174). “Local biologies” instantiated a recognition that “the biological” and “the social”—terms that underpin nature versus nurture battles, which continue to influence the organizational structure of US anthropology departments today—were becoming, in the words of Evelyn Fox Keller, “hopelessly muddled” (Dizikes 2010).

The idea of local biologies has influenced a productive period of scholarship in the anthropology of science and medicine. This scholarship has helped to unsettle the nature/culture divide, showing that instead of a nature to be pitted against a



nurture, nature is cultural while culture is also shaped by material resources. This tradition does not speak of the biological *and* the social or the natural *and* the cultural but of biosociality (see, for example, Gibbon and Novas 2008; Rabinow 1996) and naturecultures (see, for example, Goodman, Heath, and Lindee 2003; Heath, Rapp, and Taussig 2004).

As anthropologists have become increasingly dubious about the universality of the human body over the past decades, they have been joined in force by (other) scientists. The attention to local biologies in anthropological theory today does not so much challenge scientific and biomedical orthodoxy as it parallels much contemporary scientific practice in which bodies are not everywhere taken to be the same biologically.<sup>1</sup> Drawing on research with environmental scientists, including some developmental biologists, Tim Choy notes that an indictment of universalism in expert venues is helpful but not sufficient for the critical analysis of expert politics. He writes, “This critique—and its valorization of specificity—has already been internalized by the state and its experts” (2011: 105).

Through the following analysis of public health experts’ interest in growth and development, I suggest that rather than argue that biologies are local, anthropologists might add to emerging discussions about local biologies an insistence on the situatedness of any object of concern. To posit that human biology expresses itself differently in different regions risks reproducing violent notions of typologies as bound to geography. Instead, we might rather point to the malleability of the categories that underpin discussions about what constitutes biology and how biology is localized. This emphasis on the malleability of categories resonates with a theory of culture shared by many anthropologists, in which culture expresses situated material relations. But other fields use culture in very different ways. So instead of saying “nature is cultural,” and assuming this holds true everywhere, I’d want to ask, what is nature or what is culture in the sites where they gain relevance? This, then, invites a question that informs my analysis of the ethnographer’s local: what is a site?

Anthropologists commonly refer to the way in which they demarcate fieldwork when narrating it as a “case,” while a “site” is taken as the location in the world where the case took place. In this essay, I instead consider the narrative cuts I make as *ethnographic sitings*. I use the frame of siting to indicate that a strength of anthropology lies in its insistence on the entanglement of the field and how we write it into being, or rather, how we author it into being, since we use a range of devices including film, photography, design, social media, public speaking, and classroom instruction to articulate our knowledges. Ethnographic siting unsettles the division between representation and field site, underscoring the iteration built into

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1. While social epidemiologists have long tracked how particular environmental conditions become embodied (see also Gravlee 2009; Krieger and Davey Smith 2004), current research on epigenetic development has given new force to the idea that biological form varies locally (cf. Landecker and Panofsky 2013; Meloni and Testa 2014). Many anthropologists who have worked in the trenches studying nature-nurture debates have long noted “naturalists” concern for socialization (e.g., Franklin 2003; Rapp and Ginsburg 2001). This is explored in more depth in a recent discussion initiated by Margaret Lock in *Current Anthropology* (2015).



ethnographic practice and challenging an assumed ontological coherence of things (cf. Asdal and Moser 2012).

My thinking is influenced by Annemarie Mol's critique that relativism—in which there are different points of view on the world—remains predicated on an underlying universally shared nature (see 2002: 32–36). This critique may seem counterintuitive to anthropologists, who are commonly taught that relativism is a counter to universality, but Mol has shown how the notion of diverse “points of view” both depends on and leaves unsettled a colonialist metaphysics. Turning away from relativism, she encourages care-filled engagement with how realities are done in practices that take shape through entwined activities of observation and descriptive interference (2008, 2014). Care, as she uses it, is both a practice of tinkering to be studied in others, and a method of scholarship that refuses a definitive resolution of what the world *is*— or should be.

That the world is not “out there,” to be known once and for all, shifts the aim of ethnography from representation as a technique of mediating between object and image, where the goal is to reflect the world in its proper form, to representation as ontological commitment, where representations are practices that “world” realities. Donna Haraway's classic writing on situating knowledges is useful here, although some decades later, in the face of growing concern for nature in the “time of the anthropocene,” we might read this as situated materialities (1988, 2016). Where Euclidian localization segments space into smaller and smaller measurable units, the practice of situating expands it, drawing subjects and objects into a network of fluid relations. The point is not to expand outward until the entire world is covered (a fantasy of holism). The point is rather to treat research as relational: knowledge and materials emerge through what is done with them.

