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New directions for management and organization studies on waste

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2015

Document Version:
Publisher's PDF, also known as Version of record

Link to publication

Citation for published version (APA):
Corvellec, H. (2015). *New directions for management and organization studies on waste*. (GRI-rapport; Vol. 2015, No. 3). Gothenburg Research Institute School of Business, Economics and Law at University of Gothenburg. https://gupea.ub.gu.se/handle/2077/38826

Total number of authors:
1

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Gothenburg Research Institute

GRI-rapport 2015:3

Managing Big Cities

New directions for management and organization studies on waste

Hervé Corvellec

EFMD EQUIS ACCREDITED

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UNIVERSITY OF GOTHENBURG
SCHOOL OF BUSINESS, ECONOMICS AND LAW

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ISSN 1400-4801

Layout: Lise-Lotte Walter

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Hervé Corvellec

Abstract

This article presents a research agenda about waste management from the perspective of management and organization studies. The agenda suggests that scholars should draw upon research on waste governance, lean management, the circular economy, and sustainable consumption. It also suggests, in a cross-disciplinary spirit, that scholars should heed research on waste within other social sciences and the humanities.

Keywords

Waste management, Lean thinking, Circular economy, Sustainable consumption, Otherness, Leonia

Introduction: Starving albatrosses in Leonia

Italian novelist Italo Calvino ([1972] 1974, pages 102-103; see also Case and Gaggiotti (2014)) describes Leonia as a city where "every morning the people wake between fresh sheets, wash with just-unwrapped cakes of soap, wear brand-new clothing, take from the latest model refrigerator still unopened tins, listening to the last-minute jingles from the most up-to-date radio." This opulent newness is dependent upon garbage trucks collecting the remains of Yesterday's Leonia every morning and driving it outside the city, where "the outflow increases and the piles rise higher, become stratified, extend over a wider perimeter." Leonia is actually surrounded by waste, and "[p]erhaps the whole world, beyond Leonia's boundaries, is covered by craters of rubbish, each surrounding a metropolis in constant eruption." The higher the pile of rubbish that surrounds Leonia,

> the more the danger of a landslide looms: a tin can, an old tire, an unraveled wine flask, if it rolls toward Leonia, is enough to bring with it an avalanche of unmated shoes, calendars of bygone years, withered flowers, submerging the city in its own past, which it had tried in vain to reject, mingling with the past of the neighboring cities, finally clean.

Calvino insinuates that waste waits, patiently. But waste is already amongst us, calling into question the current institutional order of an endlessly growing linear flow of production→distribution→consumption.

The World Bank (2013) projects an alarming 70% global increase in urban solid waste from 1.3 billion metric tons to 2.2 billion tons per year by 2025, an estimated 1.42 kg/capita/day for 4.3 billion urban residents, with developing countries facing the greatest challenges. Moreover, urban solid waste represents a small fraction of the total waste generated by production (agriculture, industry, services), distribution, and consumption. Upstream waste volumes are some 30 times larger than post-consumption waste volumes (Cascadia Consulting Group, 2006). And 5 to 12 million tons of plastic waste are already entering the ocean annually (Jambeck et al., 2015), this quantity being on the rise.

Waste creates a major challenge to public health and land- and sea-based ecosystems, sustainable access to rare materials, political stability, and global justice. Nuclear waste in their repositories (Madsen, 2010) or electronic waste that finds its way, legally or otherwise, into the backyards of electronic production clusters in developing countries (Minter, 2013) are clear indications of the vanity of Leonian enamorment for perfect tidiness and endless renewal. A more accurate metaphor for our common waste future, to recycle the title of the Brundtland Report (1987), *Our common future,* may be Chris Jordan's (2009–current) photographs of albatrosses starving to death in the fish-rich waters of the Midway atoll (one of the places on earth furthest from the mainland) because their bellies were filled with bits of plastic, mistakenly swallowed when they were fishing in the Pacific trash vortex – one of the five pelagic trashlands to

have appeared in the oceanic gyres. Micro-plastics, which have started to make their way into the food chain, will eventually jam human bodies. Yet waste continues to accumulate, at sea and on shore. Hoarding is not a psychological deviance reserved for a few (Herring, 2014); it is the contemporary condition. If management and organization studies are facing a crucial concrete challenge, it is waste.

