



King's Research Portal

DOI:

[10.1525/gfc.2016.16.3.66](https://doi.org/10.1525/gfc.2016.16.3.66)

Document Version

Publisher's PDF, also known as Version of record

[Link to publication record in King's Research Portal](#)

Citation for published version (APA):

Sexton, A. (2016). Alternative Proteins and the (Non)Stuff of "Meat". *Gastronomica*, 16(3), 66-78.
<https://doi.org/10.1525/gfc.2016.16.3.66>

Citing this paper

Please note that where the full-text provided on King's Research Portal is the Author Accepted Manuscript or Post-Print version this may differ from the final Published version. If citing, it is advised that you check and use the publisher's definitive version for pagination, volume/issue, and date of publication details. And where the final published version is provided on the Research Portal, if citing you are again advised to check the publisher's website for any subsequent corrections.

General rights

Copyright and moral rights for the publications made accessible in the Research Portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognize and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the Research Portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the Research Portal

Take down policy

If you believe that this document breaches copyright please contact librarypure@kcl.ac.uk providing details, and we will remove access to the work immediately and investigate your claim.

Alternative Proteins and the (Non)Stuff of “Meat”

Abstract: Beyond Meat, a food technology company based in California, is currently developing a range of plant-based proteins that aim to provide more sustainable, ethical, and healthful alternatives to conventional meat. Its products are also aiming to be viscerally equivalent in terms of their meatlike taste, texture, and overall sensory experience. These alternative proteins (APs) are not, however, intended merely as a substitute for conventional meat. Instead they are viewed and marketed by their developers as meat, made simply from a different raw material and via different methods. Yet as animal meat has become increasingly linked with environmental, health, and ethical concerns, Beyond Meat is having to negotiate a careful balance between positioning its products as meatlike in some respects and not meatlike in others in order to gain consumer adoption. To become “meat” in consumer thinking not only depends on the things these APs are made of—both material and ideological—but also the things that are actively excluded; as such, their materiality is made of

purposefully chosen “stuff” and “non-stuff.” The article explores this decision-making via my fieldwork encounters with Beyond Meat’s products. Using a visceral-autoethnographic approach, I discuss how certain (non)stuff was “made to matter and not matter” (Evans and Miele 2012) to me during these encounters, and how this careful balancing of stuff can create new and problematic imaginaries, moral politics, and misguided understandings of what constitutes “better” foods and “better” eaters. The observations made contribute to existing discussions on visceral methodologies, perceptions of (novel) foods, embodied consumption practices, and the ways in which bodies are made as eaters and things as food.

Keywords: meat, alternative proteins, free-from diets, materiality, viscosity, embodied consumption, autoethnography

Inside were four quarter-pound brown patties. I tossed one on the grill. It hit with a satisfying sizzle. Gobbets of lovely fat began to bubble out. A beefy smell filled the air. I browned a bun. Popped a pilsner. Mustard, ketchup, pickle, onions. I threw it all together with some chips on the side and took a bite. I chewed. I thought. I chewed some more. And then I began to get excited about the future.

—JACOBSEN 2014: N.P.

. . . we want all of the good and none of the bad. We want to eat delicious meat but we don’t want any of the bad stuff that goes along with it . . . Together we can build a world that’s zero downside and all delicious upside.

—“OUR VISION,” BEYOND MEAT WEBSITE¹

The two quotes above encapsulate the concepts of the “stuff” and “non-stuff” of meat that are explored in this article. In line with the theme of this special issue, the “stuff” of meat (and food in general) is taken to mean both its materialities and imaginaries; that is, the material objects, bodies, processes, and ingredients involved in turning substances into meat, as well as its rhetorical (i.e., discursive/visual/textual) and socio-cultural dimensions. It also includes the materiality of the end product and how eaters perceive meat through its shape, appearance, texture, and other physical characteristics. The first quote speaks to this visceral materiality, or the sensory “stuff” of meat. To anyone familiar with the food experience

Jacobsen recounts, the rich description will likely have stimulated personal memories of, and visceral reactions to, the smells, sounds, sights, feel, and taste of burgers cooking on a grill, and perhaps evoked particular occasions and contexts within which these experiences occurred. Jacobsen’s description also touches upon the cultural and social “stuff” of meat. It showcases a common practice of grilling burgers and enjoying them with familiar accompaniments of alcohol, savory condiments, and a side of chips. For some it may have conjured wider notions of Western—or perhaps specifically North American—cultural identity and history (Parker Talwar 2003), and possibly even the gendered roles that are performed through the cooking and eating of meat within different contexts (Probyn 2000; Julier and Lindenfield 2005).

The second quote, from a California-based food technology company, speaks to how animal meat has become an increasingly contentious and ambiguous product over recent years (Chiles 2013). This is largely due to associations of (intensive) meat production with widespread environmental degradation, animal welfare concerns, and human health risks. As such, meat has also become the stuff of climate change, food scares, cancer risks, and corporate cover-ups in recent public discourses (Lawrence 2013; WHO 2015). At the same time, global tastes

for animal meat have grown rapidly and are projected to continue rising over the coming decades, particularly within emerging economies (FAO 2013). Yet notably within this growth there has been increasing consumer demand, particularly in the West, for meat products that are aware of and have successfully navigated the negative issues listed above. As the second quote highlights, many consumers now want meat to be full of the “good” stuff and not the “bad.” They also want meat to remain tasting delicious and to fulfill the many cultural and social functions that have evolved around this food throughout human history. As Jacobsen (2014: n.p.) wistfully recounts at the beginning of his article, “some of my most treasured moments have involved a deck, a beer, and a cheeseburger.”

Both of these quotes, then, bring attention to the material and visceral expectations, preferences, desires, and realities that make up meat in the modern food system. They show how many eaters today want meat to (not) contain specific materialities and to (not) represent particular imaginaries—to be and not be certain “stuff.” Building on the view of food as a collection of “stuffs,” the first aim of this article is to explore the stuff that is not wanted and thus excluded from meat. I introduce the concept of “non-stuff” to get at those things that are purposefully and increasingly being made absent from meat products, and indeed many other modern food items. This absencing, as will be shown, can occur within the production process and supply chains (for example, the exclusion of certain methods), or it can relate to the ingredients and discourses omitted from the final product.

The second aim of the article is to explore the selection of (non)stuff by producers in their meat products. This selection refers to how cultural trends and the expectations and concerns of consumers regarding what they want meat to be—i.e., the things that “matter” to them regarding meat (Evans and Miele 2012)—are balanced with other factors, such as the realities of production and market opportunities. The presence or absence of stuff in the end product can thus be viewed as a materialization of this balance. Furthermore, I discuss how the presence or absence of particular stuffs can often be viewed by consumers as indicative of a “better” product.