Refiguring “the empirical” as a practice of *siting* requires paying simultaneous attention to what we study and to the practice of authoring. This approach asks us to consider the structures of power and intellectual histories that shape the terms we use (Martin 1987; Rosaldo 1989; Strathern 1980); to consider the futures that these terms will help us to build (Haraway 1997; Povinelli 2011); and to attend to the lines of exclusion/inclusion that structure any “us” that emerges as relevant (see, for example, de la Cadena 2010; Despret 2008; M'charek 2013; Morita 2013; Todd 2015). *Siting* materialities unsettles the Euro-American concept of perspective, suggesting that perspective does not offer a view on a detached world but shapes which worlds come to matter. This tradition of scholarship has shown perspective to be partial, both because it is passionate and committed—unlike relativism, there is no pretense of equivalence or neutrality—and also because it is not totalizing. We, a necessarily partial we, can draw other connections, authoring other coherences and, with this, other worlds.

I build on this feminist and de-colonial tradition of science studies in my analysis of local biologies to destabilize the template of Euclidian space that continues to impose parameters around “the field” of anthropology (see Candea 2007). To be clear, this is not a critique of Lock's “local biologies,” but an attempt to strengthen it by tethering it an ethnographic sensitivity for treating concepts and objects alike as mobile, empirically situated, not-quite-ever-things. Where Lock helped to denaturalize the universality of the body, I build on her thinking to now denaturalize the local: in addition to unsettling the nature of biology, is the project of unsettling the nature of the world.



My interest in the local surely comes in part from interaction with global health experts who often expect anthropologists to add local knowledge to their own larger, more powerful, global knowledge (see also Yarrow 2008). In seeking to denaturalize the local, I share much with geographers who have illustrated that there is no space without time; the local, they have argued, is necessarily temporal (see, for example, Massey 2004; May and Thrift 2001). I also share Arjun Appadurai's concern, offered quite some time ago, with the fragile, quotidian production of locality (1986). Yet where Appadurai argued that locality is neither spatial nor scalar but ultimately a phenomenological quality, I suggest that the properties of the local be meticulously left open and not stipulated at the outset. Likewise, rather than advocate the deterritorialization of the local (because the local is never a territory), or assert that local space is really timespace (geographers' "place"), following Mol I push for an approach that remains curious about how the local is *done*.<sup>2</sup> This seemingly small rhetorical shift dramatically alters the desired aim of ethnographic research from relativist knowing to relational doing.

In my conversation with Solomons above, I came to consider local biologies through ancestral exposure. I now consider two additional sitings of local biologies, also drawn from fieldwork on the overlapping entities of Global Health and Global Development that I have been carrying out since 2004. The three sitings are connected by an interest in how scientific and policy interventions assess and address growth and development. More importantly, they are connected by their differences. I have made selective cuts in my field materials (see Strathern 1996) to author (1) a siting in which biology is localized by exposure drawn from Solomons' research above, (2) a siting where biology is localized by the geopolitical borders that structure policy responses to malnutrition, and (3) a siting where biologies are localized according to anticapitalist networks that take place at UN's Food and Agriculture Organization (FAO). It is not my aim to represent the truth of local biologies in a particular place. Instead, I use the technique of juxtaposition—connecting through differences—to explore variation in how local biologies are done in practices with the aim of destabilizing the dominance of Euclidian space, and, with this, shifting established expectations for how to constitute the anthropological field.

## Siting 2: Locality of geopolitics

This second siting hinges on a commonly used geopolitical map that divides Guatemalan bodies into twenty-two spatial provinces—arguably the most common way of also localizing anthropological fieldwork. To reflect how maps are themselves practiced in contingent ways (Kitchin and Dodge 2007), I use this siting to consider how spatial representations of stunting localize bodies through techniques that we might, following John Law (1994), conceive of as geopolitical "modes of b/ordering." This then leads to an inquiry of how space becomes scalable, and how

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2. When I refer to locality as being *done* as opposed to *constructed*, this is to emphasize that it is not simply made from ideas and beliefs but enacted through material-semiotic practices. For more on the difference between doing and making see John Law and Annemarie Mol (2002); Tiago Moreira (2006); and Ingunn Moser (2008).



this scaling becomes instrumental to understanding local biologies in terms of the nation state.

This siting coheres through its focus on territory, but I do not stay in one place. I first focus on the distribution of nutrients in a province where an important chart reports that 70 percent of children there are stunted (see fig. 2a); I show how this number localizes bodies according to their political region (see fig. 2b), while, at the same time, localizing bodies through their relation to global standards. I then analyze an event that seeks to incite action by mobilizing the geopolitical border of Guatemala. I hope to make evident that even as bodies are localized by territory, the practice of territory becomes done in various ways.<sup>3</sup>

The same week of my bus ride with Solomons, Guatemala's presidential cabinet was inaugurating a public health intervention called *La ventana de los mil días* (The window of 1,000 days), promoting the weekly delivery of nutrient supplements to pregnant women and their nursing infants in designated provinces. Improving national development by providing supplements to those deemed especially needy was becoming the government's major platform for public health. Vice President Roxana Baldetti initiated the "1,000 days" intervention outside the municipal building of Totonicapán, a highland K'iche'-speaking province adjacent to Quetzaltenango.

After declaring that the needs of people from Totonicapán were urgent, and that her government was paying attention to them, Baldetti handed out packets of *Mi Comida*—a nutrient-fortified protein supplement for babies between six and twenty-four months developed by the UN's World Food Program and funded by the Canadian government. She promised when they ran out, that more was on its way, and, indeed, monthly drops of food aid would soon become a fixture of rural life—along with the men who arrived to monitor distribution so that woman, who did not think highly of the taste, would not feed it to their animals.