A multidisciplinary study object

A landmark of social science research on contemporary waste is the University of Arizona's Garbage Project (Rathje and Murphy, 2001). Beginning in 1973, William L. Rathje and his teams have been excavating, hand-sorting, measuring and recording tens of tons of garbage from landfills for over thirty years, in what amounts to an archeology of contemporary disposal practices. The Garbage Project has demonstrated that the study of waste provides unique access to such diverse aspects of modern consumption society as faulty self-perceptions of disposal behaviors, materials in use, technological development, the evolution of nutrition, entertainment preferences, social inequalities, privacy concerns, and valuation practices. The project has also demonstrated to landfill managers, microbiologists, and water scientists that waste does not decompose as fast as they originally believed, which indicates that one cannot yet know the long-term environmental impact of landfills as a disposal solution.

Searching the archives, historians such as Martin Melosi (1981) explain how engineers and public health specialists joined forces to develop waste management practices, inclusive of regulations, that developed urban sanitation in times of rapid industrialization and population growth. Susan Strasser (1999) has demonstrated that convenience has come to mean disposability and unmendable products and has demonstrated the rapidity with which waste behavior can change – in times of crisis or war, for example. And Ylva Sjöstrand (2014) provides evidence that the current interest in waste valorization may eventually relegate landfill and incineration to transitory practices.

For urban theorist Kevin Lynch (1990), waste is an arbitrary and evolving classification that balances expressions of life and morbidity, movements and immobility, and resource and inefficiency; waste pervades the living system, but it is a necessary part of living. Even if waste signals a lack of imagination, it also signals that someone is at work. Martin O'Brien (2008) underscores the fact that, from a sociological perspective, an intensive production of waste is one of the things that allow the intensive production and consumption that characterize the contemporary world. Thus waste should be considered a product. This view is shared by cultural theorist Gay Hawkins (2006), who suggests that consumers should engage with waste as a proxy for aging and decay rather than simply rejecting it and hiding it as a sign of moral and practical failure. Likewise, Tim Edensor (2005) invites his readers to reflect critically on waste – to see industrial

ruins, which are waste-in-becoming, as significant material reminders of the significance of past labor, for example.

Engaging with shit and designing the interface between the private and the public are among the things that characterize modernism, as Dominique Laporte (2000) asserts in his political history of feces management. On this account, social science research on waste may benefit from Joshua Reno's (2014) suggestion: to move beyond a purely anthropocentric view of waste, take cues from biosemiotics, and consider waste as the starting point of cross-species interaction rather than the end point of human activities.

In the meantime, waste allows materiality to enter social practices in an endless variety of ways (Gregson et al., 2010). And the fact that one person's waste is another person's resource in so many different contexts suggests that the temporality (Thompson, 1979) and spatiality of value (Gregson and Crewe, 2003) serve as the basis of the economics of waste (Porter, 2002).

Management and organization studies on waste

In comparison to academics in the other social sciences or to the humanities, management and organization scholars have shown relatively little interest in waste.

"Waste management" is a recognized academic field that stands at the crossroad of engineering and the physical sciences and is only losely connected to management and organization studies. The field offers many descriptive case studies of the organization of waste management (Scheinberg et al., 2010). But the few articles that take their cues from recent management and organization studies in such leading journals as Waste Management, Waste Management & Research, or Resources, Conservation and Recycling tend to be applied management research (e.g., Corvellec and Bramryd, 2012, Corvellec et al., 2012).

In other journals, scholars in the field of "waste governance" pay particular interest to the orientation of waste management practices. Today and for years to come, European waste governance is and will be oriented by the so-called waste hierarchy model. This model, described in the European Waste Framework Directive (The European Parliament and the Council of the European Union, 2008/98/EC), states that the best waste disposal method is prevention, followed in declining order by reuse, recycling, energy recovery, and landfilling. For the waste management sector, the waste hierarchy is a pressing and difficult challenge. Correspondingly, for the research community, the hierarchy is an opportunity to study the relationships between organizing and policy, the organizing of policymaking, or simply the translation of political ambitions in organizational practices. Patrik Zapata (2013) notes, for example, that the prevention step is not included when the hierarchy is introduced in the poorer cities of what he calls the Global South. Johan Hultman and Hervé Corvellec (2012) have shown

that the European waste hierarchy model organizes the relationships among various facets of the economy in ambiguous and contradictory ways, in spite of an appearance of continuity among its various levels. Corvellec et al. (2013) analyzed the lock-ins that prevent Swedish waste management companies from leaving the incineration stage and describe how climbing the waste hierarchy entails defining biogas based on food waste as a sustainability object – an object that promotes sustainability (2015). And, as Corvellec and Barbara Czarniawska (2015) show, developing waste prevention entails the development of new action nets, which is a classic organizing issue rarely adressed in the waste or the waste management literature.

