Eating from the bin: salmon heads, waste and the markets that make them

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Abstract: Recent scholarship in the social sciences has begun to question the cultural contingencies that demarcate waste from ‘stuff worth keeping’ (Watson and Meah, this volume). This scholarship has problematized linear discourses of production, consumption and disposal, and interrogated the relationships between objects, commodities and value but has yet to investigate the ways in which place and place-making are complicit in constituting these relationships. This paper explores where and how the lines between foodstuff and food waste are drawn, as well as the role of place and processes of place-making in contesting and reproducing them. Focusing on salmon heads and salmon, this paper examines not only how food becomes waste, but also on the issue of how waste becomes food. Specifically, we analyse the geographical processes through which salmon heads are valued as foodstuffs in some places but waste in others. We argue further that these valuations extend beyond the place of one market to encompass an assembled geography of markets. Further, we suggest that by tracing out the geographies of salmon heads and salmon – and the markets where each can be found – we can better articulate where as well as how it is that waste can become food. Ultimately, we argue that questions of food and waste are not just questions of materiality, but questions of the ways in which the material intersects relations of place, place-making and geography. Salmon heads, we argue, become a matter of geography.

Keywords: food, waste, commodities, material culture, place

Material evaluations: Opening proposition

We are in the indoor portion of Birmingham’s Bull Ring Market, standing in front of a fishmonger, some way away from the main centre-aisle. One vendor tells us that either the very poor or the idle rich come to this market to shop. This is one of the out-of-the-way stalls: less shiny, smelling like old fish, cheaper, with various fish from different parts of the world – more than the turbot, cod, sea bass or salmon that mainstream fishmongers located in a more convenient position within the market might sell. This place seems to specialize in what the industry sometimes calls ‘trash’ fish, pompano, rockfish or conger eel – those that get caught in the nets but have little commercial demand beyond what a fisherman might be able to get for them on the
quayside. In this marketplace someone will find a use for it, buy it and eat it. The fish are layered out in rows and packed on ice. In the corner of the display, off to the side, there are buckets full of fish parts, bones, carcasses, off cuts, and startling for us, salmon heads. A very thin black man with a vaguely Caribbean accent is arguing with the fishmonger over the price of salmon heads; apparently they’re now 55 pence a pound. He complains that this is too expensive; they used to be 35 pence apiece. When asked if they were for his cat, he says no, they were for dinner. 35p is not much money, but for the man arguing it is the difference between buying one fish head or two – the difference between possibly having enough to eat or not. (Excerpt from field diary 2006).

We begin this paper with two opening propositions: first, that waste and rubbish are not food, and second, that salmon heads, along with the rest of its carcass and other such discarded materials usually found in skips and bins, even if edible, are ‘waste’. Waste is ‘matter that has crossed a contingent cultural line that separates it from stuff that is worth keeping’ (Watson and Meah, forthcoming) while food is a ‘“thing” caught up in the process of being eaten by a consumer’ after being valued as a foodstuff (Roe, 2006: 112). In some instances, owing to particular materialities of particular objects as well as to fundamental properties of their geographies, waste crosses back over the ‘culturally contingent line’. It is (re)valued as foodstuffs – objects with the potential to become food. It is (re)formed into food. This paper interrogates the material processes through which waste can become food and the geographical relationships that underpin its transformation. Through the objective correlatives of salmon heads and salmon; their peculiar material properties; the marketplaces where they are (re)valued; and the geographies into which these places and objects are assembled, this paper provides an account of what needs to happen to waste for it (once again) to become food.

We are geographers, and thus attuned to questions of ‘place’. This paper therefore engages with where and how the lines that delineate food-waste from foodstuff are drawn, as well as where and how these lines are contested, transgressed and otherwise reproduced through and within processes of place and place-making, with a particular focus on food markets. The opening vignette illustrates some of the ways in which the relations that comprise Birmingham’s Bull Ring Market challenge normative distinctions between food and waste and transform the market into a place where a waste-stuff – such as salmon heads – can be revalued and commoditized into foodstuffs. We argue that the relations through which waste becomes food extend beyond the place of this market (where waste-stuff like salmon heads are materialized into food-stuffs) to other places where salmon heads are dismissed as waste and separated from the rest of the valuable flesh. By tracing out the geographies not only of salmon heads but also of salmon (the fish and flesh), we can better understand and articulate ‘where’ as well as ‘how’ waste can become food. We further argue that these are not simply questions of materiality, but also questions about the ways in which the material and the places into which the material is embedded are assembled into a kind of geography.