Whereas region was not central to Solomons' organization of locality above, it is critical to the delivery of the supplements to these particular women, and eventually into their babies' bodies. Roughly every five years, Guatemala's national ministry of health conducts a survey (Encuesta Nacional de Salud Materno Infantil, ENSMI) of maternal-infant health, tracking information such as fertility, mortality, access to and utilization of family planning, breastfeeding rates, vaccinations, and anthropometric data. According to several Guatemalan health workers with whom I spoke, the most important page of the ENSMI lists rates of *desnutrición crónica* (chronic malnutrition, another term for stunting) for each province. One can look at this page and see that the province of Totonicapán has the country's highest rates of stunting for children under five, at 70 percent. Scientists and policy makers alike offer this number as evidence for why the government has designated

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3. To restate from above, the point is not to arrive at ontological claims about what a locality or biology is but to unsettle this aspiration. This may be confusing for a reader who is used to reading through materials to find generalities, for what I am asking for is an orientation to knowledge production capable of staying with "the mess" of relationality (Law 2004). If the lack of solid ground on which to stand becomes disconcerting to the reader, I hope it is useful to remember that a capacity to attend to the partiality of nature—the lack of solid ground—is, at least in part, what I am after.

Lugar de residencia	Porcentaje con desnutrición crónica (Talla para la edad) <sup>1</sup>		
	Porcentaje por debajo de -3 DE	Porcentaje por debajo de -2 DE <sup>2</sup>	Promedio valor Z (DE)
<b>Área de residencia</b>			
Urbana	10.7	34.6	-1.6
Rural	17.3	45.4	-1.9
<b>Región</b>			
Metropolitana	4.0	26.9	-1.4
Norte	15.7	38.9	-1.8
Suroriente	11.1	33.8	-1.5
Nororiente	9.5	32.3	-1.5
Central	15.4	39.5	-1.7
Suroccidente	16.7	47.7	-1.9
Noroccidente	27.9	60.5	-2.3
Petén	7.4	31.0	-1.4
<b>Departamento</b>			
Guatemala	4.0	26.9	-1.4
... Guatemala municipio	3.6	23.5	-1.3
... Guatemala resto	4.1	28.0	-1.4
El Progreso	3.1	26.5	-1.2
Sacatepéquez	13.8	39.2	-1.8
Chimaltenango	21.5	56.9	-2.1
Escuintla	10.8	25.0	-1.3
Santa Rosa	6.2	27.0	-1.3
Sololá	24.8	64.0	-2.3
Totonicapán	27.8	70.3	-2.4
Quetzaltenango	14.3	48.4	-1.9
Suchitepéquez	8.5	34.7	-1.4
Retalhuleu	9.8	29.7	-1.4
San Marcos	17.8	45.4	-1.9
Huehuetenango	32.3	63.1	-2.4
Quiché	23.6	57.9	-2.2
Baja Verapaz	15.3	48.3	-2.0
Alta Verapaz	15.7	36.8	-1.7
Petén	7.4	31.0	-1.4
Izabal	4.2	19.1	-1.1
Zacapa	12.7	34.8	-1.7
Chiquimula	14.9	45.2	-1.9
Jalapa	18.8	50.4	-2.0
Jutiapa	9.1	26.8	-1.4
<b>Total</b>	<b>15.0</b>	<b>41.7</b>	<b>-1.8</b>



**Figure 2a:** Biological stature of children under five, ordered by province, according to the Encuesta Nacional de Salud Materno Infantil (ENSMI). The middle column lists “the percentage two standard deviations below World Health Organization’s norms for height/ age.” [www.osarguatemala.org/osartemporal/Archivos/PDF/201603/259\\_4.pdf](http://www.osarguatemala.org/osartemporal/Archivos/PDF/201603/259_4.pdf).

**Figure 2b:** A map of political provinces of Guatemala.

Totonicapán as a high priority region, deserving of research and the delivery of nutrient aid.<sup>4</sup>

The chart does not define locality as a specific level of territory. Instead, this localization happens through what Susan Gal (2002) describes as a fractal nesting of spatial distinction: community nested in municipality, nested in province, nested in country, nested in world. Environment, when made scalable as such, becomes figured in mapping terms as zooming in to the local or zooming out to the global. Scaling between different levels—or nested spatial distinctions—also works to constitute local/global distinctions through indexical relations: the local operates as a “here,” that is, by virtue of its immediacy, not “out there.”

We may not be used to thinking of numbers as indexical (cf. Verran 2010), but the indexical relation of global/local is threaded into the statistic of 70 percent, which does not report height, an individual measure, but a proportional measure dependent on reference to global growth standards. Indicated at the top of the ENSMI chart, the designation of stunting occurs when any population’s measure of height-for-age falls two standard deviations below the World Health Organization (WHO) standards.<sup>5</sup> The chart makes no mention of how these standards were determined, but this absent information nonetheless remains central to the resulting localization of bodies (see also Nelson 2015). Each state is ordered according to its deviation from the global norms. As such, 70 percent both contains a global norm within it and it is also used to localize the territorial-specific population—in this case, the seven out of every ten children in the province of Totonicapán who fall below global standards and warrant food aid.

