

RESEARCH

Introduction to Special Collection: Social Science and the Social Life of Plastic

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Concern around plastic pollution and China's ban on receiving foreign waste and recycle have refocused attention on responsible waste management and attracted interdisciplinary research that impacts policy and practice. Consequently, plastic has elevated the role of social science in the innovation space, which has traditionally been occupied by science and enterprise. This opening article marks the launch of a special collection of works, which will be published monthly, on the social life of plastic. As a preface to the forthcoming contributions, this introduction highlights the value of humanities and social science approaches to tackling plastic waste, tracing the directions that the social science of waste and plastic has taken and can take in future. Concomitantly, it helps to steer discussions and collaborations away from the restricted realm of plastic bag consumption towards a deeper engagement with socio-material processes. We thus contribute to ensuring that the current anti-plastic zeitgeist is situated in space and time, and that potential solutions benefit from a rigorous examination of the multiplicity of plastics.

Keywords: Post-consumer plastic; household recycling; circular economy; plastic pollution; qualitative research; interdisciplinary; environmental politics; waste policy; global social problems; people-centred solutions; consumption cultures

Introduction

On 18 July 2017, China told the World Trade Organisation that it would ban the import of 24 materials, including post-consumer plastic, effective from the 1st of January, 2018. Until then, China had been a significant consumer of the world's recyclable materials (National Waste and Recycling Association, 2019). Countries around the globe quickly had to find solutions for their plastic wastes, especially those that were of poor quality and highly contaminated. However, this situation alone does not answer the question of why plastic waste has become such an emotive topic and why politicians think that tackling the matter might be a vote winner.

In the UK, the last episode of the *Blue Planet II* documentary series on life in the oceans, presented by David Attenborough and first broadcast on 10 December 2017, showed how plastic harmed animals in remote marine environments, and shocked the UK into activity (Buranyi, 2018). Other documentaries such as 'Drowning in Plastic', 'A Plastic Ocean' and 'Plastic China' had similar effects in different countries. Images of plastic fragments floating around the oceans and especially in the bodies of fish have been broadcast in a range of media around the world, hammering home the message that plastic

waste is a major environmental issue capable of affecting humans at the end of the food chain. Words like 'microplastic', coined by marine biologists (Thompson et al., 2004), entered into common parlance. In response to public concerns, the UK government, via UK Research and Innovation (UKRI), announced a call to develop research hubs on 'circular economy approaches to eliminating plastic waste' in the summer of 2018. One of the eight hubs created was the Cambridge Circular Plastics Centre (CirPlas) at the University of Cambridge, within which the editors of this special collection collaborated to develop and disseminate research on the social science of plastics.¹

Each of the hubs was interdisciplinary, and expected to develop innovative ways to tackle plastic waste that incorporated natural and social scientific methodologies to impact policy. Clarifying the value of interpretivist social science required differentiating our approach from experimental behavioural science, which tends to be more readily understood by people with a background outside of social science. Contextualised by the rise of circular approaches to the economy and building on the social life of plastic literature, in this introduction we disaggregate what the study of processes related to plastic waste means in qualitative research. We discuss the cases raised in this special collection and beyond to explain the value of social science and humanities approaches, including first, how plastic comes to be defined and represented as a problem; second, the multiple approaches to situating plastic in

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space and time; third, the role of theory in the anthropology of plastic; and lastly, what changes the COVID-19 outbreak has and might bring about. Conclusions consider the implications for humanities and social science scholars, who are increasingly relied upon to make circular economy hubs/collaborations interdisciplinary.

Cleanliness, Convenience, and Circularity

As scholars from across the humanities and social sciences, the contributing authors to this special collection attempt to understand the perspectives of consumers and local communities. When it comes to plastic, the question of why and how we choose and use packaging and how we consume food and drink are important to consider. Using ethnographic methods such as participant observation and narrative interviews, as well as visual analysis, this special collection looks at how plastic waste disposal and recycling rules and infrastructures influence people's views on cleanliness, convenience and good citizenship. It also examines people's agency and how they negotiate social relationships through plastic waste-related activities. We aim to clarify what plastic packaging and other plastic items mean to people and to try to understand why they prefer certain things over others.