_Eating from the bin_
The empirical research on which this paper is based was carried out in three distinctive UK food markets. Birmingham’s Bull Ring Market is a retail market located in the city centre but on its social and economic margins. London’s Billingsgate Market is primarily a wholesale market that was located on the River Thames in the City of London until 1982 when it was moved to the East London Docklands. London’s Borough Market at the southern end of London Bridge is both wholesale and retail – and increasingly noted both for its high-end, ‘ethical’ and ‘alternative’ foods and for its reproduction of a kind of ‘foodie’ culture (Coles and Crang, 2011). We focus on markets because, we argue, they are the key sites in which definitions of food and waste are contested. Although ‘market’ and ‘marketplace’ may refer to discursive spaces of the ‘economy’ (see Abolafia, 1998; Callon, 1998), as Bestor (2001: 91) comments, flows of ‘stuff’ (capital, fish, etc.) organized at a global scale work ‘hand in glove’ with locally embedded agents through the interaction of market and place. Here we first consider markets individually as places that value food, waste, salmon and salmon heads, before connecting them into their broader geographies. As marketplaces, each represents an assemblage of people, things and ideas, organized around the buying, selling and exchange of goods. They are places where ‘actions’ such as commoditization and ‘things’ such as commodity fetishes are produced, consumed and/or otherwise invoked. As markets, and as places, each of these three markets is linked materially, socially and discursively to each other, as well as to other places that constitute their ‘geographies’. The salmon heads and salmon upon which this paper focuses comprise one-such relation.

Conceptually the paper is organized into three interconnected and interrelated parts that weave their way through the body of the text. First it relates a narrative of our own encounters with salmon heads and salmon as they materialize at a variety of different sites – akin to ‘following the things’ (see Marcus, 1995; Cook et al., 2004a). Rather than constructing a biography of salmon heads and salmon, which implies looking ‘back’ at the negotiation(s) of their value(s) (see Kopytoff, 2005 [1986]; Appadurai, 2005 [1986]), this paper constructs a ‘geography’ that also looks ‘forward’ (and side-to-side) at some of the different places where salmon heads and salmon can be found in order to elucidate the object’s material, social and discursive possibilities. We suggest that this topographic perspective (see Coles, 2013a; Coles and Crang, 2011) is necessary to deal with a transitory assemblage of mutable objects (eg the fish before, during and after it has been parcelled out into its constituent parts). These objects could become food or waste, or indeed, based on the organization of its geographies, these objects flit between these two culturally contingent categories.

Second, through this geographical narrative, the paper demonstrates the importance of an object’s geography (assembled through place-making and the interrelatedness of place) in shaping its multiple possibilities. We contend that whether or not salmon heads become food is contingent upon relations that extend beyond those between salmon head consumers and the places where salmon heads are available for consumption. Our expanded geographical
analysis includes relations surrounding salmon production more generally but also relations surrounding the valuing and consumption of salmon flesh, which subsequently leads to the dismissal of salmon heads as waste. In short we argue that salmon heads are transformed into food in one set of places and waste in others because salmon flesh itself is valued and consumed as a foodstuff. The value of the rest of the fish is left to be negotiated. Finally, we use this geographical framework to make a moral critique of food waste. We are not so much interested in the usual ways that food production and consumption lead to waste or the supposed moral implications that come with wasting food (see Evans, 2011b; Godfray et al., 2010), but rather the moral implications that underlie place and place-making as they relate to consumption (Sack, 1992, 1997). Particularly we are concerned with the ways in which place and place-making shape where and how foodstuffs are demarcated from waste-stuffs and the ways in which some places, such as markets, eclipse ‘geographical awareness’ and make it so the normative boundaries between food and waste can be transgressed.

Material evaluations: Salmon and salmon heads

A fishy smelling puddle of icy water covers nearly the entire floor of Billingsgate Market. It’s cold; it’s wet; it’s slippery, and we’re standing in the middle of it. We would find later, long after departure that a certain lingering fishiness seemed to follow us around. Billingsgate Market is the City of London’s main fish market and at one time the largest in the world. It is open to the public, but the market’s primary business is with the city’s caterers and fishmongers. It is a busy place. There are forty or so vendors, each with their seafood on display. Stalls are laid out to show off a wide variety of fish and shellfish. Everything is displayed on ice, and fish is packed in polystyrene cartons that all seem to be a standardized size. Given the tremendous volume of fish that are on display we can only wonder at how many of these cartons are used each week, and how many of them make their ways into skips and landfills at the end. We hazard guesses about the amount of ice the fish market uses in a year. This market has no stylized ‘marketing’. The architecture of the building resembles an aluminium Quonset hut. The fish here are traded on price, quality and the skill of negotiators. Buyers and sellers haggle to get the best prices for the commodities before porters ferry them to waiting vehicles that transport the fish to London’s fishmongers’, retail food markets and restaurants. This is an everyday place of food but one that hides within a vast food system. We’re here looking for salmon heads. Billingsgate has an extraordinary variety of fish available, including numerous types and ‘configurations’ of salmon – filets, ‘steaks’, whole fish, but we’ve yet to spot just their heads here. Given their retail value (somewhere between 40 and 55 pence) their absence at a mostly wholesale market is unsurprising (Excerpt from field diary, 2010).