The WHO’s global growth standards did, of course, come from somewhere but they have been stabilized through claims to generality that allow them to be applied equally to all provinces in Guatemala. Yet, if claims to global generality allow norms to travel (see Merry, Davis, and Kingsbury 2015; Merry 2011), they can undermine interventions by indexing the problem as from “out there.” As one senior public health official explained to me, “when it comes to intervention, action is necessary, and action depends on *local* relevance” (see also Ferguson and Gupta 2002). He thought that to encourage action, the abstract space of “the global” needed to be grounded in a unit of belonging with which people could identify. We see this performative “shape-shifting” (Verran 2010: 173) between global scales and local scales play out in the scene I offer next, in which experts emphasize the need to invest in nutrition through global, general truths, which they then localize in the Guatemalan nation-state.

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4. In an analysis of body standards for children, Marianne de Laet and Joseph Dumit show how graphs “produce the very bodies that populate the accounts which are then illustrated by the graphs” (2014: 73; see also Castañeda 2002). De Laet and Dumit demonstrate that “images do things,” and identify illustrations of normal size as “body-shaping practices” that structure “the physical substance that we live with, in and through” (2014: 73). Their analysis can help us to see how the ENSMI chart for stunting localizes body norms in ways that in turn shape the substance of bodies.
  5. WHO standards were adopted by the Guatemalan government in 2006; before this, the reference population was assembled from data drawn in the United States.



In 2015, two years after its inauguration, the attention garnered by Baldetti's 1,000 days program was a primary reason the UN chose Guatemala City as the site to launch the first annual UN Global Nutrition Report. The report, backed by nearly every major player in the global health community, made a case for the integral role of fetal development in global development. At the launch event, held in the British Embassy, a World Bank nutrition expert showed the audience of policy makers images of brain synapses, suggesting that "brain cells of a normal child have extensive branching versus the abnormal branches of the stunted child." She then localized this general statement within Guatemala, noting that the World Bank had found that Guatemalans suffer from the world's fourth highest rate of stunting—with huge impacts on Guatemalan brains.<sup>6</sup>

Next, a senior researcher from the International Food Policy Research Institute made a similar maneuver in his speech. He explained the general fact that malnourished children start school later, attend fewer classes, and ultimately have less income than children with proper nourishment. He then reported that "this was a local matter," costing Guatemala \$8.4 million dollars a day in reduced productivity.

The final speaker at the prestigious event was Vice President Baldetti. She began by underscoring the general message of the other speakers: "Early life nutrition is one of the best ways to invest in global development." She then localized the problem of global malnutrition within Guatemala's geopolitical borders, emphasizing that "Guatemalan children and pregnant women need the commitment of the next Guatemalan government to deliver results."

In each of these talks, facts treated as globally applicable become anchored to "the local," which here takes the scale of the nation-state (i.e., *Guatemalan*). Accordingly, concerns specific to Guatemala—its trade regulations, stunted brains, and GDP—inspire and justify *Guatemalan*-based interventions. Geopolitical territorial divisions are a colonial import—they are certainly not a natural division of space or politics (Lomnitz-Adler 2001; Mitchell 2002)—but this mode of b/ordering nonetheless has powerful effects, being central to how governments collect their data, organize their health initiatives, and also how their citizens respond.

It is critical that Baldetti's focus at the launch of the report was on bodies localized through the Guatemalan nation-state because of what was happening that very day across the capital. Tens of thousands of urban protestors had gathered outside the county's congressional palace. The crowd was chanting "Resign Now!"—a rallying cry mobilized by the #RenunciaYa hashtag to demand the resignation of its executive party. Three days after Baldetti touted the progress Guatemala had made with regard to nutrition, she was forced to listen to the crowd and she resigned. She and the president would soon after be arrested and imprisoned as a massive political corruption scandal was exposed. In the countryside where the 1,000 days program was being rolled out, it became apparent that it was not viable since the funds used to sustain it had been stolen. Given the dramatic political failure, some wondered if the structural b/orders of the nation state would be called into question

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6. Much more should be said about the resurgence interest in stunting, head size, and cognition. I include the statement not because it *is* fact but because many global experts are currently mobilizing the relation between stunting of height and stunting of the brain *as if it were* fact.

(Copeland 2015). But the geopolitical b/ordering of Guatemala was strong: the primary concern raised by civic protests erupting in the capital city was that the laws and values of the nation-state had not been honored.<sup>7</sup> Urban protestors generally wanted to strengthen and not dissolve Guatemalan locality.

### Siting 3: Locality of connection

In the first siting, Dr. Solomons' interest in "the local" was focused on heterogeneity of exposure. In the second, "the local" of importance was ordered through an indexical relation of scalable geopolitical boundaries. In this third siting, I now highlight how "the local" is done through the formation of specific transnational networks. I describe a conference at the FAO in Rome, Italy, where a range of actors met to influence the future of global nutrition. Here, activists who gathered to create sustainable biological ecosystems used "the local" as a resource in their campaigns for global food sovereignty.