"Lean management" is arguably the subfield of management that deals most explicitly with waste. James Womack and Daniel Jones characterize "lean thinking" as a way to "banish waste and create wealth in your organizations" (2003). In a style typical of advice on re-engineering industrial processes, the widely cited authors make a key set of recommendations: "identify the value stream for each product, make value flow without interruptions, let the customer pull value from the producer, and pursue perfection" (page 10; emphasis in the original). As Tony Bendell (2006) puts it, "[l]ean can be summarized as the systematic pursuit of perfect value through the elimination of waste in all aspects of the organizations business processes" (page 257). In lean management, waste is what does not provide value to the customer. Waste is seen as a defect and thus an expression and a penalty for poor management: the opposite of value and of wealth. It is something that should be closely monitored in order to reduce, minimize, and possibly eradicate it.

More recently, the circular economy movement (e.g., Ellen MacArthur Foundation, 2013) has taken up the challenge of developing a zero-waste business model. First, the circular economy movement is inspired by William McDonough and Michael Braungart's (2009) cradle-to-cradle (C2C) principles. C2C suggests that the waste issue should be addressed at the design and production stages rather than at the end-of-pipe post-consumption stage. C2C principles entail 1) the use of materials that are safe from chemicals, continuously recyclable, and re-utilizable, creating bridges between biological and technical flows; 2) the use of renewable energy and regards water as a precious resource; and 3) a demonstration of fairness to all people and natural systems. A circular economy allows biological nutrients to re-enter the biosphere safely and build natural capital, and technical nutrients circulate at high quality without entering the biosphere (Ellen MacArthur Foundation, 2013). Second, circular economy advocates suggest the replacement of current business models in which producers sell their products to consumers with models whereby manufacturers or retailers retain the ownership of their products and sell access to their products as a service. The rationale is to reorient people from ownership to use – a key tenet of what is called économie de la fonctionnalité in French (Bourg and Buclet, 2005): literally the economy of functionality, but unfortunately often translated as "service economy" and sometimes as "functional service economy".

Lean management and circular economy are but two pathways to work with the development of less waste-intensive business models, but other new models can be imagined. Making processes more resource efficient and replacing products with services are likely to attract research on services, innovation, entrepreneurship, and sustainable management. Lean management and circular economy are soft anti-programs (Latour, 1986), however, because they aim at solving the waste issue within the capitalist growth paradigm. Other anti-programs are more radical and aim at reshaping the very principles of material and energy throughput (Daly and Farley, 2004) in the economy.

In recent years, we have seen how some sustainable consumption practices (Jackson, 2006, Ekström, 2015) have moved away from simple greening strategies – buying only what one really needs, for example, buying things that last (Fuentes, 2014) – and have given way to more radical reconfigurations of consumption practices.

Some radical waste anti-programs have emerged. Frugality and voluntary simplicity (Cherrier and Murray, 2002, Zamwel et al., 2014) are post-materialist rejections of consumption that provide an entry into less waste-intensive modes of living. Zero waste experiences (Beavan, 2009, Korst, 2012, Johnson, 2013) question what has become the natural acceptance of wasting, redefine the nature of consumption, and incentivize waste-meager production. Maker Spaces are spaces available to people for learning how to repair their things, offering an opportunity to understand the critical role of repair and maintenance (Graham and Thrift, 2007) in a ready-made society. They also provide paths to exploring collaborative design, the organizational rationale of voluntary collaboration, and the role of grassroots initiatives for ecological transition. The sharing economy and collaborative consumption (Belk, 2010) dissolve the notion of ownership and lay the groundwork for a post-ownership paradigm (Belk, 2015) with the potential to reduce total consumption. More generally, waste prevention (Bortoleto, 2015) is a research terrain of initiatives with the potential to entail ways of producing, distributing, consuming, and diverting that slip away from the growth imperative (Zovanyi, 2013); furthermore, it offers new starting points to management and organization studies.