Salmon heads begin their ‘lives’ as waste. Before they are separated from the rest of the fish, salmon heads are part of an assemblage of materialities that comprise a fish called ‘salmon’. Individually, salmon’s materialities embody specific biophysical characteristics and portray particular socially and culturally derived
values that conspire to make some parts of the fish, its flank for instance, a foodstuff and some parts, such as the head and carcass, a waste-stuff. These assembled materialities inhabit discrete geographical locales, ranging from the sea, to a fishing boat, to a collection of markets before finally arriving at the body as food, or the bin as waste. These locales further assemble into a geography that comprises salmon and salmon heads. As the whole ‘thing’ moves from place to place, however, this assemblage is cut apart. Some parts are valued as foodstuffs and begin their own ‘lives’ where they have the potential to become food. Others parts, such as the heads and carcasses, are not valued as foodstuffs. They begin a different ‘life’ where they might become by-products for which applications can be found, or they might become waste and subject to disposal. The places where these assemblages and dis-assemblages occur are critical in determining the shape, direction and indeed geography of their various future material lives.

Salmon are cold-water fish from the North Atlantic and the North Pacific. Unlike cod or halibut – familiar to those who frequent the UK’s fish and chip shops, and whose carcasses, like those of other white fish, are often prized by restaurants because they can be used for making fish stock – salmon is an oily fish. This is important, because oily fish not only spoil faster than lean white fish, but when they do begin to spoil it is obvious because of the smell. One of the reasons why salmon carcasses are not used for fish stock is that boiling water has a similar effect to the bacteria growth of spoilage. Both quickly break down salmon’s fatty acids and proteins into nitrogen and sulphur compounds, which are ultimately the chemicals that make fish smell ‘fishy’ in the first place (McGee, 2004: 205). These bio-physical properties are one reason why the recent history of salmon as a food source is marked by technological capabilities (such as ice, flash freezing and refrigeration) that keep the fish as ‘fresh’ as possible – these inhibit such chemicals from forming, thus preventing the fish from going off and to keep it from smelling and tasting ‘fishy’ (or worse) (Freidberg, 2009).

As a food and as a commodity, salmon is available for purchase almost everywhere that sells food in the UK, and comes in many forms. At the fishmonger, it is available fresh, whole, in fillets, cut into steaks, wild or farmed, and also smoked. In supermarkets, it can be displayed ‘fresh’ at the fish counter, in plastic packs in freezer cabinets or tinned in the canned goods aisles. Often it can be found frozen in Cryovac bags in the freezer aisles along with other fish associated with the ‘world’ food system, such as tilapia. In broad terms, salmon can be divided into two classes: ‘market salmon’ and ‘industrial’ salmon. Market salmon are those that appear for sale in the world’s retail and wholesale markets and are destined for restaurants and fishmongers, and ultimately domestic kitchens and dining rooms. Market fish can be either wild or farmed (factors that impact their price and position within the market), and they are sold through a variety of marketing systems where prices are set through negotiations that take into consideration the fish’s provenance, quality and size, as well as secondary factors such as season and availability – all of which trickle down to impact the
price and value of salmon. Salmon are also part of industrialized and mechanized fishing systems in which the movement of salmon from ocean to saleable item is created in on-board factory-fishing ships or in the pens where they are farmed. These systems rely on economies of scale and typically supply supermarkets with ‘fresh frozen’ fillets and steaks. The processes are largely mechanized to remove as much flesh as possible from the carcass, with even remaining flesh being mechanically separated from the carcass to be ground up and tinned. The bones and heads are packed separately, and typically sold frozen *en masse* in one-ton blocks to fertilizer manufacturers – a recent price check showed the going rate for a block of salmon heads to be about US$950 per ton (we were unable to find anyone who would deal in smaller quantities of heads, and, given the equipment necessary to deal with such a quantity, one ton of salmon heads can probably be considered ‘for industrial use only’).

The critical difference between market and industrial salmon is that market fish enter markets as whole objects (minus the guts, which end up in the sea). Only later down the ‘chain’ is their flesh separated from carcasses and the edible bits parcelled out from waste pieces. Much of the work surrounding market salmon is done in geographically disparate locales by skilled labourers such as fishermen (and women), market traders and porters, fishmongers and cooks. Each of these labourers occupies a particular locale within a salmon’s ‘life’, and each contributes to the fish’s ‘added value’ – added values that make the fish more edible through capturing, portering, filleting and cooking. These are the values that are reified into the commodity form. Salmon gets more valuable as it moves from sea to fork (or bin), is repeatedly bought and sold in markets, and paradoxically as it is parcelled into smaller and smaller pieces.