My focus, however, will not be on conventional animal meat, but rather meat made from plants. Despite first impressions, the eating experience Jacobsen describes is not in fact animal meat but rather Beyond Meat’s plant-based “Beast Burger.” The burger is a recent addition to the company’s other cook-at-home plant-based “chicken” and “beef” lines, as well as a collection of ready-meals. Unlike other alternative proteins (APs) on the market (e.g., tofu), Beyond Meat’s

products are not intended as substitutes for meat. In interviews discussing his company’s work, CEO Ethan Brown specifically describes and promotes his products as *meat*. For him, the raw materials may be different but the end products remain the same:

Meat is really made up of five constituent parts: the amino acids, lipids, carbohydrates, minerals and water. They’re all actually present in plants. What we’re doing is building a piece of meat directly from those plants, and so the compositions are basically the same. And in that case we are delivering meat.²

Exactly how Beyond Meat is “delivering meat” from plants is what I explore in this article. I demonstrate how the company is striking a careful balance between presenting their products as meatlike in some respects and not meatlike in others. Put another way, the company emphasizes that certain stuffs of conventional meat have been made materially present and absent from their products; as such the materiality of these foods can be seen to contain the stuff and non-stuff of conventional meat. Through my encounters with their “chicken” products during fieldwork in California, I reflect upon this decision-making and how certain (non)stuff was “made to matter and not ‘matter’” (Evans and Miele 2012: 299) to me as a consumer and eater. In particular, I call attention to how the non-stuff of these foods forms an integral part of their framing as desirable meat products. This is examined within the context of other foods that also emphasize the stuff absented from the materialities of their supply chains and end products. In situating Beyond Meat’s products within this wider trend, I build upon scholarship that examines food/body relationalities (Mol 2008) and things becoming food (Roe 2006; Miele 2011) by exploring how the non-stuff of foods is increasingly becoming part of the materiality of the modern food system. Furthermore, both my fieldwork experiences and the descriptions I have encountered in the media, such as Jacobsen’s, reveal that the visceral stuff of Beyond Meat’s products is integral to them becoming “meat” in public thinking. These products thus offer valuable opportunities for calling attention to and furthering understandings of visceral encounters in food research; I argue that they highlight the critical role such encounters play in things becoming “food,” and how both the visceral and ideological work together in shaping our food choices.

Things Becoming Food

There has been a distinct turn within agro-food studies to “get behind the veil, the fetishism of the market and commodity” (Harvey 1990: 423). Traditional approaches have sought to “follow the thing” (Cook et al. 2004) from farm to

fork so as to uncover the myriad discourses, materialities, geographies, and relationships that are involved within commodity chains (de Sousa and Busch 1998). However, others have stressed the need to also look backward along these chains, beginning instead with the eater in order to understand how things become “food” (e.g., Hayes-Conroy and Hayes-Conroy 2008; Carolan 2011). Roe (2006: 109) describes this as a “fork to farm” approach in that it seeks to “trace meaning-making enacted through how foodstuff is handled” by eaters, as well as how it is translated through the embodied practices and material processes of other bodies (e.g., butchers, chefs). This process of how eaters “sense and make sense” of foods (Evans and Miele 2012: 306) challenges the view of eaters as merely passive consumers. As Evans and Miele remind us, “[w]e do not merely contemplate foods; rather, we taste them, we smell them, we feel their textures with our hands and our tongues—we enter into an embodied relationship with them” (ibid., 302).

The process of sensing and making sense of food also extends to rhetorical/conceptual mechanisms. Evans and Miele posit that, in addition to embodied perception, “language can function like an additional sense” (ibid., 304) through which individuals come to not only feel but also “know and shape our worlds” (ibid., 303). In taking this approach, the authors work to reveal how animals are made to matter and not matter in food consumption practices, both through textual and visual representations as well as the visceral properties of the end products. For example, they found that the presentation of chicken in highly processed forms—such as chicken nuggets—does much to “background” its animal origins in consumer thinking. Conversely, the inclusion of more “bodily” features (e.g., legs, skin, bones), certification labels, and descriptions of “happy animals” can have the opposite effect and instead invite contemplation on the life of the animal (Miele 2011). This balance of presenting and absencing particular qualities, imaginaries, and histories of animals highlights the complex process of turning living bodies into food, and also how this process is dependent upon a careful foregrounding and forgetting of the many things that happen in between. Moreover, it stresses the need to understand eaters not solely as passive consumers or as willful deniers (Evans and Miele 2012: 303) of the things that go into making food. Rather the process of things becoming food can be conceptualized as a “performance” that is conducted through both producer and consumer (and other bodies in between), and by which certain imaginaries, perceptions, expectations, and realities are made to matter and not matter.

These literatures have done much to uncover the human and nonhuman, material and ideological, political and visceral “stuffs” involved in transforming substances into food,

as well as the selective foregrounding and forgetting of these stuffs within the producer-consumer relationship. There is, however, more room within these analyses to examine how such processes are being conducted at the *material* level of foods, particularly the material absencing of certain stuffs. The modern (Western) food system is becoming increasingly defined by the non-stuff of food, and the products of Beyond Meat are no exception to this trend. Yet this shift toward food’s non-stuff remains underexamined from a critical food studies perspective. I argue that the material absencing of stuff from food offers a unique lens for exploring the political systems, cultural trends, food/body relationalities and materialities of the modern food system. It speaks to what is considered “good” and “bad” food, and in turn, what constitutes “good” and “bad” eating. It also calls attention to why certain (non)stuffs are specifically chosen by food producers, and how these choices can create new and problematic imaginaries, moral politics, and misguided understandings of what constitutes “better” foods and “better” eaters. Using the conceptual tool of the (non)stuff of food, I explore these points through the case study of Beyond Meat and, in particular, bring existing food scholarship into dialogue with the stuffs being increasingly absented from contemporary food products.

A Note on Methods

To unpack my fieldwork encounters with Beyond Meat’s products I draw upon autoethnographic methods (Anderson 2006; Ellis et al. 2011) and previous work that has used the body as a visceral “instrument of research” (Crang 2003: 499; see also Longhurst et al. 2008). This is done to explore how, through sensing and eating, I came to personally situate and make sense of these products, both as “food” and in relation to conventional meat. Ellis et al. (2011: 273) describe autoethnography as “an approach to research and writing that seeks to describe and systematically analyze (graphy) personal experience (auto) in order to understand cultural experience (ethno).” They view it as combining elements of autobiography and ethnography, and stress that “as a method, autoethnography is both process and product” (ibid.). In line with this model, I used autoethnography as a method for exploring the products of Beyond Meat as a consumer and eater during my fieldwork (process), and I use it now in this article as a method for narrating, reflecting, and analyzing these encounters through my written descriptions (product).