Plastic is an extremely useful, light-weight, durable, cheap, hygienic and often visually attractive material for storing food, domestic cleaning products and many other household items. Plastic packaging has made it possible to transport ready-made speciality meals over larger distances and make diverse goods accessible for mass consumption (Endō, 2020). Plastic is used to wrap items to keep them clean, yet at the same time, there is growing awareness and concern about the tons of plastic waste that is dumped into the environment and often enter the food chain. In this sense, plastic is not clean at all and its durability causes problems. Most of our research took place before the COVID-19 outbreak, at a moment of intense critique of single-use plastics that has to be placed in historical perspective, as we have seen a recent appreciation of plastic's role in the maintenance not only of cleanliness, but also of hygiene and public health. Thus, for plastic, the distinction between what is clean and dirty is context-dependent and far from obvious. Similarly, with the question of convenience, grabbing a take-away wrapped in plastic and warming it up in the microwave without removing it from its packaging is time-saving but sorting and taking out the waste is time-consuming and annoying. Consequently, the use of plastic creates conflicting notions of cleanliness, convenience and citizenship for consumers and communities alike. These provided three guiding themes for our qualitative research, in partnership with non-academic groups, including local waste management authorities, policy makers and environmental campaigners and activists.

The study of plastic has increasingly been framed by the 'circular economy,' a concept which is promoted in UK, EU, Chinese and other international policy documents. At a basic level, the circular economy model aims at minimising waste leakage out of the economic system. This can be achieved through slowing, closing, de-materialising and

intensifying resource loops through long-lasting design, maintenance, repair, reuse, remanufacturing, refurbishing, recycling, servitisation, capacity sharing and digitalisation (Ellen MacArthur Foundation, 2019). Thus, the idea is that circular business models can leverage the resources and capabilities of the private sector to address the plastic waste problem (Geissdoerfer et al., 2020).

Yet what precisely do we mean by circular loops? Are these circular economies local, regional, national or global? Which place do institutions, businesses, individuals, and communities occupy within these circles? How are costs, benefits and responsibilities distributed? As Cambridgeshire County Council's Commission Manager for Waste, asked: 'Where does it end...?' With his question, he alluded to the problem of establishing discrete parameters when systems are interconnected and enmeshed. Setting weight-based metrics for the reduction of waste, for instance, could mean that decreases in consumption (and thus disposal for recycling) could be interpreted as a failure to meet recycling targets, and are blunt tools for benchmarking progress towards national commitments to be carbon free by 2050 (Interview, Cambridge, July 2019).

Moreover, it is important to pay attention to what is hidden behind the label of 'circular economy'. Based on many years of fieldwork, Schulz and Lora-Wainwright (2019) argue that China's circular economy policies, introduced in the late 2000s, have more to do with controlling who benefits economically from recycling activities than with environmental stewardship or reductions in waste. In the case of a circular economy initiative at the e-waste recycling hub in Guiyu, many small recycling workshops went out of business, whereas profits accumulated in the hands of local elites. This points to how we need to pay attention to the socio-economic consequences for weaker groups in society when new economic and environmental policies are introduced. O'Hare's nascent research on circular economies in Uruguay and the UK (forthcoming in this collection) suggests that low status actors such as waste-pickers may be involved in forms of 'actually existing circularity' that can become displaced by formal sector policies, whether by accident or design.

The circular economy is primarily an industrial concept, influenced by cognate models such as the performance economy, the blue economy, cradle-to-grave and mother-ship earth (Wautelet, 2018). Circularity has become increasingly popular among government policymakers, some sectors of the global business community and environmental movements. In certain places, it has spurred local grassroots movements and small businesses: In Cambridge and beyond, 'zero-waste' shops that sell a range of refillable, reusable and zero-packaging products are increasingly common. Circular Cambridge (2020) brings together public and private actors to promote events like free repair cafés that seek to extend the life-span of products and avoid unnecessary waste creation and disposal. Nevertheless, the concept of a circular economy has not seeped into popular consciousness to anywhere near the same degree as plastic waste and the term was often met with blank looks when mentioned by researchers in interviews. Thus, the articles in this collection that discuss the

perspectives of consumers in their everyday lives pay little attention to the concept.

The Plastic Problem and its Representation

Unlike the issue of climate change, there do not seem to be many vocal 'plastic problem deniers', as anthropologist Gauri Pathak observed during 'The Social Life of Plastic' workshop we organised on 7–8 November 2019 and out of which this special collection grew. What is less clear, however, is what exactly 'the plastic problem' entails, and therefore how we should approach it. Max Liboiron (2016: 88) reminds us that 'policy makers, NGOs, and other change-makers design solutions in response to how problems are defined.' For instance, the difference between 'plastic islands', 'plastic soup', 'plastic confetti', 'plastic smog' or even 'miasma,' is significant. A 'plastic island' or 'garbage patch' can be tackled by mechanical means, scooped from the surface of the ocean. However, most plastics and microplastics are distributed unevenly across the ocean, including in very deep waters. Unlike the metaphor of 'island', the words 'smog' or 'pollution' emphasise that plastics in the ocean interact with the environment, are a health hazard, and point to different—and considerably more complicated—ways of how we need to face the situation.