Among the conference attendees were activists working to create sustainable biological ecosystems. "My struggle is our concern; my concern is our struggle." A speaker at the front of the room where I sat had encouraged us to chant about our struggle in our various languages, and the chant now emanated through the back halls of the FAO, where members of the Civil Society group had gathered to review the progress made since the start of the conference. The previous three days had been spent in advocacy meetings at the Second International Conference on Nutrition (ICN2), which convened at the FAO headquarters. The first ICN, held in 1992, had been a small affair. Now, in 2014, concern for feeding the world was linked to concern for chronic illness and climate change. Decisions about the Sustainable Development Goals that would be included in the UN's agenda were in the process of being made and the conference was billed as an opportunity to shape the global "post-2015" agenda. All around me, people were emphasizing that the decisions being made would shape which interests would become visible, and with this, where capital would flow. It was obvious to everyone that there were high political stakes surrounding how biologies were localized.

As in the previous siting, some of the politics on offer at the conference were organized around the boundaries of the nation-state. I attended well-publicized expert meetings in rooms adorned by world maps and national flags, where people were regularly referred to by their country name. For example, in the green room, I heard a delegate called "Guatemala" speak on the theme of "global governance" while his session was translated in real-time into English, Italian, French,

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7. Jimmy Morales, a former comedian backed by the Guatemalan military and compared by many to Donald Trump (see, for example, Torres 2016), was elected shortly after Perez Molina and Baldetti were imprisoned. It is worth considering that the inability of the #RenunciaYa movement to sustain its call for transformation may pertain to a failure to incorporate Indigenous communities' desires for structural revolution into its agenda. In the Indigenous countryside—where nearly everyone has family living in the United States and crossing borders is a fact of life—the strengthening of the Guatemalan nation-state is treated with considerable suspicion by many.



Portuguese, and Chinese, which audience members could select on their individual headsets. “Guatemala” championed the resources his government had invested in fighting childhood stunting, highlighting the statistical achievement of a 1.6 percent drop the previous year. “The national investments we’re making are bearing fruit!” he exclaimed with pride, although this same statistic had been offered to me by policy makers in Guatemala as evidence of the government’s failures.

While nation-state politics were highly visible in the well-trodden spaces of the conference, in the side rooms where the grassroots contingent of the Civil Society sector met, people were more likely to introduce themselves with the name of the NGO they represented than by country. The side rooms had no headsets for live translation so the conversations moved slowly. Someone would speak; then someone would translate the speaker’s words into, say, English, then someone else (or sometimes the original translator was fluent in multiple languages or speakers would translate themselves) into Spanish, Portuguese, and French. “It’s important to keep the richness of our local languages,” a woman declared, organizing locality on the basis of linguistic affinity while affirming the slowness of the process.

The Civil Society comprised various interest groups promoting issues such as pastoral farming, peasant or indigenous communities, fisheries, human rights, and women’s health. Whatever their particular movement’s focus, most participants shared antipathy for the “current hegemonic food system” and the “existing agro-industrial production model that promotes ultra-processed products.” They collectively worried about soil contamination, ocean acidification, reduction of biodiversity, and climate change, and the effects of these changes on the earth and its bodies (see fig. 3).



**Figure 3:** Another image of “local biologies” in which the body is figured as an ecological relation. This image is the logo used by the Agrarian Reform for Food Sovereignty Campaign.



The declaration they submitted to FAO highlighted the harmful effects of global trade routes, exported pesticides, and transgenic crops, and resolutely rejected the global flow of chemicals and seeds (see also Kinchy 2012). The group called on the United Nations to “reaffirm that nutrition can only be addressed in the context of vibrant and flourishing local food systems that are deeply ecologically rooted, environmentally sound, and culturally and socially appropriate.”<sup>8</sup>

I lost track of how many times I heard someone emphasize the importance of global solidarity. Speakers sought to collaborate so as to build “new social relations,” “to deepen collective understanding,” and to “learn about the realities of our respective struggles.” As the director of a Latin American food sovereignty movement explained:

The fact that we’re working together is already a victory. We share a hope. For me, it has been valuable to cross the oceans to come here because I was able to meet you and work together. There is strength in coordinating, since there is a deep darkness that we face. I thank God that God has made me a peasant and made me able to produce food with my own hands. As little as I can contribute, I am proud of being able to feed people from my own place. I call on you, with love, to continue our struggle.

We can see in this citation that while global coordination is a desired outcome of the meetings, the local of “my own place” remains critical. One man who had been vocal throughout the meetings explained:

The beauty of Italian cuisine is that we try to make sure when we cook our food that all of the ingredients can be tasted. It is very important that you can feel the taste of local ingredients. They may not taste like much separately but when they come together they have a universe of savors. That’s the beauty of it and this is what local diversity is like: a coming together that does not obliterate our diversity but enhances it. We need this diversity to be able to stand together against powerful global institutions.