I draw on the work of other food scholars who have adopted similar methodological approaches and have proven them a highly effective method for getting at less “visible” aspects of food/body research (cf. Abbots 2015; Longhurst 2012). Like these

writers, I use autoethnography with awareness that my experiences and reflections have a “partial-ness” and “moment-ness” to them (Latham 2003, quoted in Hayes-Conroy 2010: 736). As such, they are not intended to present a “whole picture” (Hayes-Conroy 2010: 736) of how others necessarily interact with and understand the products of Beyond Meat. Rather I use autoethnography, in combination with the visceral methods of shopping, cooking, and eating, to reflect upon my bodily encounters with the (non)stuff of Beyond Meat’s products and how these experiences formed an integral part of the ways in which I personally “sensed and made sense” (Evans and Miele 2012) of the APs as food. And to avoid “self absorbed digression,” as Anderson (2006: 385) cautions in his discussion of autoethnographic approaches, I take care to situate and consider my personal experiences in connection with wider theoretical debates around eating practices, visceral knowing (Hayes-Conroy 2010), and how bodies are made as eaters and things as food (Probyn 2000; Roe 2006). The article also draws on interviews conducted with members of the Beyond Meat team and others working within the plant-based protein space in California.

The (Non)stuff of Meat and “Meat”: Free from Bad Health and Big Food

During fieldwork I visited a Whole Foods Market in an affluent, residential area of San Francisco to purchase some Beyond Meat products to cook and eat for the first time. The store’s layout steered me first through bountiful displays of fresh produce, then via a row of self-service salad bars, and on to a series of aisles that stretched across the width of the building. The first one happened to be a specialist diet aisle and it was there I found the Beyond Chicken strips among other plant-based meat, dairy, and egg alternatives. On the front of the packaging was a chicken-shaped image covered with vegetables (Fig. 1). To the right of this a caption read “REAL MEAT” in large capital letters, and underneath “100% plant protein; as much protein as chicken.” What struck me most, however, was on the back of the packaging: running the width of the reverse sleeve was a series of icons listing the many things the strips did and did not contain (Fig. 2). They were labeled as being “100% vegan,” “kosher,” and containing “20g of protein per serving.” They were also “cholesterol-free,” “hormone-free,” “non-GMO,” “antibiotics-free,” and “certified gluten-free” (with the latter three also displayed on the front of the packaging).

It is perhaps not surprising from a commercial perspective that Beyond Meat has displayed these labels on their products. Over recent years the vegan market has experienced significant growth in the United States as consumers are increasingly adopting more plant-based diets (Crawford 2015). Similarly,

protein has become the latest star of the functional food trend and as such is now advertised as a desirable selling point on a wide range of products, from breakfast cereals to beer (Daniells 2014). The “free from” trend has also experienced a dramatic upward trajectory over recent years; the gluten-free market in the United States was valued at \$2.6 billion in 2014 (Llewellyn Smith 2014), and a recent Mintel report revealed similar growth in wheat- and dairy-free markets elsewhere in the Americas and in Europe (Brockman 2014). Its market share within the United Kingdom is expected to exceed £500 million by 2018 (Philipson 2014), and over half of the national population—55.2 percent—now reportedly buy free-from products (McGowan 2016).

Prior to these developments, plant-based and free-from products were largely limited to specialist health stores. Today, however, it is common to find entire plant-based and free-from sections in major supermarkets, as well as numerous options on the menus of high-street restaurants and public institutions. An increasing number of everyday foods has since been reformulated under the plant-based and free-from model which has enabled eaters to continue enjoying the taste, convenience, and familiarity of these items (albeit often for higher prices).³ A factor that has been attributed to this increased demand has been the rise in awareness and medical diagnoses of ingredient-based sensitivities (Copelton and Valle 2009; Rubio-Tapia et al. 2009). However, recent studies reveal that consumer adoption of these foods extends far beyond reasons of medical necessity (Brockman 2014). For many, these consumption practices have instead been motivated by plant-based and free-from products becoming synonymous with “healthier” and “cleaner” foods (Crawford 2015), despite many of these foods containing high quantities of sugar as well as often being highly processed and industrially manufactured (Llewellyn Smith 2014). Such attitudes fall into the pattern Scrinis (2012) terms “nutritionism,” a phenomenon that involves the narrowing of industry and public focus onto specific nutrients and recasting them as either good or bad. As a result, foods that contain or are devoid of these nutrients are viewed (and often marketed) as the better option, regardless of the other ingredients and inputs within them. A well-known example of this process is margarine (Scrinis 2012; see also Hocknell this issue).

Plant-based and free-from products have thus become viewed by many eaters as devoid of the “undesirables” of the modern food system (Brockman 2014). They are perceived as offering equivalent versions of everyday foods—i.e., comparable in taste, convenience, and familiarity—without the ethical misgivings, harmful ingredients, and seemingly “dirty” political economies of industrialized food. To allude back to the



FIGURE 1: Front of packaging for Beyond Meat “chicken” strips.

PHOTO BY ALEXANDRA SEXTON © 2016

words of Beyond Meat at the beginning of the article, free-from products are perceived as providing the “good” stuff without the “bad.” For many consumers, then, these products enable them to continue eating their favorite foods without feeling like they are eating the stuff of bad health and Big Food.

The labels on the packaging of the Beyond Chicken strips can thus be considered as more than simply signifying an absence of particular ingredients. By calling attention to the non-stuff of these strips the consumer is invited to position this food as free from the undesirable stuff of modern (industrial) protein production. As mentioned earlier, conventional meat has increasingly become associated with negative health consequences and many of these have been linked with the inputs commonly used in industrial production, such as growth hormones and antibiotics. The free-from labels on the Beyond Chicken strips actively call attention to the bad stuff of intensively reared animal meat and invite the consumer to understand the strips as being devoid of such things, both in terms of their material inputs and the less care-full political economies associated with them. Thus as I stood considering the packaging of the “chicken” strips, I came to understand their materiality through their non-stuff (i.e., the stuff that had been made absent), and perceive this absencing as a materialization of a more healthful and care-full product. Moreover, by extension I felt that by eating this product I

would be materialized through its non-stuff as a more healthful and care-full eater. This was further supported by its placement within the “specialist diets” aisle, in addition to the overall environs of the Whole Foods Market; both added to my sense-making of these foods as distinct from the “normal” fare and less desirable “stuff” of modern food production, and also as the products of a “feel-good business” (Johnston 2008: 248) that promotes itself as mindful of farmer livelihoods, animal welfare, the environment, and ultimately, the well-being and culinary enjoyment of its consumers.