Market fish, or those found at most retail fish markets and fishmongers, are part of a wide variety of commercial fishing operations that range from seine-and gill-net trawler fishing, to line-caught day fishing, to fish farming on a variety of scales. These operations, however, are not as industrialized as the factory fishing model. Seine-nets scoop up entire schools of fish after they are located by sonar; everything in the water is captured, and all fish in the net are ultimately sent to different markets – the valuable fish to places such as Billingsgate, less valuable ‘trash’ to the wholesalers that supply fishmongers in markets such as Birmingham’s. Gillnets only capture fish large enough to become entangled in the nets by their gill plates (hence the name). Smaller fish can swim through, while larger fish (such as tuna) do not get caught. Setting the net sizes generates a consistent size of fish, and with gillnets it is also possible to fish for particular species – all elements that make it possible for fishing boat skippers to more closely control where their fish might end up, such as markets like Billingsgate that promise the greatest chance of profitability. Salmon taken off day boats, for example, are caught with individual lines and usually end up in specialty markets (such as Borough Market), or they are sold directly to local restaurants where their extreme freshness, together with associated claims to ‘wildness’, commands premium prices – which restaurateurs are willing to pay. All market salmon arrive in markets packed whole in ice, fresh-frozen and
gutted. Once at the wholesale market the entire fish is sold to restaurateurs and suppliers, to fishmongers or possibly to members of the public based on either a daily market price or via face-to-face negotiation when they are sold.

Fishmongers and cooks are the ones who then display and market the fish to end consumers, and who also prepare the fish for cooking. At a fishmonger, salmon are displayed on ice along with other fish so shoppers may choose for themselves what they might want to buy. Because whole salmon are usually large, customers typically tell the fishmonger what cut they want and how they want it. For a fillet, the fishmonger scales the fish, removes the head, and then slices the flesh free of the main skeleton, and sometimes skins the resulting fillet. The fillet is cut to the customer’s requirements, and then wrapped in greased paper before being placed in a plastic carrier bag. Preparing a salmon for the table in this way clearly creates a lot of waste: skin, bones, heads. The cost of this wastage, along with the cost of everything else (transport, labour, packaging and so on), is bound up in the price of the commodity and passed on to the shopper. The materiality of wastage goes into the bin because these aspects of the salmon no longer incorporate the part that makes ‘salmon’ valuable. In Birmingham’s Market, this bin is a parts bucket where carcasses and heads await (re)sale and (re)consumption – or, in other words, revaluation. Other bones, such as those of white fish, might await resale as a value-added product such as fish stock, but, because of their material properties (outlined above), salmon heads and bones are not desirable for stock, so they remain in the bucket until someone buys them to eat, or until the fishmonger puts them out with the rest of the rubbish at the end of the day. When they are in the parts bin, salmon heads enter into a kind of liminality because even here, they might cross back over into ‘food’.

**Material evaluations: Place and commodities**

We are in Borough Market, London. The market floor is hectic. Customers and tourists consume Borough Market’s material and affective commodities (see Coles and Crang, 2011). A fishmonger is selling the usual variety of high quality, extremely fresh fish arranged on ice and around a display comprised of driftwood sculptures and fishing bric-a-brac (old nets, lures, lobster pots). Colourful trash-fish are arranged in comic poses around the other bits: a shark’s mouth is propped open with plastic diver figurine from an aquarium; a large octopus is wrapped around one of the sculptures, and large salmon heads are splayed on hooks and hung from the back of the stall giving the whole place a ‘fishy’ feel . . . A couple of hours later – it’s 3:35 and Borough Market has reached a critical moment where customers and vendors are in a further frenzy of buying and selling. During this time, stuff that does not sell ends up in the skips out back, so vendors are keen to bargain and customers keen to haggle. We stop back by the fishmonger and see the salmon heads placed alongside a rapidly depleting stock of other fish. The ice is melting fast and everything is for sale. ‘How much are these?’ ‘£1.50’ each. ‘What are they good for?’ ‘Stock,’ ‘You can’t make stock with salmon heads, it goes funny’. ‘Okay £1 each’. ‘Done! back in 30 minutes, keep ’em here?’ ‘Fine!’ We take a walk around the market for about half an hour and buy a
lemon, some celery stalks, parsley and some spring onions – the usual ingredients for fish stock. ‘Let’s see if we can make stock with salmon heads’. It’s 2 minutes before the closing bell. The vendor’s gone. Only his assistant remains. ‘How much for the salmon heads?’ She glances at her watch and back at me, ‘a quid [£1]’. ‘For the lot?’ ‘Yep,’ ‘Done!’ ‘What are you going to do with those?’ ‘Gonna try to make fish stock . . .’ ‘Ha!’ (Excerpt from field diary, 2008).