Liboiron 2016 herself prefers to speak of miasma. The metaphor of miasma is the (outdated) idea that some diseases, like the plague, are caused by poisonous vapours or smells in the air. In it, Liboiron finds parallels in how plastic additives act as endocrine disruptors that are 'inextricable from the landscape, urban architecture, and the human population, yet insensible, invisible, and somewhat mysterious' (2016: 102). In this context, it is noteworthy that Nigerian students—as discussed by Henderson and Dumbili in this special collection—perceive the problem of plastic waste mainly as a problem of bad smell, which they believe to be cancerous. Plastic as such is odourless, but it smells either when it is burned or clogs drainage systems, pointing to larger-scale issues. At a time when meeting global climate change targets requires reducing greenhouse gas emissions, the production and incineration of plastic is predicted to exacerbate the climate crisis (CIEL, 2019). Thinking of plastic waste in the oceans mainly as beach litter, people in landlocked countries or countries with an efficient waste collection system like Japan sometimes feel that the problem has nothing to do with them.

None of these metaphors reflect the situation of plastic pollution fully, functioning instead as heuristic devices to try and make plastic issues relatable. In tackling the 'plastic problem' we need to pay attention not only to how scientists and policy makers understand plastic and its problematisation, but how ordinary people in their everyday lives do so as well. This may be a basis for making plastic waste issues pertinent in different world views. Yet recognising that plastic (waste) is a problem is not necessarily enough to spark a reaction, never mind one that is up to the job and scale of the predicaments we face. This point is explored in Henderson and Dumbili's article, where Nigerian students enumerate many issues with plastic littering, from the aesthetic to the physiological

but nevertheless openly admit to littering themselves. In fact, holding on to one's plastic waste in South-Eastern Nigeria is considered 'uncool', 'infantile' and counter to hegemonic masculinities.

The diverse relationship between gender and plastics (and plastic waste disposal), as seen in the work of McKay and Perez (2018) and Meiu (2020), is but one facet of the cultural reception of plastic and the way its materiality can also reshape cultural norms and expectations. This can be seen in more subtle ways in O'Hare's work in Uruguay (forthcoming in this special collection). Although most research participants responded to the introduction of a plastic bag charge by re-using bags, while women returned to a previous market bag known as *la chismosa* (the gossiper), men were more comfortable with backpacks. Gender-specific attitudes and practices towards plastic packaging and carrier bags can be discussed from the perspective of 'consumption work', a concept developed by Wheeler and Glucksman (2015). While the finding that adult women in the UK are more likely to be in charge of such labour, which includes not only shopping or cooking but also tidying up, waste sorting and disposal, they tend to be much more conscious about the waste produced and willing to make an effort to reduce it.

Henderson and Dumbili's work on the reasons behind 'littering culture' is crucial in a country like Nigeria, which is an important producer of petroleum, the seventh biggest plastics polluter in the world, and a state that has resisted the regional trend of introducing plastic bag bans or charges. In the South African case studied by Perez (forthcoming in this special collection), a plastic bag charge has been introduced, but has largely failed to have the intended impact on the use of bags, an outcome attributed to the low monetary value of the charge. In her article, Perez introduces an interesting ethical claim made by those who litter. In a country with high levels of unemployment, and where economic rather than ecological issues have greater political currency, 'litterers' argue that they are in fact generating employment for waste-pickers and municipal workers. This view overlooks the type of jobs created, which at present often do not meet international 'decent work' standards.

Such examples demonstrate that despite the representation of plastic as a homogeneous global problem, one very soon unearths a multiplicity of problems related to a multiplicity of plastics. In O'Hare's comparative research between Uruguay and the UK, Uruguayans largely represented plastic as a littering issue, while those in the UK had stretched ethical plastics behaviour to include consumption and recycling practices. For some, knowing that their plastic was going to be recycled was no longer enough, and they actively adopted plastic minimisation strategies, such as buying milk in glass bottles, avoiding plastic products, and carrying re-usable bags and containers. While a recent graduate in Perez's Cape Town study held on to her litter because she couldn't bring herself to throw it in the street, students in Henderson and Dumbili's study in Nigeria litter because they could not bring themselves to hold on to it. Although it is often assumed that the world over has become a throwaway society, contributions in

this issue uncover the ‘concern, guilt and anxiety’ involved in discarding goods (Gregson et al., 2007: 684).