The Cultural Stuff of Meat

The non-stuff of the Beyond Chicken strips—or more specifically, the non-stuff that distinguishes this product from conventional meat—was “made to matter” (Evans and Miele 2012) through the free-from labels on the packaging. In this moment the strips were *not* meatlike in terms of their health impacts, production methods, and political economies. Yet elsewhere on the packaging other stuffs were made to matter, and attempted to position the strips as very much like conventional meat. This was most salient in the description of the product as “real meat” and the promise of containing “as much protein as chicken.” This latter claim was also repeated on the back of the packaging where one of the labels stated “20g protein per



FIGURE 2: Section of labeling on the back of packaging for Beyond Meat “chicken” strips.

PHOTO BY ALEXANDRA SEXTON © 2016

“serving” underneath an illustration of a muscular arm. At the same time as being framed as devoid of the harm-inducing ingredients of conventional meat, these labels reassure the eater that the health benefits of the latter are still present. When I read these statements the strips became meatlike through their equivalent nutritional properties, and also by offering the same culturally desirable benefits associated with these properties.

Of these benefits, bodily strength was particularly emphasized and made visible. It is also inferred through the product endorsements of elite US athletes on the company’s website.⁴ The association between eating conventional meat and acquiring muscular strength has a long history in many food cultures, and has come to define meat-based corporate advertising, public health discourses, and claims to the “naturalness” of eating meat (Joy 2010). The strength-giving abilities of animal protein are clearly viewed by Beyond Meat as an example of the “good” stuff of meat. As such, in this context they position their Beyond Chicken strips as very much like meat by offering these equivalent abilities, and by aligning with and reinforcing the cultural association between meat-eating and building strength. The eater is invited to see the strips as a means by which they can acquire the health benefits of conventional meat and in turn come to embody all of the desirable cultural associations that are attached to this particular physique (e.g., attractiveness, masculinity, power, virility, and self-confidence) (Bordo 1997; Calvert 2014).

Here I have shown how the plant-based products of Beyond Meat are navigating the realities, imaginaries, and expectations of conventional meat in terms of the latter’s health impacts and the methods of its production. As animal meat has become an increasingly “ambiguous good” (Chiles 2013: 473), due to its existence as a desirable yet problematic and

healthful yet risky substance, a careful balance is required by APs seeking to become “meat” in consumer thinking. They must be meatlike enough to satisfy expectations regarding health properties and cultural associations, but not meatlike in the production methods and ethical dilemmas of modern protein production. As seen with other free-from foods, a consequence of this balance has been a distinct emphasis on the non-stuff of these AP products, an absence that is materialized through their packaging, their positioning within specialist aisles, and within the end products themselves. In so doing, this non-stuff is often seen as a signifier of a more healthful and care-full product and another means by which the “ethically competent” consumer (Miele and Evans 2010) may come to embody these properties through eating.

Free-from Guilt: Animals, Farmers, Earth

The term “free from” has largely come to represent food products where particular ingredients and/or industrial inputs have been excluded. However, a separate trend has emerged within the modern food system that represents another form of free-from eating. At the same time as ingredients and inputs have been removed from food products in response to the industrialization of food production, a similar exorcism has occurred with regard to their environmental and ethical footprints. In recent years consumer awareness of the animal welfare and planetary impacts associated with the modern food system has grown, as well as the often unjust political economies that exist particularly between producers in the Global South and consumers in the North. A number of schemes have evolved in response to these concerns, with fair trade arguably being the most notable. Through providing fairer prices, transparency, and claims of

sustainable and ethical practices, the products of these schemes have come to represent more care-full, place-full, and meaningful options, and as such they are often perceived as impact-free—and thus guilt-free—consumption choices (Lewis and Potter 2011; Pelozo, White, and Shang 2013). Like the free-from examples discussed above, these are products that claim all of the good stuff and none of the bad, where in this instance the “bad” represents harm to the “distant others” (Smith 1994) of Southern farmers, animals, and the environment.

Similar mechanisms exist around the products of Beyond Meat, yet notably the cardboard sleeve of the Beyond Chicken strips did not possess any visual or textual references to the environment or animals, but instead focused on the health-related aspects of the product. However, the company’s “quest for better meat” is not limited to its health benefits. A page entitled “Our Vision” on the company’s website sets out the other components of this quest as follows:

We believe there is a better way to feed the planet. Our mission is to create mass-market solutions that perfectly replace animal protein with plant protein. We are dedicated to improving human health, positively impacting climate change, conserving natural resources and respecting animal welfare. At Beyond Meat, we want to make the world a better place and we’re starting one delicious meal at a time.⁵

Further down the page another passage makes more explicit the connection between adopting plant-based proteins and creating a better world—it states that “[r]eplacing animal protein with meat made from plants would do wonders for human health, for the environment, for conservation of natural resources and for animals,” and goes on to claim “It’s worth a fight.” These messages are commonly reiterated by the company’s CEO in media interviews and public talks, particularly the call for swapping animal with plant-based meat as a solution to mitigating climate change. Indeed, Jacobsen’s article states that it was a report on climate change in particular that provided the catalyst for Brown to begin developing plant-based alternatives to conventional meat:

Brown’s aha moment came in 2009, when the Worldwatch Institute published “Livestock and Climate Change,” which carefully assessed the full contribution to greenhouse-gas emissions (GHCs) of the world’s cattle, buffalo, sheep, goats, camels, horses, pigs, and poultry That was all Brown needed to hear to put the plant-based McDonald’s back at the top of his agenda. Forget fuel cells. Forget Priuses. If he could topple Meatworld, he thought, he could stop climate change cold. (Jacobsen 2014: n.p.)

Not only are the products of Beyond Meat framed as better in terms of their health benefits but also in terms of their environmental footprint. By eliminating the animal, these APs are presented as eliminating the concerning levels of water usage,

deforestation, greenhouse gas emissions, and other pollutants associated with large-scale meat production. Moreover, they also remove the potential for animal suffering that has become associated with this type of livestock farming.⁶ The products of Beyond Meat thereby claim to offer the non-stuff (i.e., the absence) of environmental degradation and ethical concerns that have come to define modern meat production; instead they offer the good stuff of health but eliminate harm done to the “distant others” of animals and the planet. The emphasis on these particular non-stuffs thus encourages consumers to view the Beyond Meat strips as a more care-full, sustainable, and better alternative to conventional meat.

Up until now I have engaged with the textual and visual sense-making mechanisms that appeared to me as a consumer when making my food choices in the supermarket. Yet these are not the only ways in which eaters come to know food. It is a process of both “*sensing* and making sense” (Evans and Miele 2012, my emphasis), and it is to these more visceral and embodied encounters with the Beyond Meat products that I now turn.