Radical experiences of sustainable consumption provide a potential starting point for a reflection on the immediate origin of waste. Yet focusing on consumption can also individualize responsibility, as Samantha Mac Bride (2011) underscores, and can divert attention from conventional policies that act through legislation, for example. Such is the case with nudging, a term that suggests a reorientation of behavior though non-forced compliance – through the design of default solutions that orient people's choice in a given direction (Thaler and Sunstein, 2008), for example. Nudging stands for a libertarian focus on individual behavior whereby the individual is the relevant unit of study and of politics (Goodwin, 2012) – a political choice that disconnects waste from the sphere of public policy, public administration, and public action (environmental

governance, for example). It suggests that waste lies beyond the reach of legislation, despite the fact that legislation has proven incomparably effective in influencing waste management in the past. The use of soft governance to change waste behavior is an issue that deserves critical scrutiny.

Conclusion: A cross-disciplinary research agenda

As suggested by the short literature review in this chapter, management and organization studies on waste would have much to gain by their scholars attending to waste research within the other social sciences and the humanities and by grounding their research agenda on a cross-disciplinary understanding of waste as multi-faceted social reality. Researchers with a cross-disciplinary agenda could start enlarging the notion of waste beyond industrial wastage and household garbage to encompass the CO_2 generated by agriculture or transportation, for example, urban lighting directed at the sky, by-catches in industrial fishing, or metal pipes and cables that rest uselessly under the streets. They could consider that waste is a global market (Minter, 2013) and heed the diversity of urban waste management practices (Scheinberg et al., 2010, Zapata Campos and Zapata, 2013, Zapata Campos and Zapata, 2014). These issues may even connect to migration and social work research and encompass migrants, the homeless, and other outcasts. As Zygmunt Bauman (2004) observes, such groups are assimilated to waste, given the large sums of public money that are spent for quasi-military equipment aimed at keeping migrants away.

A cross-disciplinary agenda could have researchers questioning the normalization of waste (Corvellec, 2014). Paradoxically, efficient energy recovery and recycling have made waste innocuous, or close to it. Consumers have learned to have a blasé attitude toward mountains of edible tomatoes thrown away because they do not meet a solvent demand, and move on to something else. Likewise, it seems that producers of electronic equipment have managed to convince their consumers that a short duration of their products is a sign of quality, taking to new heights the strategies of planned obsolescence denounced by Vance Packard (1960) more than fifty years ago as a manipulative waste of resources. The recycling worker in a small country place in Sweden, who has filled hundreds of recycling cages with TV sets over the years, asked the question, "How many thick television sets can there be in the world?" – a question that points precisely at the need to analyze the organizational challenges of recycling routines and resource flows (Lisberg Jensen, 2016). Likewise, one could scrutinize the process of waste normalization that occurs when waste is presented as a resource: for material or energy production, for example. Such a view situates waste in the global resource nexus that interconnects energy, land, minerals, food, and water through markets – but also through war (Andrews-Speed, 2014). And it normalizes waste in the sense that waste is featured as an ordinary ingredient in a country's energy and material mix. Viewing waste as a

resource turns waste into something valuable, something that one could easily find other uses for, something that is paradoxically featured as beneficial to the environment. This normalization of waste is a paradox deserving of investigation.

This agenda could also investigate the numerous efforts that disassemble what is no longer considered of value (Minter, 2013). Management and organization studies have exerted a great deal of effort studying ways to assemble resources to produce things. The time has come to examine the rationale of disassembling. For environmental reasons, but also for social reasons. When unemployment hits more than 20 million people in the European Union alone, examining the possibility of developing a disassembling economy that is work intensive but materially parsimonious may take corporate responsibility beyond the narrow limits of Corporate Social Responsibility, and contribute to a limiting of the potentially dreadful political consequence of massive and long-term unemployment.

A key element of a disassembling economy is the waste competence of people and organizations at all stages of the value chain. How do actors in charge of design, production, distribution, and consumption integrate the waste dimension of their products and services in their decisions? Think of nano-waste. Nano-products are already invading mass markets for beauty care, apparel, electricity production, and food containers, with no methods in sight for the handling of nano-waste. Introducing a waste perspective on organizational outputs would be yet another way of developing corporate responsibility. Just like corporations may someday need a social license to operate (Morrison, 2014), they may need a waste license to operate. There is no legitimate reason to structurally produce hazardous waste.