Understanding cultures of wasting and recycling, and how these ripple out into subjective affects and individual practices, is therefore a key contribution of social science research to tackling plastic pollution. In policy contexts, however, this tends to be defined and subsumed under the broad banner of behaviour. In the UK, behaviour change policies are increasingly used to alter the context in which decision-making happens (Jones et al., 2013: 33). In doing so, people are more likely to act in ways that reduce the problems caused by plastic waste, without necessarily self-identifying as pro-environmental. These techniques are popular because it is believed that ‘certain well-placed nudges’ could well be ‘more efficient than the more traditional regulation or direct government action’ (Jones et al., 2013: 35). Efficiency was a recurring theme in our research with local government in 2019, which helps to explain why some ways of defining the problem are more popular than others. In particular, ‘efficiencies of service’ was an important phrase used to communicate the utility of, and need to maximise, existing recycling infrastructure. Defining the problem as individual littering means that improvements can be made with minor implications if the right message can be transmitted to the public. This has involved targeted campaigns to encourage citizens to ‘do the right thing’ and ‘police themselves’ to correctly classify and sort items, but this only tackles one part of the problem.

Anthropology of Plastic Waste: Pollution, Dirt and Classification

Reference to the rights and wrongs of classification bring us to discussions of pollution as they first emerged in the anthropological canon. When thinking about waste and pollution, anthropologists often take as a starting point Mary Douglas’ classic book *Purity and Danger* (1966), which highlights that what we consider as dirt or polluting is not universally accepted but culturally specific. We learn about relevant notions from the day we were born, in the cultures that we are born into, and the categorisation of what is clean and what is not is therefore deeply engrained tacit cultural knowledge. As anthropologist Joy Hendry put it: ‘Some of the earliest acquired ideas, which are most difficult to dislodge in any society, are those associated with dirt and cleanliness’ (2019: 58). Such classifications are also often bound up with power, as can be seen in the spatial distribution of settlements and people. For example, colonial era ‘segregation for sanitation’ policies in South Africa justified the removal of non-Europeans to what are now known as townships (Miraftab, 2012).

As Diemberger and Skriver (forthcoming in this special collection) highlight, how we categorise plastic and waste is very much embedded in a wider cosmology that includes ideas of purity and pollution (c.f. O’Hare, 2019). In their example of Limi in the remote Himalayas of Nepal, local MP Tsewang Lama pointed out not only the importance of local understandings of landscape and its management but also the cosmological dimensions of these issues, as connected to wellbeing, fertility, power and pollution. New sources of plastic pollution need to be reframed for people to understand how to handle them. Decision-making

processes need to take into account different kinds of knowledge to avoid the marginalisation or indeed wasting of indigenous peoples’ knowledge and lands (Liboiron, 2018)—a historical tendency in problems that attract the involvement of scientists, engineers and politicians.

By choosing plastic packaging during shopping, re-using it or throwing it away to be recycled or landfilled, we all categorise plastics in certain ways: as something to keep food fresh and hygienic, a useful container to throw away other rubbish in, or something that is no longer of any use. Informal-sector waste pickers in Uruguay are called ‘*clasificadores*’ or classifiers (O’Hare, 2017), a name that indicates a cultural awareness of what these men and women do, namely classifying and sorting items that other people have thrown away. By doing so, they help to reduce the amount of waste that ends up in landfills and increase the secondary use of plastic and other materials. In Japan, the sorting is done by individual households, following instructions given by municipal authorities (posters, brochures, websites) and information written on packaging. This categorisation decides what happens with what people throw away. The categories are broadly divided into *gomi*, which means ‘waste’ or ‘rubbish’, and *shigen* (resources)—or in the case of Hiroshima *yūka shigen* (resources that have a value)—which would normally be rendered as recyclables. While the word *gomi* implies something dirty and useless, ‘resources’ do have a value, especially for a country poor in natural resources.