Sensing Stuff

Standing in the specialist diet aisle in the Whole Foods Market, my choice of Beyond Chicken strips was between three different flavors: southwest style, lightly seasoned, and grilled (Fig. 3). I ended up choosing grilled. My decision was both personally and research motivated: the former because I try not to pick pre-flavored foods, preferring instead to season things myself and avoid any extra levels of processing and additional (often ambiguous) ingredients. To me, the grilled strips offered the absence (or non-stuff) of this extra processing and instead enabled me to decide how to flavor them. I also picked this variety because, for research purposes, I wanted to see how “chicken”-like they tasted in their simplest form without any additional flavorings.

I moved from the specialist diet aisle and carried out the rest of my shopping. After examining the shape of the strips I had decided to use them to make a curry for dinner and, if they tasted good, as an ingredient for a quick lunchtime wrap the following day. I picked up some coconut milk, spices, and vegetables for the former, and some salad for the latter. I also collected a couple of cans of tuna as a backup for the wraps. Later that evening I set about making the curry. My first action was to open the packet of strips and feel them in my hands. They were rather chunky and uniform in shape, but quite soft; not too dissimilar in fact from chicken found in pre-made sandwiches. They did not have much of an odor and the little they had was not unpleasant, though perhaps ever so slightly



FIGURE 3: *Beyond Meat products in a Whole Foods Market, San Francisco.*

PHOTO BY ALEXANDRA SEXTON © 2015

“processed” in some way. Their appearance was a chicken-like pale cream and running diagonally across the pieces were dark brown lines to simulate the grilled effect. These lines triggered a taste of charcoal as I looked at them, inspired by a visceral memory of grilled meat. The main surprise, however, came when I broke the strip in half—they shredded, as promised, pretty much equivalently to conventional chicken. As a seasoned eater of other plant-based proteins this struck me as a significant advancement over other products; nowhere was the crumbly or rubbery texture of many meat substitutes I had previously tried. This was fibrous. This was, indeed, meatlike.

Then came the tasting: one half first. Again, like its odor it was neither pleasant nor unpleasant. It had a subtle savory flavor mixed with a slightly charcoal taste and the same “processed” quality I associate with pre-made foods. It was just pleasant enough to consider eating on its own, although I concluded it would probably be more enjoyable with other complementary flavors. I would rarely eat conventional chicken on its own so this was by no means a break in my usual eating habits. I proceeded to make the curry in exactly the same way as with conventional meat: I browned the strips, onions, and spices in oil before adding the coconut milk and vegetables to simmer until cooked (Fig. 4). The sounds and smells of the dish as it cooked were also largely comparable. The only notable differences to this whole process were the slightly reduced length in cooking time and the convenience of not needing to keep any raw meat separate from the other ingredients as I prepared the meal. I served

the curry in a bowl with a naan bread on the side. The overall verdict was a tasty and enjoyable meal. Whereas the strips did not add distinctly to the flavor of the dish, they offered a satisfying meatlike texture. If I had not known they were plant-based I would have quite likely passed them off as pre-cooked conventional chicken pieces from a supermarket.

During my visceral sensing of the strips I found the ideologies that had been constructed in the supermarket (via the packaging and aisle positioning) were both reinforced and challenged by my “bodily experiences” of the product (Hayes-Conroy and Hayes-Conroy 2008). Perhaps most guiltily given my research area, my decision to buy tuna as a backup in case the strips did not live up to my visceral expectations is a salient example of the attitude-behavior gap that shapes many consumers’ food purchases (Aschemann-Witzel and Aagaard 2014). Despite buying into the claims of a more sustainable, healthy, and ethical alternative, as I stood making my choice in the supermarket aisle the visceral imaginings of my planned meals were still a powerful influence over my final decision, if not in fact a priority. Also, I knew the strips did not contain any animal products and were thereby devoid of the undesirables of industrially produced chicken, yet aspects of the texture, smell, appearance, and taste called upon memories of exactly this type of foodstuff. This led to a slightly diminished enjoyment, which maybe would have been avoided if the strips had instead called upon my visceral memories of, for example, my family’s roast chicken dinners. Yet the familiarity of the strips in terms of how I was able to handle and eat them, the ingredients I could pair them with, and the



FIGURE 4: *Cooking with Beyond Meat “chicken” strips during fieldwork.*

PHOTO BY ALEXANDRA SEXTON © 2015

“shredded” texture they provided all supported my perception of them as meatlike, and collectively encouraged me to enjoy them not as plant protein but rather as meat. They were thus not simply another vegetable added to the curry. This was, to my “minded-body” (Hayes-Conroy and Hayes-Conroy 2008), “chicken” curry.

Like Jacobsen’s account at the beginning of the article, my eating experience highlights the importance of visceral experiences in not only sensing but also accepting food. It was only after Jacobsen (2014) had seen, smelled, heard, and, importantly, *tasted* the burger that he then became “excited about the future.” He admits elsewhere in the article that he is uncomfortable with the undesirables of the modern meat industry, yet Beyond Meat’s promises of a more sustainable, ethical, and healthy alternative were ultimately not enough

to get him enthused about a future of plant-based proteins. These promises had to taste good and they had to slide effortlessly into existing social and cultural practices. For Jacobsen (2014: n.p.), the trade-off is nonnegotiable: “If I couldn’t have meat, I needed something damn close. A high-performance, low-commitment protein recharge, good with Budweiser.”

This somewhat reflects the trade-off I negotiated when deciding to buy tuna as a backup lunch option. In this decision-making process I was acting as an “eater” and not merely a “consumer” of ideologies and political imaginaries (Abbots forthcoming; Goodman 2016). My personal politics around food and consumption came up against my visceral expectations and preferences in the moment of my food choice, and also later during the preparing and eating of this choice. I wanted a type of meat to include in the wraps, and with this wish came a set of visceral criteria. From previous encounters I knew that the tuna I picked fulfilled these criteria, whereas having not tried the Beyond Chicken strips before I was unsure if they could perform as meat in this particular meal. Thus despite the performance I engaged with via the packaging that encouraged me to see the strips as meat, it was not until my visceral encounter with them that they became (more) so. In short, and in a similar way to Jacobsen, I could not accept the strips as “meat” until the point of eating them.

Thinking through (Non)stuff

To “deliver meat from plants” involves a careful balance, by Beyond Meat, of the (non)stuff of their products—on the one hand, they are presented as the stuff of meat in terms of their nutritional properties and cultural value; on the other, they are the non-stuff as to their impacts on human health, animal welfare, and the environment. Ultimately, however, the company’s approach aims to avoid any significant change to the ways in which eaters engage with and eat meat. As I found during my fieldwork, their materialities and imaginaries do not ask their customers to modify where they shop for it, how they culturally situate it, and the ways in which they prepare, eat, and enjoy it.⁷ These products are not intended as substitutes for meat; they *are* meat, as Brown regularly asserts, simply made from different raw materials and via different production methods. And not only this, they present themselves as a *better* type of meat by offering the visceral familiarity, enjoyment, functionality, cultural value, and convenience of conventional meat without all of its associated “bad” stuff.