The core mission of the proposed research agenda may be an investigation of the fine-grained modalities of the contemporary engagement with waste: how it is produced, what it looks like, and how it is dealt with. One the one hand, waste is a stigmatized Other. It is the dark side of production, distribution, and consumption that has long been systematically dissociated, separated, and isolated from them. The French dé-chet or the German Ab-fall suggest a separated and fallen Other. Systems of extended producer responsibility, long-term rentals, or a separated collection of food waste may have impinged on this separation of production and consumption – and of waste. But as a rule, waste remains an Other, to be kept at bay. Waste follows trails that are all but secret (Royte, 2005), carefully kept away, not merely from eyes and nostrils, but even from awareness and consciousness.

Yet, in the words of Johan Hultman (2004), "waste is us". It is a total expression of desires and behavior that touch on every aspect of individual and organized life. As Georges Bataille (1988 [1949]) argues, spectacles of destruction like wasting hold societies together. And as Italo Calvino (1974 [1972]) suggests, waste is what holds Leonia together:

> It is not so much by the things that each day are manufactured, sold, bought that you can measure Leonia's opulence, but rather by the things that each day are thrown out to make room for the new. So you begin to wonder if Leonia's true passion is really, as they say, the enjoyment of new and different things, and not, instead, the joy of expelling, discarding, cleansing itself of a recurrent impurity. The fact is that street cleaners are welcomed like angels, and their task of removing the residue of yesterday's existence is surrounded by a respectful silence, like a ritual that inspires devotion, perhaps only because once things have been cast off nobody wants to have to think about them further.

Waste is thus an estranged but omnipresent Other. My suggestion is to put this contradictory Othering of waste at the core of a research agenda for management and organization studies on waste management to clarify what production, distribution, and consumption actually entail.

References

Andrews-Speed, C. Philip (2014) *Want, Waste or War?: The Global Resource Nexus and the Struggle for Land, Energy, Food, Water and Minerals.* Oxon and New York: Routledge.

Bataille, Georges ([1949]1988) *The Accursed Share: An Essay on General Economy* (Volume 1: Consumption). New York: Zone books.

Bauman, Zygmunt (2004) *Wasted Lives: Modernity and Its Outcasts*. Cambridge: Polity.

Beavan, Colin (2009) *No Impact Man*. New York: Picador.

Belk, Russell (2010) Sharing. *Journal of Consumer Research,* 36(5), 715–34.

Belk, Russell (2015) *Post-Ownership sustainability*. In Karin M. Ekström (ed.) *Waste Management and Sustainable Consumption: Reflections on Consumer Waste*. Abington: Routledge, pp. 199–213.

Bendell, Tony (2006) A Review and comparison of Six Sigma and the Lean Organisations. *TQM Magazine,* 18(3), 255–62.

Bortoleto, Ana Paula (2015) *Waste Prevention Policy and Behaviour: New Approaches to Reducing Waste Generation and Its Environmental Impacts*. Abingdon: Routledge.

Bourg, Dominique & Nicolas Buclet (2005) L'économie de fonctionnalité: changer la consommation dans le sens du développement durable. *Futuribles,* (313), 27–38.

Brundtland, Gro Harlem (1987) *Our Common Future*. Nairobi: United Nations Environment Programme.

Calvino, Italo ([1972]1974) *Invisible Cities*. San Diego: Harcourt Brace.

Cascadia Consulting Group (2006) Environmental considerations: An overview of the benefits of waste prevention and reuse. *Waste Prevention Strategy – Background Paper #2*. Portland (OR): Oregon Department of Environmental Quality.

Case, Peter & Hugo Gaggiotti (2014) Italo Calvino and the organizational imagination: Reading social organization through urban metaphors. *Culture and Organization:* DOI: 10.1080/14759551.2014.901325, 1-21.

Cherrier, Helène & Jeff Murray (2002) Drifting away from excessive consumption: a new social movement based on identity construction. *Advances in Consumer Research,* 29, 245–7.

Corvellec, Hervé (2014) Recycling food waste into biogas, or how management transforms overflows into flows. In Barbara Czarniawska & Orvar Löfgren (eds.) *Coping with Excess: How Organizations, Communities and Individuals Manage Overflows.* Cheltenham: Edward Elgar, pp. 154–72.