Reclaiming salmon heads depends on renegotiating their value(s). In this case, their reclamation from some type of symbolic value as an artefact of a visual economy to a potential foodstuff occurs because of the commodity relations at Borough Market, which are negotiated after the rest of the fish is valued and commoditized. Salmon heads in this market start as a waste-stuff that is produced when a whole salmon is butchered into ‘useable’ and therefore saleable parts, and whatever is left over. The heads become useful only so far as they help constitute the market’s visual material culture, but they are no longer food-stuffs nor are they commodities. As the market begins to close and the relations holding it together begin to weaken, the usefulness of salmon heads as part of the display diminishes, and, had the authors not sought to renegotiate their values, the salmon heads would become ‘stuff not worth keeping’. At this point in time and space, the salmon heads are essentially waste and only become commodities as their potential to become a foodstuff is recognized by the authors and their values summarily renegotiated. The analysis of salmon heads therefore depends on more than following the thing and examining its materialities. Materialities are important, but only so far as they are bracketed by the material, social and discursive relations that comprise Borough Market, or indeed the other markets and places where salmon heads may be found. The limitations to just following the thing when it comes to salmon heads lies in identifying which ‘thing’ to follow. Following salmon does not necessarily lead to a salmon head: as we have suggested, salmon heads as food signify an unexpected outcome of both the commodity relations and geographical relations that underlie salmon as food. Salmon heads are not bound up in the same processes as the commoditization and fetishization as salmon. Rather, their commoditization happens within the peculiar, yet all-too-normal relations of the markets that either make salmon heads available for sale as foodstuff, or, subsequently and specifically, do not, unless as the above vignette demonstrates, the usual ordering of things is explicitly renegotiated.

Within the processes that define an object, such as those that define commodities, or those that delimit waste and food, the question of ‘where’ is often overlooked (Castree, 2004). Appadurai (2005: 13) argues that alongside other ‘aspects of commodity-hood’ – including ‘phase’ and ‘candidacy’ – ‘commodity context’ requires ‘explication’. ‘Context’ for us suggests place and place-making, which are processes that involve the internal organization of material, social and discursive relations as well as the external ordering of a constellation of other places into a ‘geography’. Although the desirability of salmon flesh as a foodstuff is socially and culturally mediated through a variety of sites and places, the contexts that help to demarcate the valuable salmon from salmon heads are
generally markets, which are produced as places when people, things and ideas come together through their own culturally contingent relations in situ (Caliskan, 2007; Abolafia, 2002; Taussig, 1980; Geertz, 1978). Specific markets, such as Borough, Billingsgate or the Bull Ring, however, are also defined through their relations with each other.

Internal and external relations of place define salmon and salmon heads as well as ‘govern’ their commoditization (Callon, 1998). Externally both salmon and salmon heads are produced through the relations that define a variety of commercial fishing operations and link the different sites that handle and add value to the fish. Internally, however, as the vignette above suggests, salmon and salmon heads are subjected to relations that are defined by the place(s) where their values are further negotiated – relations which establish, for instance, the things that are available for commoditization as a foodstuff, and the things that are positioned as waste. This field encounter suggests a different trajectory for fish leftovers. The salmon heads in Borough Market are cast aside; ‘liberated’ as rubbish (Min’an, 2011); and hung on hooks to be reclaimed as part of Borough Market’s ‘material semiotic’ fabric (Coles, 2013a). They are not destined to be eaten unless a customer really wants them. In this vein, anything in a market is negotiable. The fishmonger in Borough Market uses salmon carcasses and heads and other ‘trash fish’ (sharks, eels, octopus, among others) to decorate the stall, alongside lobster traps, old fishing nets and other bric-a-brac associated with fishing, to produce some kind of geographical knowledge and imagination of ‘fishing’. The decoration of this stall, along with all the other stalls in the market, assembles into a visual material culture that is ultimately consumed as part of Borough Market’s visual economy. The fishmonger will sell the heads, and he even recognizes an option for their use as a foodstuff. Mostly, to him, however, the value of salmon heads is to make his stall look more like a fish stall so he can sell more valuable parts of the salmon. Rubbish, after all, is not normally consumed here.

Relations within the market do more than make commodities. They also obscure geographical relations and truncate geographical awareness. In the case of Borough Market, these relations produce an imaginative geography that replaces the market’s external relations that define the food supply/commodity chain with a collection of geographical discourses about food, markets and consumption. Borough Market is a high-end London retail food market that positions itself as an ‘alternative’ and otherwise ‘ethical’ marketplace that specializes in retailing foodstuffs that are rich in their declared provenance. These foodstuffs are variously ‘local’, ‘fair’, ‘organic’, and each have some kind of geographical story or knowledge associated with them that seemingly unveils the fetish of the commodity but in practice effectively evokes a kind of ‘double’ commodity fetish in which the value of the commodity is partially derived from production of geographical knowledge (Cook and Crang, 1996). Vendors in Borough Market produce these knowledges by ‘revealing’ some narratives of production through devices such as labels designating geographical origin, small object biographies, stall displays and other materials that assemble into a
material-semiotic locating of Borough Market and its foods within an idealized geographical imaginary of food consumption that only includes partial and mediated geographies (Coles, 2013a, 2013b).

These imaginative geographies do not include the market’s own waste, which remains largely invisible, except during critical moments such as near the end of the trading day when the relations holding the market together are already unstable, and therefore allow for the renegotiation of its materialities. More significantly, while these imaginary geographies may or may not aid consumers in unveiling the commodity fetish that obscures production, they certainly are not orientated as such to allow consumers to see or imagine the effects that their consumption might have on what others might consume elsewhere. The market for salmon in Borough necessitates the production of salmon waste. Buying salmon in Borough Market displaces its head and leaves them to be disposed of by someone or someplace else.