At this point we may ask why Beyond Meat is taking this particular approach. It would certainly remove significant financial and technical challenges if the company were not striving to simulate meat in the ways they are, particularly their quest to

create products that are viscerally equivalent to animal meat. A major reason for the company taking on these challenges is due to current consumer attitudes toward plant-based products that are already on the market (Hoek et al. 2011). Although many of these products invite eaters to perceive and engage with them as “meat” (e.g., Quorn), sales for these foods remain significantly lower in comparison with animal meats. As such the view among the latest AP companies is that greater impact on planetary issues resides in convincing meat-eaters to choose APs over animal-derived foods, rather than appealing to the culinary adventurous or the much smaller vegetarian and vegan markets. Targeting meat-eaters also presents a much higher market share: the estimated value of global livestock production is estimated at around \$1.4 trillion, and animal products account for approximately 17 percent of kilocalorie consumption and 33 percent of protein consumption globally (Thornton 2010). Thus, instead of fighting the global demand for animal meat, either through the production of non-meatlike products or encouraging a reduction in protein consumption, Beyond Meat seeks to shift this demand to a “better” type of meat. Capturing the meat-eating market through this strategy not only holds the promise of a larger consumer base and therefore greater planetary returns but also vast economic returns for the company.

There are other important factors to consider with regard to the approach Beyond Meat (and other AP companies) are taking. By not requiring their customers to change the way they eat, think about, and interact with meat, these products are doing—or rather not doing—a number of things. First, as discussed above, they do not challenge people’s taste for animal proteins. Quite the contrary: from the textual and visual language of their advertising to the materialities of the end products, these APs actively encourage eaters to continue indulging in the sensory pleasures of animal meat. Second, they do not challenge certain cultural imaginaries associated with animal proteins. Instead of cultivating more positive notions around eating plant-based foods in their “original” forms, they are instead adopting and aligning themselves with the same ideas of hypermasculinity, power, and physical attractiveness that are commonly associated with animal meat (Calvert 2014; Fiddes 2004). This ties into the point above whereby consumer tastes for animal proteins—both in the visceral and cultural sense—are being actively encouraged through making plants meatlike. As such the current and at-times problematic ideals of meat-eating are reinforced and do little to improve the cultural and visceral value of plant-based foods in their original forms.

And third, the products are presented as more healthful and care-full than conventional meat, but they do not attend completely to these claims. As Scrinis (2012) notes with


other nutricentric foods, the performance of making certain (non)stuff matter and not matter is inherently misleading. For example, the emphasis on the stuff made absent from the Beyond Chicken strips draws attention away from the ingredients and political economies they do “contain.” Upon closer inspection, the ingredients listed on the packaging puncture the imaginary of the strips as free from the stuff of industrially produced food—these include “chicken flavor,” dipotassium phosphate, titanium dioxide, and potassium chloride.⁸ Issues have also been raised regarding the level of salt in the southwest style and lightly seasoned-flavored strips (Tepper 2013), and Kummer (2015) noted similarly high levels of seasoning, including sugar, in the company’s “Beast Burger.” He attributes this decision as an attempt to mask the added nutrient powder, suggesting that by prioritizing nutritional equivalency with conventional meat the company has compromised other health-related aspects of their products. Moreover, the focus on the environmental and ethical non-stuff of these products gives little room for explaining exactly how the company is contributing to the planetary ideals it highlights on their website and in promotional talks; nor indeed is there any information regarding the traceability, ecological footprint, or labor conditions of their commodity chains.

The promotion of certain (non)stuff in food products such as these has important implications on how consumers make sense of food products, and by extension how they make sense of themselves. On the one hand, it can distract attention away from other potentially problematic components of foods, such as the lack of transparency and nutritional concerns of food products. On the other, it can lead to what Scrinis (2008: 46) terms “the nutritionalised self” whereby food becomes known to the consumer predominantly through the presence (or absence) of particular stuff. This highly selective overview, mediated by food companies and marketing teams, is often then used by consumers to reimagine themselves as more healthful, care-full, and “better” eaters despite the food products not always living up to these claims.

An important observation of exploring the (non)stuff of Beyond Meat’s products is the recognition by their developers that visceral engagement is integral to how eaters understand food. The millions of dollars spent on making plants look, feel, taste, sound, and smell like conventional meat is testament to this importance (Loizos 2015). Despite more eaters wanting meat with less of the “bad” stuff, for many this is still not enough if the end product does not meet specific taste requirements and does not provide the same visceral experiences. Indeed, more than this—it appears that such a product cannot and will not truly become meat without these aspects.

The direction being taken and the improvements already made by companies such as Beyond Meat to their products' sensory attributes could pose a more considerable threat to the current meat industry than previous attempts within the alternative protein sector. If the world cannot and will not yet give up conventional meat, then perhaps redefining our understandings of what constitutes "meat" without yet disturbing our taste for it may prove an effective first step toward more sustainable protein consumption. However, at the same time care must be taken to not simply view APs as inherently sustainable and healthful, nor as the only solution (e.g., Dagevos and Voordouw 2013); rather they should be considered and problematized within the context of both their opportunities and impacts on the current system as they develop.

Viscerality, Materiality and Rethinking Food

Alternative proteins highlight the importance of attending to visceral encounters in food research, not only to reveal the ways in which these experiences contribute to (and are arguably integral to) things becoming "food," but also to explore how ideological and visceral meaning-making come together in the moments of food choice. As such, this article adds to a growing body of literature focused on examining such encounters and similarly advocates for an extension of visceral/autoethnographic engagement both within and beyond food-related research (Hayes-Conroy 2010; Sweet and Ortiz Escalante 2015). It also seeks to draw attention to the growing emphasis on the non-stuff of food as an important part of the materiality of foods, consumer identities, and the moral politics of eating today. Consumer awareness of, and preference for, what foods do *not* contain is a growing and lucrative space within the food system, and reinforces the popular model of impact- and guilt-free consumption that claims to be kind to the planet while remaining kind to capitalism (Guthman 2015). Continued discussion is needed to reflect critically upon this model, and a focus on the non-stuff of food provides an important and little-researched avenue for conducting this work and for further unpacking the eater-eaten relationship in contemporary food systems. 