Corvellec, Hervé (2015) Sustainability objects as performative definitions of sustainability: the case of food waste-based biogas and biofertilizers. GRI report 2015:1, Managing the Big City.

Corvellec, Hervé & Torleif Bramryd (2012) The multiple market-exposure of waste management companies: a case study of two swedish municipally owned companies. *Waste Management,* 32(9), 1722–7.

Corvellec, Hervé, Torleif Bramryd & Johan Hultman (2012) The business model of solid waste management in Sweden: A case study of two municipally-owned companies. *Waste Management & Research,* 30(5), 512–8.

Corvellec, Hervé & Barbara Czarniawska (2015) Action nets for waste prevention. In Karin M. Ekström (ed.) *Waste Management and Sustainable Consumption: Reflection on Consumer Waste.* Oxford: Earthscan-Routledge, pp. 88–101.

Corvellec, Hervé, María José Zapata Campos & Patrik Zapata (2013) Infrastructures, lock-in, and sustainable urban development: the case of waste incineration in a Swedish metropolitan area. *Journal of Cleaner Production,* 50(1), 32–9.

Daly, Herman E. & Joshua C. Farley (2004) *Ecological Economics: Principles and Applications*. Washington (DC): Island Press.

Edensor, Tim (2005) Waste matter: the debris of industrial ruins and the disordering of the material world. *Journal of Material Culture,* 10(3), 311–32.

Ekström, Karin M. (2015) *Waste management and sustainable consumption: reflections on consumer waste.* Abingdon: Routledge.

Ellen MacArthur Foundation (2013) The circular model: an overview. Cowes (Isle of Wight): Ellen MacArthur Foundation.

Fuentes, Christian (2014) Managing green complexities: consumers' strategies and techniques for greener shopping. *International Journal of Consumer Studies,* 38 (5), 485–92.

Goodwin, Tom (2012) Why we should reject 'Nudge'. *Politics,* 32(2), 85–92.

Graham, Stephen & Nigel Thrift (2007) Out of order: understanding repair and maintenance. *Theory, Culture & Society,* 24(3), 1–25.

Gregson, Nicky, Mike A. Crang, Ahamed, Farid, Akhter, Nasreen & Ferdous, Raihana (2010). Following things of rubbish value: end-of-life ships, 'chock-chocky' furniture and the Bangladeshi middle class consumer. *Geoforum,* 41(6), 846–54.

Gregson, Nicky & Louise Crewe (2003) *Second-Hand Cultures*. Oxford: Berg.

Hawkins, Gay (2006) *The Ethics of Waste: How We Relate to Rubbish*. Lanham (MD): Rowman & Littlefield.

Herring, Scott (2014) *The Hoarders: Material Deviance in Modern American Culture*. Chicago (IL): University of Chicago Press.

Hultman, Johan (2004) Soporna, det är vi. In Birgitta Johansson (ed.) *Sopor Hit Och Dit – På Vinst Och Förlust*. Stockholm: Formas.

Hultman, Johan & Hervé Corvellec (2012) The European waste hierarchy: from the sociomateriality of waste to a politics of consumption. *Environment & Planning A,* 44(10), 2413 – 27.

Jackson, Tim (2006) *The Earthscan Reader in Sustainable Consumption*. London: Earthscan.

Jambeck, J. R., Perryman, M., Geyer, R., Wilcox, C., Siegler, T. R., Andrady, A., Narayan, R. & Law, K. L. (2015) Plastic waste inputs from land into the ocean. *Science,* 347(6223), 768–71.

Johnson, Bea (2013) *Zero Waste Home: The Ultimate Guide to Simplifying Your Life by Reducing Your Waste*. New York: Scribner.

Jordan, Chris (2009–current) Midway: Message from the Gyre. Boston (MA). http://www.chrisjordan.com/gallery/midway/#CF000313%2018x24 Accessed January 15, 2015.

Korst, Amy (2012) *The Zero-Waste Lifestyle: Live Well by Throwing Less*. Berkeley: Ten speed press.

Laporte, Dominique (2000) *History of Shit*. Cambridge (MA): MIT Press.

Latour, Bruno (1986) The power of association. In John Law (ed.) *Power, Action and Belief: A New Sociology of Knowledge?* London: Routledge, pp. 264–80.