Another Civil Society member, a self-described activist who was also a nutrient scientist, told me during a break:

There is no such thing as a sustainable food. A food can only be made sustainable if the system around it is made sustainable. A cow can fertilize soil, for example, but if you put too many together they create poison. People who live with the land know this. If we want global sustainability, it is not investment capital that needs strengthening, but investment in local knowledges and local ways of life.

If we were to understand the local in territorial terms as a small scale that is opposed to the large scale of the global, we would face a paradox: a focus on the local would be at odds with a desire to affect global change just as advocating for global solidarity might seem incongruous with a desire to invest further in the local. But because this local is based in a practice of making connections, there is no paradox. This local is not opposed to the global but is opposed to particular forms

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8. <http://www.fao.org/3/a-at641e.pdf>.



of capital accumulation. The Civil Society was committed to strengthening traditional farming techniques and customary diets, concerned about what could grow in a particular climate, and attentive to the problems of starvation facing specific rural communities. These “local” concerns also required developing the kinds of expansive and diverse relations that could combat international trade agreements, market privatization schemes, climate change, and long-lasting chemical residues. Here, strengthening the local required looking outward, making affinities.

Rather than organize their networks around space or scale, the movement was organized around shared interests. Human biology and ecosystem biology were inseparable, pertaining not only to immediate agricultural soil and waterscapes but also to the economic climate of who was allowed to market and distribute micronutrients to whom. The local biologies these activists sought to cultivate were at once traditional, ecological, and political; these were localities contingent on cultivating anticapitalist connections.

### Discussion: Field c/siting

Henrietta Moore describes *the local* as a concept metaphor, which along with its binary other, *the global*, can obfuscate ways in which people relate to and experience their surroundings (2004). But in the sitings above, the local that becomes relevant to the biologies at issue invokes different and incommensurate concepts. When analyzing the local emergence of chronic illnesses, ancestral exposure became salient. When distributing nutrient supplementation, the local became organized by geopolitical space. When seeking to change the structure of the industrialization of food and empower pastoral farmers, the local was a resource for making anticapitalist connections that could challenge the harmful conditions of industrialized food systems.

At times the local was as small as nearly invisible toxins in the water or soil. At times it was expansive, as when scientists began to trace the effects of these toxins across generations. At times the local and the global were territorial dichotomies staged through opposition. Other times the local was in cooperation with the global, as we saw in local food movements calling for networks of global solidarity. Elsewhere, the local emerged without the global being especially relevant, as was evident in the scientist's concern for soil sustainability, where poison was related to a density of production in a bounded pasture and not to global conditions at all.

I have so far connected local biologies to ancestral exposure, to geopolitical territory, and to networks of connection; in order to stay intelligible, I could not unsettle too much at once. But now that I have addressed the sitings in this way, we can also consider how the realities of these terms also shift as the stories unfold. In other words, just as the terms by which the local is constituted are malleable *between* sites, they are also malleable *within* sites. For example, the nation-state, a powerful device for b/ordering the local in the second site, also seems strong at the start of the third, but becomes rather weak as I move from the main forum to the activist side rooms. Biology similarly moves across terrains of epi/genetics, body stature and composition, and ecosystem characteristics. Even relations take the form of ancestral heredity, indexical association (here, not there), calculable proportions (7/10), and cooperative affinity.

The adaptability of the terms I work with stems from the entangled worlds I have encountered in fieldwork, where scientists, policy makers, and activists all, in different ways, speak of the importance of culture, express concern about the effects of global capitalism, and champion a commitment to political change (see Marcus 2000). This adaptability also poses a productive challenge for the project of ethnographic representation as we will never, try as we might, *know* a term's meaning. Diane Nelson explains this challenge well: "As researchers we may hear the word 'genes' in our interviews but the assumptions it carries may have less to do with Mendelian inheritance than religiously stipulated blood purity, neo-Lamarckian eugenics, or nineteenth century notions of physiognomy where physical appearances give clues to moral worth" (1999: 76). As anthropologists, we can begin to analyze the underlying assumptions, showing, for example, that people in one setting refer to ancestry when speaking of biology, while people in other settings will use biology to refer to corporal physiology or body composition, and still others will refer to ecological relations. But even with all the context we can muster (years of fieldwork, following knowledge through time and across world systems), we still won't be able to define biologies in "local terms" as these are constantly on the move. Once we locate biology as genetics, as physiology, or as ecological relations we have new, shifting terms to follow. Ethnography, an iterative doing, necessarily leads down a rabbit hole of actualities, where it is mixed, overlapping, "practices all the way down" (Law 2011: 4; see also Geertz 1973).

It is precisely because there is no true definition to settle on for *any* term that consideration of ethnographic siting is critical: it moves us from the (doomed) hollist, realist fantasy of mapping endless entanglements to the difficult work of acknowledging and accounting for the boundaries we draw. In my fieldwork I have operated, as best I could, with the "ethnographic sensibilities" of openness and a commitment to unknowing what I thought I knew before beginning (McGranahan 2014); I have let myself be moved to places I was not expecting, and in so doing, I have stumbled into questions that I had not previously known how to ask (Fortun 2012). At the same time, in carrying out fieldwork my presence is neither neutral nor irrelevant. I have spent time with certain people, formed certain alliances; and in writing I have privileged certain voices, citing (and ignoring or overlooking) the messy terrains of both field site interlocutors and academic interlocutors in necessarily partial ways.