Acknowledgments

I would like to express gratitude to Emma-Jayne Abbots, Melissa Caldwell, and Gustav Cederlöf, whose insightful comments and suggestions have vastly improved this article. Many thanks also to my interviewees for their time, and to the two anonymous reviewers for their helpful comments. This work was supported by a PhD studentship from the Economic and Social

Research Council [grant number ES/J500057/1], and a Small Grant for Postgraduate Research from the King's College London Faculty of Social Science & Public Policy (SSPP) to support fieldwork.

NOTES

1. <http://beyondmeat.com/about>.
2. Ethan Brown, interviewed on PBS NewsHour (www.pbs.org/newshour/bb/is-it-possible-to-build-meat-out-of-plant-protein/).
3. Despite becoming more mainstream, many plant-based and free-from products remain higher in price than their "regular" counterparts and as such present significant economic barriers to many eaters following these diets (Stevens and Rashid 2008; Scott-Thomas 2014).
4. <http://beyondmeat.com/futureofprotein#>.
5. www.beyondmeat.com/about.
6. Consumer awareness of these issues has increased over recent years, facilitated in part by the campaigns and exposés of animal welfare groups (Beer, Bartley, and Roberts 2012), and also food scares such as BSE and avian flu that have brought public attention to the practices of intensive animal farming.
7. As well as being stocked in higher-end retailers like Whole Foods Market, Beyond Meat's products have since expanded their availability into mainstream supermarkets such as Walmart, Target, and Safeway across the United States.
8. For clarification, the "chicken flavor" is listed as vegan and the dipotassium phosphate, titanium dioxide, and potassium chloride are stated as comprising "0.5% or less" of the product.

REFERENCES

- Abbots, Emma-Jayne. 2015. "The Intimacies of Industry: Consumer Interactions with the 'Stuff' of Celebrity Chefs." *Food, Culture & Society* 18(2): 223–43.
- . In press. *The Agency of Eating: Mediation, Food and the Body*. London: Bloomsbury.
- Anderson, Leon. 2006. "Analytic Autoethnography." *Journal of Contemporary Ethnography* 35(4): 373–95.
- Aschemann-Witzel, Jessica, and Emilie Marie Niebuhr Aagaard. 2014. "Elaborating on the Attitude-Behaviour Gap Regarding Organic Products: Young Danish Consumers and In-store Food Choice." *International Journal of Consumer Studies* 38(5): 550–58.
- Beer, Christopher T., Tim Bartley, and Wade T. Roberts. 2012. "NGOs: Between Advocacy, Service Provision, and Regulation." In *The Oxford Handbook of Governance*, ed. David Levi-Faur, 325–39. New York: Oxford University Press.
- Bordo, Susan. 1997. "Reading the Male Body." In *Building Bodies*, ed. Pamela L. Moore, 31–74. New Brunswick, NJ: Rutgers University Press.
- Brockman, Chris. 2014. "The Development of the Global Free-from Market." *Food and Drink Innovation Network*. September. www.fdin.org.uk/wp-content/uploads/2015/09/Development-Of-Global-FreeFrom-Market-Mintel.pdf.
- Brown, Ethan, interview by James Hamblin. 2015. "Is It Possible to Build 'Meat' out of Plant Protein?" PBS NewsHour. November 26. www.pbs.org/newshour/bb/is-it-possible-to-build-meat-out-of-plant-protein/.
- Buerkle, C. Wesley. 2009. "Metrosexuality Can Stuff It: Beef Consumption as (Heteromascu)line Fortification." *Text and Performance Quarterly* 29(1): 77–93.
- Calvert, Amy. 2014. "You Are What You (M)Eat: Explorations of Meat-eating, Masculinity and Masquerade." *Journal of International Women's Studies* 16(1): 18–33.