**Moral evaluations: Waste, objects and geography**

Recent literatures have sought to problematize waste. In particular, these literatures focus on the ways in which wasting and rubbishing are active processes of disposal bound to the maintenance of social and cultural order (see Douglas, 1994 [1966]; Douglas and Isherwood, 1996; Hetherington, 2004); the ways that processes of disposal are often incomplete, conditional and otherwise fraught (Munro, 2001); and, the ways these processes effectively respatialize more-or-less ‘traditional’ notions of political economy to incorporate multiple productions and multiple consumptions of ‘waste’ (Gregson et al., 2010a). This scholarship not only complicates ‘typical’ production/consumption narratives of objects and commodities, but also highlights the processes of material as well as ephemeral production implicit within commodity processes and the processes of waste. Hetherington (2004: 159), for instance, disrupts such linear narratives of production, consumption and disposal by suggesting that ‘waste’ signifies too final ‘an act of closure’: disposal, he argues, does not necessarily represent some ‘final state of rubbishing’ but rather constitutes an act that signals the ‘closure of a particular sequence of production-consumption events’. This allows us to consider the binning of salmon heads not as a final act of rubbishing but as a suspension of their ‘lives’ into a liminal period of possibility. Should they enter into particular geographical relationships they might become food, they might become objects of visual economy – or they might stay in the bin, where they remain waste.

The relationship between consumption and waste and the liminal possibilities they possess are further problematized by examining and understanding the ways in which consumers variously produce, consume and re-produce objects that might be classed as waste. Notions of ‘second hand cultures’ suggest that – rather than a final act of rubbishing that signifies a complete devaluation – disposal constitutes the renegotiation and subsequent transference of value.
(Gregson and Crewe, 1999, 2003). Moreover, reconfiguring and theorizing spaces of consumption in order to challenge the discourses of so-called ‘consumerism’ broadens the ways in which rubbish and waste are, and can be, spatialized to provide fuller accounts of initial production to presumed ‘end-of-life’ and ‘final’ burial (Gregson et al., 2002, 2007, 2010a, 2010b). The negotiation of salmon in Billingsgate, the (re)negotiation of salmon heads in Birmingham, and the various negotiations of salmon and their heads in Borough Market suggest a broadening of salmon’s spatialities as a foodstuff and as a commodity.

Working from the perspective of material entropy and decay, Edensor (2005) and DeSilvey (2006) conceptualize the affective, ephemeral and material productions that come alongside waste and wastage. Both deploy notions of material memory and monument. Edensor (2005), drawing from Neville and Villeneuve’s (2002) work, for instance, considers the absent presences contained within ‘ruins’. Specifically, he comments that whilst ruins ‘disassemble and rot’ and ‘seem to have lost any value they may once have possessed . . . ruinous matter has not been consigned to burial or erasure, and still bears the vague traces of its previous use and context’ (Edensor, 2005: 317). Using this lens, salmon heads contain value as food because they bear traces of the fish’s previous material assemblages, in the form of some nutritional content, and contexts through their presence as part of the broader salmon system. One way to consider a salmon head, therefore, is to consider its absent salmon body – if the body is edible, then why not the head? DeSilvey (2006) examines ecological processes of ‘dis-assemblage’ and decay and argues that, as well as being destructive, waste can also be a part of productive processes leading to new life. For her, as for us with salmon heads, notions of ‘new life’ can be taken very literally as organisms ingest ‘waste’ as part of their own bodily reproduction. We are not convinced that eating waste is acceptable – even if it is edible and fulfills basic biological requirements for bodily reproduction. An understanding of geography where place-making is a moral act and places are evaluated based on the ways in which they promote geographical awareness informs this position (Sack, 2003). Our argument is that ingesting ‘waste’ happens because the place-making processes in markets obscure the circulation of – and therefore the possibilities for – multiple materialities. We thus position the consumption of salmon within a broader narrative of consumerism that requires salmon’s disassembly into constituent parts, some of which are valued as foodstuffs and some devalued as waste, and binds it to processes of place and place-making.

Evans (2011b, 2011a, 2012) aligns debates about food and food consumption with those of waste to examine the ‘conduits’ of food as it moves through the household, but also the household practices that simultaneously reproduce and contest a discourse of a ‘throwaway society’. Drawing from a range of anthropological literatures Evans (2012) considers first and second ‘burials’ of food in refrigerators, and positions food waste as existing in a kind of liminal space as its owners decide its fate: the rubbish bin, a gift or a material transformation into compost. Crucially, this work acknowledges that food and foodstuffs are different from other objects that might one day become waste.
Food provides for biological nourishment and reproduction, but it also constitutes a site where politics and ethics are contested and contestable (Goodman et al., 2010). Salmon heads are buried in bins or hung on display, and they can be exhumed as food depending on the internal and external relations that define place and its geographies. In any case, the paths that salmon heads take raise ethical and political questions about where they go and how they get there.