Lisberg Jensen, Ebba (2016) How many thick television sets can there be in the world? recycling workers and customers reflect on changing roles, recycling routines and resource flows. In Jens Hoff & Quentin Gausset (eds.) *Community Governance and Citizen-Driven Initiatives in Climate Change Mitigation*. Abingdon: Routledge.

Lynch, Kevin (1990) *Wasting Away. An Exploration of Waste: What It Is, How It Happens, Why We Fear It, How to Do It Well*. San Francisco: Sierra Club Books.

Macbride, Samantha (2011) *Recycling Reconsidered: The Present Failure and Future Promise of Environmental Action in the United States*. Cambridge (MA): MIT Press.

Madsen, Michael (2010) *Into Eternity* [Documentary]. Copenhagen: Magic Hours Films.

Mcdonough, William & Michael Braungart (2009) *Cradle to Cradle: Remaking the Way We Make Things*. London: Vintage.

Melosi, Martin V. (1981) *Garbage in the Cities: Refuse, Reform, and the Environment, 1880–1980*. Chicago: Dorsey Press.

Minter, Adam (2013) *Junkyard Planet: Travels in the Billion-Dollar Trash Trade*. New York: Bloomsbury Press.

Morrison, John (2014) *The Social Licence: How to Keep Your Organization Legitimate*. London: Palgrave Macmillan.

O'brien, Martin (2008) *A Crisis of Waste?: Understanding the Rubbish Society*. New York: Routledge.

Packard, Vance (1960) *The Waste Makers*. New York: McKay.

Porter, Richard C. (2002) *The Economics of Waste*. Washington, DC: RFF Press.

Rathje, William L. & Cullen Murphy (2001) *Rubbish! The Archaeology of Garbage*. Tucson: The University of Arizona Press.

Reno, Joshua Ozias (2014) Toward a new theory of waste: from 'matter out of place' to signs of life. *Theory, Culture & Society,* 31(6), 3–27.

Royte, Elizabeth (2005) *Garbage Land: The Secrete Trail of Trash*. New York: Little, Brown and Company.

Scheinberg, Anne, David C. Wilson & Ljiljana Rodic-Wiersma (2010) *Solid Waste Management in the World's Cities: Water and Sanitation in the World's Cities 2010*. London: UN-HABITAT/Earthscan.

Sjöstrand, Ylva (2014) *Stadens sopor: Tillvaratagande, förbränning och tippning i Stockholm 1900–1975*. Lund: Nordic Academic Press.

Strasser, Susan (1999) *Waste and Want: A Social History of Trash*. New York: Metropolitan Books.

Thaler, Richard H. & Sunstein, Cass R. (2008) *Nudge: Improving Decisions About Health, Wealth, and Happiness.* London: Penguin Books.

The European Parliament and the Council of the European Union (2008/98/EC), 'Directive 2008/98/Ec of the European Parliament and the Council on Waste and Repealing Certain Documents', Official Journal of the European Union L 312/3, 0003-30.

The World Bank (2013) *What a Waste: A Global Review of Solid Waste Management.* Washington (DC): The World Bank.

Thompson, Michael (1979) *Rubbish Theory: The Creation and Destruction of Value*. Oxford: Oxford University Press.

Womack, James P. & Daniel T. Jones (2003) *Lean Thinking: Banish Waste and Create Wealth in Your Corporation*. New York: Simon & Schuster.

Zamwel, Einat, Sasson-Levy, Orna & Ben-Porat, Guy (2014) Voluntary simplifiers as political consumers: individuals practicing politics through reduced consumption. *Journal of Consumer Culture,* 14(2), 199–217.

Zapata Campos, María José & Zapata, Patrik (2013) Switching Managua on! connecting informal settlements to the formal city through household waste collection. *Environment & Urbanization,* 25(1), 1–18.

Zapata Campos, María José & Zapata, Patrik (2014) The travel of global ideas of waste management. the case of managua and its informal settlements. *Habitat International,* 41(January), 41–9.

Zapata, Patrik (2013) Waste in translation: global ideas of urban waste management in local practice. In María José Zapata Campos & C. Michael Hall (eds.) *Organising Waste in the City: International Perspectives on Narratives and Practices.* Bristol: The Policy Press, pp. 83–96.

Zovanyi, Gabor (2013) *The No-Growth Imperative: Creating Sustainable Communities under Ecological Limits to Growth*. Abingdon, Oxon: Routledge.