Analysis of the three sitings I have juxtaposed to address the question, "Where is the ethnographer's local?" illuminates the inadequacy of any finite answer. The question frames locality in terms of "where," which might seem to index linear, spatial location. *Q: Where? A: There.* But if the local inhabits an ontological position (a there to be identified on a map), this is never the end of the story; there are other conditions of reality to be grappled with, other stories to be told, and other ways of telling the stories we tell (see also de la Cadena and Lien 2015). The local might be (done as) a remote Guatemalan village. It might be (done as) an experience of intimacy: for me, there is something profoundly, viscerally local in looking across a landscape of misty cornfields through the cold windows of a bus that I have ridden hundreds of times. But the local also became important in the halls of one of the UN's largest global buildings, where I had never been before. The local



may emerge through the fractal boundaries of territory, shifting between the city, province, and nation; it can also be constituted by a network of global activists, “the global” being central to the local and not antithetical to it.

The fact that localities—as well as biologies, bodies, environments—can be otherwise has implications for the antidisciplining of anthropology. This possibility suggests that the time spent in the field and the intimacies fostered therein do not grant us the authority to define reality; they rather give us vitally necessary materials for authoring the worlds we want to inhabit in more imaginative ways.

### Conclusion: The anthropological perspective

As our bus wound up the rocky, wet mountains along a piece of the Pan-American highway that had been under construction since long before I began traversing it regularly in 1999, I offered Dr. Solomons the advice that he might devote more attention to the “local situation” of his research. Recalling the traditionally bounded field site of the anthropologist, he took this as advice to focus on regional differences and thus informed me that “the local” of relevance to his work pertained to generational exposure more than to spatial boundaries. I had not wanted to convey a map-made locality, but if we consider that he framed my intervention as offering “an anthropological perspective” it is understandable that we would encounter this disjuncture.

Perspective, when taken as a projection onto the world, easily conjures up a view of a stable landscape—the anthropologist looking out over a knowable world. Meanwhile, I was underscoring the relevance not of diverse worldviews but of considering how, where, and to what effect worlds were made to be relevant or made to disappear. The perspective I had to offer was not a depiction of the beliefs and bodies of the other but a way of reading and analysis that holds close the questions: “What is it that our methods are doing? What do they imply? What kinds of worlds are they opening up to us? And what kinds of worlds are they closing off (Law and Ruppert 2013)?”

When I emphasized the “local situation” to Solomons, I had in my hands an article that a group of international scientists who had worked with his center had published in a high-profile nutrition journal earlier in the year (Doak et al. 2013). The article reported that mothers who fed their babies herbal infusions, thin gruels, or sweetened waters called *agüitas* were more likely to have stunted infants and toddlers: the earlier the introduction of *agüitas*, the more severe the stunting. The scientists had supplemented anthropometric measurements with qualitative interviews, asking mothers about their beliefs about *agüitas*. They wrote that mothers reported using *agüitas* to treat common illnesses (respiratory, ear, diarrhea, or other gastrointestinal infections, fever, colic, constipation) and also to “maintain health” and to “restore the hot-cold balance.” The scientists concluded that *agüitas* were deeply rooted in the culture of infant rearing, leading them to raise the possibility that the public health community’s desire to respect cultural traditions might be at loggerheads to its desire to prevent stunting.

I shared the scientists’ concerns about shortcomings of existing policy guidelines. Still, I wondered about the overlay of familiar global health categories on

the practices of caring for small, precious infants.<sup>9</sup> The scientists used the term *agüitas* in their publication because there is no good English word for the waters boiled with anise, chamomile, cinnamon, mint, and orange that women gave to their children. In this, they are unique; most scientists do not fight to incorporate languages other than English in their international publications. But how did the other classifications in their article—medicine, therapy, treatment, health, stomach pain, or even mothering—align and diverge from the classificatory strategies of the people in their study? I had lived in Guatemalan homes while working with global health policy makers, an experience that made me aware of how poorly many of the categories of global health fit the negotiations women engaged in while nourishing their families (Yates-Doerr 2015b). Meanwhile, their interviews coded *agüitas* as medicinal *or* ritual, therapeutic *or* prophylactic—as if these designations were variables that could hold stable across contexts and sites. Even their finding that *agüitas* had “deep cultural significance,” with its obvious anthropological resonance, seemed unlike the ways in which the women would have ordered their worlds. To whom was *agüitas* cultural? For whom was health at stake (see also Yates-Doerr and Carney 2016)? For whom would stunting come to matter?