Food also differs from other objects because it has a definite shelf-life. Its ability to sustain life not only diminishes when it ages, and – should ageing not be managed properly, for example through poor refrigeration, inappropriate preservation, and so on – food can be transformed into a poison that takes life away. Food’s very material properties make its values as a foodstuff fragile. If not ingested, foodstuffs are destined to become waste: only through some kind of material reconfiguration and respatialization (such as that presented in Evans’s 2012 description of composting) can some value be (re)claimed from food-waste. Even the value of waste in this case, however, lies not in that it is/was food, per se, but that compost itself has some value as organic matter, which can be used as fertilizer. In a roundabout way this links back to DeSilvey’s (2006) commentary about organic reproduction, and to arguments about ‘micro-ecology’ and the ‘force of things’ (Sage, 2007; Bennett, 2004).

Prolonging the ‘life’ of the object and highlighting the particular ways that old objects can be reconfigured into new ones with new conduits and values and (that may or may not bear spectral resemblance to the old), centres on reconstituting value to reclaim objects from their normative categorization as waste and placing them into new material and social contexts. In other words, ‘new’ places must be made to accommodate the newly valued object (that was once ‘waste’), but these new places are on pre-existing material and geographical conditions. What we mean by this is that the possibility to revalue salmon heads as food, and thereby reclaim them from their normative categorization as waste, exists because there is a pre-existing demand for salmon flesh; the material properties of the fish allow it to be split up and its multiple parts to be sent down multiple conduits, and there is a geography to accommodate these relationships. Salmon do not enter the food system because of their heads.

A more expansive understanding of salmon’s material and geographical organization is especially important to debates about the relationships between value, decay, reconfiguration and revaluation as applied to salmon. Because of its bio-physical properties, salmon, like all food, is already in a state of decay. Once fished and killed, the biological processes that keep salmon alive and fresh are disrupted. From this point, the materialities that make the fish a potential foodstuff only remain applicable for a short time – after which they dissolve into other ‘stuff’. Much of the food industry is, in fact, organized around preventing, slowing or otherwise managing decay to preserve freshness and to allow foodstuffs as much time as possible before they (once again) ‘die’ (Godley and Williams, 2009; Freidberg, 2009). But, while salmon will become waste if not first configured into a foodstuff and then eaten, salmon heads are already
'waste'. They may have some possible uses should the geographies be in a position to exploit them, but salmon heads are neither surplus nor oversupply. They simply ‘happen’ because salmon are valuable as foodstuffs, and they may then become commodities because traders seek to exploit their value after the value of salmon flesh (as food) has been extracted.

Salmon heads may just ‘happen’, but their revaluation and eventual consumption as food comes near the end of a geographical ‘life’ that is enveloped by interconnecting politics of production and of consumption. Food – obviously – is valued for its ability to sustain life and reproduce the body. This makes it, along with its production and consumption, intensely political. However, much of what we eat circulates as part of a commodity system that works to obscure these same political relations behind a commodity fetish that hides the social conditions of production from consumers. Harvey (1990: 423) uses this concept as a starting point to encourage researchers to uncover, unravel, or otherwise ‘to get behind the veil, the fetishism of the market and the commodity, in order to tell the full story of social reproduction’. This ‘full story’ can be traced by ‘following’ consumption to production (and production to consumption) (Cook et al., 2004a, 2006).

Unveiling the fetish that hides these relations, however, does not account for all the relations that allow for waste to turn into food nor the types of places where such transgression can occur:

Standard analysis of the commodity fetish sets out to lay bare the process of production, but this is only the first step. The really effective trick of the commodity fetish is to suggest that it is enough to stop at this point, to conclude that by unveiling the mystery of the content of the commodity then the mystery of the commodity has been dispensed with. (Page, 2005: 304)

Engaging solely with the commodity ‘fetish’ overlooks what happens after the commodity is consumed, and similarly fails to account for waste, wasting or possible reclamation. Consuming salmon produces salmon heads, and this waste goes somewhere. Understanding the conduits of salmon heads and their geographical reproduction thus becomes a matter of starting where the salmon ends, particularly when exploring the geographies required to bring objects back from the dead – and never more so than when these ‘dead’ objects are then used to feed the living.

One way to start is to reconsider the geographies of commodities so that they incorporate the life of the object before commodification and, particularly in our case, to then consider the lives that the object might have after it has been consumed. Page (2005: 298) suggests ‘that there is no single momentous shift from non-commodity to commodity, but there is . . . the suggestion that there are endless other narratives that could be traced through the biography’. He goes on to identify a ‘new geography of commodities’ that considers such broader narratives (Page, 2005; for an example of these ‘new’ geographies, see Cook and Crang, 1996; Whatmore and Thorne, 1997; Leslie and Reimer, 1999; Hughes, 2005; Castree, 2001, 2004; Jackson et al., 2006, 2009; Cook et al.,
The life of the salmon, for instance, is traceable back from fork to sea: its fetish can therefore be unravelled by turning back and re-examining this trip, which is what the material culture of Borough Market attempts to evoke. Salmon heads, however, are only along for part of this journey. When it comes to aligning questions of waste with those of their materiality and their geographies, insights into the commodity fetish must also take into consideration the mutability of objects, and the multiple possible futures that consider what the object might become. While questions of material becoming – such as old ships becoming ‘new’ ‘chocky-chocky furniture’ (Gregson et al., 2010b) or old food becoming compost (Evans, 2012) – are centrally important, so are the questions about the geographies that enable these transformations.