- Carolan, Michael S. 2011. *Embodied Food Politics*. Farnham: Ashgate.
- Chiles, Robert M. 2013. "Intertwined Ambiguities: Meat, In Vitro Meat, and the Ideological Construction of the Marketplace." *Journal of Consumer Behaviour* 12: 472–82.
- Cook, Ian, et al. 2004. "Follow the Thing: Papaya." *Antipode* 36(4): 642–64.
- Copelton, Denise A., and Giuseppina Valle. 2009. "You don't need a prescription to go gluten-free: The Scientific Self-Diagnosis of Celiac Disease." *Social Science and Medicine* 69(4): 623–31.
- Crang, Mike. 2003. "Qualitative Methods: Touchy, Feely, Look-See?" *Progress in Human Geography* 27: 494–504.
- Crawford, Elizabeth. 2015. "Vegan Market Is Going Mainstream, Trend Data Suggests." *FoodNavigator-USA*. March 17. www.foodnavigator-usa.com/Markets/Vegan-is-going-mainstream-trend-data-suggests.
- Dagevos, Hans, and Jantine Voordouw. 2013. "Sustainability and Meat Consumption: Is Reduction Realistic?" *Sustainability: Science, Practice, and Policy* 9(2): 60–69.
- Daniells, Stephen. 2014. "Protein Is the Hottest Functional Food Ingredient Trend in United States: Packaged Facts." *FoodNavigator-USA*. December 23. www.foodnavigator-usa.com/Markets/Protein-is-the-hottest-functional-food-ingredient-trend-in-the-United-States-Packaged-Facts.
- de Sousa, Ivan Sergio Freire, and Lawrence Busch. 1998. "Networks and Agricultural Development: The Case of Soybean Production and Consumption in Brazil." *Rural Sociology* 63(3): 349–71.
- Ellis, Carolyn, Tony E. Adams, and Arthur P. Bochner. 2011. "Autoethnography: An Overview." *Historical Social Research* 36(4): 273–90.
- Evans, Adrian B., and Mara Miele. 2012. "Between Food and Flesh: How Animals Are Made to Matter (and Not Matter) within Food Consumption Practices." *Environment and Planning D: Society and Space* 30(2): 298–314.
- FAO (Food and Agriculture Organization). 2013. *Tackling Climate Change through Livestock: A Global Assessment of Emissions and Mitigation Opportunities*. Rome: FAO.
- Fiddes, Nick. 2004. *Meat: A Natural Symbol*. London: Routledge.
- Goodman, Michael K. 2016. "Eating Bioeconomies." In *Biological Economies: Experimentation and the Politics of Agrifood Frontiers*, ed. Richard LeHeron, Hugh Campbell, Nick Lewis, and Michael Carolan, 240–56. London: Earthscan.
- Guthman, Julie. 2015. "Binging and Purging: Agrofood Capitalism and the Body as Socioecological Fix." *Environment and Planning A* 47: 2438–45.
- Harvey, David. 1990. "Between Space and Time: Reflections on the Geographical Imagination." *Annals of the Association of American Geographers* 80(3): 418–34.
- Hayes-Conroy, Allison. 2010. "Feeling Slow Food: Visceral Fieldwork and Empathetic Research Relations in the Alternative Food Movement." *Geoforum* 41(5): 734–42.
- , and Jessica Hayes-Conroy. 2008. "Taking Back Taste: Feminism, Food and Visceral Politics." *Gender, Place and Culture* 15(5): 461–73.
- Hoek, Annet C., Pietermel A. Luning, Pascalle Weijzen, Wim Engels, Frans J. Kok, and Cees de Graaf. 2011. "Replacement of Meat by Meat Substitutes: A Survey on Person- and Product-Related Factors in Consumer Acceptance." *Appetite* 56(3): 662–73.
- Jacobsen, Rowan. 2014. "The Top-Secret Food That Will Change the Way You Eat." December 26. www.outsideonline.com/outdoor-adventure/culinary/Replacing-Meat-Plant-Based-Meats-Vegetarian.html.
- Johnston, Josée. 2008. "The Citizen-Consumer Hybrid: Ideological Tensions and the Case of Whole Foods Market." *Theory and Society* 37: 229–70.
- Joy, Melanie. 2010. *Why We Love Dogs, Eat Pigs and Wear Cows: An Introduction to Carnism*. San Francisco: Conari Press.
- Julier, Alice, and Laura Lindenfield. 2005. "Mapping Men onto the Menu: Masculinities and Food." *Food and Foodways* 13(1–2): 1–16.
- Kummer, Corby. 2015. "The Problem with Fake Meat." *MIT Technology Review*. March 31. www.technologyreview.com/s/536296/the-problem-with-fake-meat/.
- Latham, Alan. 2003. "Research, Performance, and Doing Human Geography: Some Reflections on the Diary-Photograph, Diary-Interview Method." *Environment and Planning A* 35: 1993–2017.
- Lawrence, Felicity. 2013. "The Horsemeat Scandal: Could There Be Much More to Come?" *Guardian*. February 8. www.theguardian.com/business/2013/feb/08/horsemeat-scandal-more-to-come.
- Lewis, Tania, and Emily Potter. 2011. *Ethical Consumption: A Critical Introduction*. London: Routledge.
- Llewellyn Smith, Julia. 2014. "The Great Gluten-Free Scam." *Telegraph*. December 30. www.telegraph.co.uk/food-and-drink/news/the-great-gluten-free-scam/.
- Loizos, Connie. 2015. "Impossible Foods Raises a Whopping \$108 Million for Its Plant-Based Burgers." *TechCrunch*. October 6. http://techcrunch.com/2015/10/06/impossible-foods-raises-a-whopping-108-million-for-its-plant-based-burgers/.
- Longhurst, Robyn. 2012. "Becoming Smaller: Autobiographical Spaces of Weight Loss." *Antipode* 44(3): 871–88.
- , Elsie Ho, and Lynda Johnston. 2008. "Using 'the Body' as an 'Instrument of Research': Kimchi and Pavlova." *Area* 40: 208–17.
- McGowan, Natasha. 2016. "Business Ideas for 2015: 'Free from' Foods." *Startups*. February 23. http://startups.co.uk/business-ideas-for-2015-free-from-foods/.
- Miele, Mara. 2011. "The Taste of Happiness: Free-Range Chicken." *Environment and Planning A* 43(9): 2076–90.
- , and Adrian B. Evans. 2010. "When Foods Become Animals: Ruminations on Ethics and Responsibility in Care-full Practices of Consumption." *Ethics, Place and Environment: A Journal of Philosophy and Geography* 13(2): 171–90.
- Mol, Annemarie. 2008. "I Eat an Apple: On Theorizing Subjectivities." *Subjectivity* 22: 28–37.
- Parker Talwar, Jennifer. 2003. *Fast Food, Fast Track: Immigrants, Big Business and the American Dream*. Boulder, CO: Westview Press.
- Pelozo, John, Katherine White, and Jingzhi Shang. 2013. "Good and Guilt-Free: The Role of Self-Accountability in Influencing Preferences for Products with Ethical Attributes." *Journal of Marketing* 77(1): 104–19.
- Philipson, Alice. 2014. "Worried Well: Half of Shoppers Now Buy 'Free From' Produce for Food Intolerance." *Telegraph*. July 15. www.telegraph.co.uk/news/health/news/10968226/Worried-well-half-of-shoppers-now-buy-free-from-produce-for-food-intolerance.html.
- Probyn, Elspeth. 2000. *Carnal Appetites: Foodsexidentities*. London: Routledge.
- Roe, Emma J. 2006. "Things Becoming Food and the Embodied, Material Practices of an Organic Food Consumer." *Sociologica Ruralis* 46(2): 104–21.
- Rubio-Tapia, Alberto, Robert A. Kyle, Edward L. Kaplan, Dwight R. Johnson, William Page, Frederick Erdtmann, Tricia L. Brantner, et al. 2009. "Increased Prevalence and Mortality in Undiagnosed Celiac Disease." *Gastroenterology* 137(1): 88–93.
- Scott-Thomas, Caroline. 2014. "Gluten-Free Foods Are Too Expensive, Say Coeliac Shoppers." *FoodNavigator.com*. February 24. www.foodnavigator.com/Market-Trends/Gluten-free-foods-are-too-expensive-say-coeliac-shoppers.

- Scrines, Gyorgy. 2008. "On the Ideology of Nutritionism." *Gastronomica* 8(1): 39–48.
- . 2012. "Nutritionism and Functional Foods." In *The Philosophy of Food*, ed. Da M Kaplan, 269–92. Berkeley: University of California Press.
- Smith, David M. 1994. "On Professional Responsibility to Distant Others." *Area* 26: 359–67.
- Stevens, Laci, and Mohsin Rashid. 2008. "Gluten-Free and Regular Foods: A Cost Comparison." *Canadian Journal of Dietetic Practice and Research* 69(3): 147–50.
- Sweet, Elizabeth L., and Sara Ortiz Escalante. 2015. "Bringing Bodies into Planning: Visceral Methods, Fear, and Gender Violence." *Urban Studies* 52(10): 1826–45.
- Tepper, Rachel. 2013. "Beyond Meat's Chicken-Less Chicken Strips Aren't Fooling Anyone." *Huffington Post*. April 16. www.huffingtonpost.com/2013/04/16/beyond-meats-chicken-strips_n_3094296.html.
- Thornton, Philip K. 2010. "Livestock Production: Recent Trends, Future Prospects." *Philosophical Transactions of the Royal Society B* 365: 2853–67.
- WHO. 2015. "IARC Monographs Evaluate Consumption of Red Meat and Processed Meat." IARC. October 26. www.iarc.fr/en/media-centre/pr/2015/pdfs/pr240_E.pdf.