I wanted to know more about the people with whom they worked, but in advocating for more about the local situation, I was not—or at least not only—asking to know more about the mothers and their languages, customs, and beliefs. Indeed, I had wanted to interfere with a nostalgic ordering of the anthropological field site in which indigenous peoples, who have long been highly mobile, are taken to be more local than scientists. The locality I sought turned attention toward the translations in the scientists’ work: from survey design, to interview conversations, to writing and publication. Translations, Anna Tsing has shown over decades of work, are relational, unfaithful practices, entailing the work of cutting and reification that is a necessity for communication to proceed (1997; 2014). The scientists, in carrying out research that aims to shape global health policies, had been extremely careful in their statistical accounting. By asking for more about the local situation, I sought to emphasize the importance of accounting for authorship, caring for what might be lost or gained by the scientific translations they had utilized. I was not asking for them to be qualitative—a method that tends to treat beliefs as stable objects to be seamlessly moved from perspective to paper. I was asking them to be ethnographic. I was asking, in other words, that they attend to the authorities shaping the inevitable transformations in the process of research.

An insistence on the partiality of any representation may help us to help those in other disciplines to be more accurate about and more engaged in the worlds they are busy shaping. As Fred Myers presciently noted years ago (1988: 610), an insistence on partiality can also help *anthropologists* to be more accurate about and

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9. Saskia Walentowitz documents how the WHO’s breastfeeding policies treat as ontologically universal the very practices these policies help to produce. To underscore the contingency of nourishment, she cites Marilyn Strathern’s concern that “the concept of maternal nurturance is so linked to the concrete Western image of a woman imparting first her own substance (milk) and then the substance she has prepared (food) to her offspring, that I suspect growing and feeding are often treated synonymously” (2012: 203).





more engaged in the worlds that we are busy shaping as well. Kim Fortun, following Josef Rheinberger, has nicely characterized ethnography as an experimental system designed to cultivate open-endedness. She further writes that ethnography “in its situated, comparative insight, is able to see across scale and leverage different analytic lenses” (2012: 451). I have rather suggested that as an experimental practice that is at once situated and comparative, ethnography does not necessarily “see across scale,” but shows scale to be multiple and partial (see also Yates-Doerr 2015a). To move from the visual metaphor of “showing,” to language of action: it *does* scale in ways that can be done otherwise. Likewise, the anthropologist’s “perspective” does not so much give us different, relativist lenses onto an independent world but attends to how different practices materialize different worlds. Perspective might, after all, be a misleading term to describe our work of cultivating a diverse set of (conceptual/material) resources an always-contingent “we” might utilize in caring for the situated challenges we face.

When the local encompasses a period of time, whose versions of time predominate? When the local is a place to which we travel, what version of place is this? When the local relates to a situated pursuit of connections, what is linked together and what is left out? These are not new questions for anthropology (Abercrombie 1998; Fabian 1983; Clifford and Marcus 1986), but they are worth repeating here to emphasize that the purpose in asking them is not to seek definitive answers. This is instead a call for recognition that the terms we use—biology, culture, Guatemalan, scientist, activist, anthropologist, expert, environment, body, world—are unruly as are the sites where we work. If the anthropologist’s “local” is to be anything at all, it might be a project of attending to which terms are the most urgent to unsettle and which we want to use in their place—a project that necessitates that we care for the worlds in which we work while we also care for how our work effects these worlds. This is, in other words, a call for the partial expertise that constitutes ethnographic sitings.

I conclude by suggesting that to approach local biologies ethnographically is not to pluralize biology—taking biology as an object to be viewed from many, measurably different places. It is not even to add culture to biology, grounding biology in different cultural perspectives. It is to implode the given-ness of biology (see Dumit 2014). It is to insist that biology is the effect of contingent and heterogeneous sitings. To account for this variation requires the exacting, relentless work of acknowledging that one’s biology may be different from another’s; that one’s difference may be different, that there is variation to be had in an “other”; and perhaps most vexing to a commodity logic of equivalence, that there is variation in the one as well. The point is not just that the objects we author into being can be otherwise but that they are already otherwise. Caring for the relationalities through which they emerge as relevant does not get in the way of good science but makes for good science. Anthropologies, like biologies, cannot be undertaken without authority. But the authority needed is not that of the master narrative with its evocation of definitive, stable truth. Needed instead are care-filled narratives, capable of attending to the ever-shifting truths of their own production. The capacity to acknowledge partiality—to ethnographize any claim to ontology—is a strength of anthropology. The world and its bodies, however localized, warrant this form of care.



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## Où est le local? Biologies partiales et mises en situation ethnographiques

Un des défis que l'anthropologie qui s'intéresse aux "biologies locales" est amenée à relever est que la biologie et la localité sont mises en pratiques de manières différentes. Je m'appuie sur une recherche menée auprès de scientifiques, de créateurs de politiques publiques, et d'activistes qui se penchent tous sur l'influence de la nutrition sur le développement biologique afin d'illustrer le fait que bien que les biologies soient différentes d'une localité à une autre, la localité aussi change de forme. Je juxtapose les biologies locales de la médiatisation, de la géopolitique et des réseaux globaux afin de suggérer que la force de l'ethnographie réside dans sa capacité à situer des matériaux à travers des pratiques de traduction, et une attention à la partialité ontologique de nos sujets d'étude. Présentant la "perspective anthropologique" comme une pratique attentive, pourvue d'un auteur responsable d'une mise en situation plutôt que d'une prise de vue sur le monde a des conséquences pour la manière dont nous concevons la nature et ce que nous considérons comme les buts de l'ethnographie.

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