### Moral evaluations: Closing proclamations

Much of the food we eat is the product of industrial food systems in which foodstuffs are manufactured for profit and circulated as commodities in a market economy (Goodman and Watts, 1997). As a result, when thinking about food and waste, it is tempting to focus an analysis and critique of waste as something systemic and structural within industrialized capitalism. Such analysis might consider the tonnes of food discarded each year (Godfray et al., 2010); the ecological and ethical cost of particular foods, such as meat, in terms of ‘lost’ (or wasted) trophic energy and environmental degradation (de Bakker and Dagevos, 2012); or the material resources mobilized to produce and transport foods as part of an internationalized system of trade (Marsh and Bugusu, 2007; Pretty et al., 2005). At the centre of such critiques (and something that Evans, 2011b, seeks to problematize in his own examination of the complex politics that bind food consumption, waste and blame in such a system to consumers in the home) is a sense of moral outrage that surrounds the notion of food waste in which wasting food becomes tantamount to all that is wrong with capitalism in the first place. We do not mean to suggest that there should be no moral critique when it comes to issues of food, waste and wasted food; rather, we argue that such critiques come with a moral imperative, not to not waste food, but rather to construct places and geographies where the impacts of consumption on the places affected by food waste are more apparent.

Such geographies and their implicit moral imperative go beyond the implied ethics and political positioning that comes along with appeals to ‘unveil’ or otherwise ‘get with’ the fetish of the commodity (see Harvey, 1990; Cook et al., 2004b) and lead to notions of ‘alternative’ and ‘ethical’ consumption (Eden et al., 2008). We extend our moral critique of the geographies of consumption to consider the ways in which the relations of consumption in one place, such as valuing and eating salmon flesh, prescribe the relations of consumption in other places and lead to the revaluing and eating of waste in the form of salmon heads. This shift in perspective positions a moral imperative onto consumption that includes not just matters surrounding the material production of commodities.
and their social and discursive reproduction as they relate to places of consumption, but also to matters surrounding the material consumption of commodities and their social, discursive and material effects as they extend to other places of consumption. This makes consumers responsible for not only the production of the things they consume but also responsible as producers of the waste that their consumption generates as well as responsible for what sometimes happens to make it to go away.

The consumption of salmon heads demonstrates the unsettling realization that ‘the outcome of disposal is placing rather than rubbishing’ (Hetherington, 2004: 163). The transformation from waste to foodstuff to food means ‘reaching into the bin’ in order to reclaim, revalue and (re)consume its contents. This account of salmon and salmon heads suggests that reaching into the bin ‘happens’ because of the ordering of particular places into a particular geography. The transformation of waste into food is further complicated when it takes place within the market. Markets are sites where market-relations define the use and exchange-values of objects; they are effectively where, amongst other things, objects become commodities and where commodities are consumed. As places, markets actively obscure the geographic relations that bring objects into their midst and they disavow an understanding of the processes that send objects away. Salmon heads are ‘things’ caught up in the relations of the market; they are reified as commodities, valued as foodstuffs, and they are normalized to become food. Often missing from their narrative, however, is that the salmon heads Bull Ring Market are also caught up in the relations of other markets, such as Billingsgate, or Borough where they are not normally consumed. Displacing salmon heads from these markets replaces them to Birmingham where they are deposited as food.

The disconcerting encounter that begins this paper compels us to join in with others to contradict or otherwise ‘queer’ the normalizing discourses and interpretations of economic practice more generally (Pollard et al., 2009: 138). Such a geographical perspective, moreover, permits multi-sited gazes and engages with the multiple spatialities and temporalities that come with objects in motion. Part of this ‘queering’ involves momentarily suspending the uncomfortable encounters (Rosenberg, 2011; Butler, 2006) that an analysis of eating waste such as salmon heads necessarily entails in order to trace the ways in which the geographies that lead to such encounters come to outline their underlying and unequal materialities. This takes the ‘rhizomic’ nature of ‘thing-power’ at face value to consider the ways in which power reverberates through a geographical assemblage of places (Bennett, 2004). Articulating a ‘multi-sited’ geographical account, one that brings together a concern for the material with a concern for their geographies, interrogates not just the places where the object goes or has been, but also the places where the object has not been, will not, or should not go – yet somehow ends up anyway. We argue that objects like salmon heads end up in certain places based partly on their valuation in one place and partly on their valuation(s) in others. Even this interrogation is incomplete until it goes so far as to examine why the materialities of these objects-in-motion happen the
way they do. This means ‘following the thing’, but it also means following the geography, and following it to unexpected, unsavoury and uncomfortable places where other things, like salmon heads, might be eaten.

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