Sorting is not easy, of course, and when categories change—as is currently happening due to the invention of biodegradable plastics—many people get confused. At cafeterias and dining halls around the University of Cambridge, for instance, re-fill cups for coffee and other drinks are encouraged, and much of the food is now provided plastic free; new alternative materials to plastic are used for packaging, and recycling bins are available at prominent places. Observing those eating at these places, our students have noticed that quite a few users stand in front of the various bins, wondering where to dispose of what. Others mix metal cutlery with plastic, even on the same plate; the selection follows a certain individual logic, which is not obvious to the observer. Similarly, supermarkets have greatly reduced their plastic packaging, offering more loose vegetables, which need to be weighed by the cashier, taking time.

From what we have seen from examples around the world, plastics are not only polymers that can change into different forms throughout their lives. Over the course of these lives they take on different meanings, and those meanings follow different logics. The same is true for polymer composites disposed of by their original owners. Speaking at ‘The Social Life of Plastic’ workshop, Tendai Chigware explained the benefits of upcycling materials, for which recycling processes do not exist in many developing country contexts. Using the example of tyres in rural Zimbabwe, modifications were made that drew on indigenous craft techniques and aesthetics to make them into playground toys, furniture and shoes. Similarly, Dey’s (forthcoming in this special collection) description of a plastic bag repurposed into a hairbrush required little external technology. From the point of view of the

original owner/purchaser, these usages may be considered 'afterlives'.

In the case of plastic, the afterlife is often infinitely longer than the useful life, as Liboiron (2016) reminds us. But for those who rely on old rubber wheels to have fun with and raise their status within the community, or use bags to untangle matted hair, these items could have a completely different meaning. If we accept that dirt is matter 'out of place' (Douglas 1966), then we also need to reflect on both systems of classification and dominant and marginalised spectrums from order to disorder. This classification is a 'moral process' and one that is often invisible (Bowker and Star, 2000). For example, shopping bags are frequently re-used as bin liners, which swiftly re-classifies consumer goods as waste via the same unmodified plastic carrier bag. Part of the work of social scientists is therefore to question tacit knowledge about how matter is placed within corresponding classification systems.

Many environmental movements are motivated or ideologically underpinned by religious thought, whether Islamic, Buddhist, Hindu, Christian or other, and notions of purity and pollution are central to all of them. The environmental coordinator of the 'Green Anglicans' (Perez's South African research partner) writes, 'Churches are using Lent as a time to abstain from the damage we are doing to God's earth' (Mash, 2020). In 2019, resources were designed to help people go on a 'plastic fast' and give up single-use plastics, with some of O'Hare's (forthcoming in this special collection) UK participants going 'plastic free' for Lent. The 'Jute not Plastic' campaign of the late 1970s and early 80s analysed by Bruns and Sommer (in this collection), was carried out mostly by Catholic and Protestant organisations. When we talk about worldviews or 'cosmologies', we do not, however, necessarily mean religious ideas, but worldviews more generally. What ideas of a good life, of social relationships, of safety and risks, of convenience and moral behaviour guide us? And where do plastic and waste fit into these ideas? The answers to these questions, although informed by diverse contexts, are framed by a somewhat shared sense of living in the 'age of plastic'.

Situating the (Anti)plastic Zeitgeist

It has been argued that every now and then someone discovers recycling as a new idea, forgetting the long history of repair, reuse and recycling that has been traced back until at least Roman times, and probably before (Alberge, 2020). Plastic too, although a mostly twentieth century material, has been rediscovered as a 21st century problem, even though its risks and principally its uncertainties have been around since its invention. One of the contributions that this special collection seeks to make is to situate what appears as a shared (anti)plastic zeitgeist in space and time.

Bruns and Sommer's article serves as a crucial reminder that the problematisation of plastic and more specifically the fetishisation of the non-plastic bag is not new. The 'Jute not Plastic' campaign was hugely popular in Germany, Austria and Switzerland in the late 1970s and 80s, with a critique of plastic-centered lifestyles around its role as a symbol of industrialisation, capitalism, mass

production, thoughtless consumption and modernity. Where plastic and its recycling are tied to job creation in Perez's South African case study, Bruns and Sommer show how plastic is portrayed as taking the jobs of Bangladeshi Jute workers, with discerning consumers urged to rectify the situation through the consumption of 'Jute not Plastic'. As Tariq Omar Ali writes in a recent history, 'from the mid-nineteenth to the mid-twentieth century jute fabrics—gunnies, hessians, burlap—were the premier packaging material in world trade' (2018: 1), a commodity crop that entangled Bengali peasants in lucrative and volatile global markets. Yet in Western Europe, jute was effectively rediscovered in the 1970s, linked to a new host of environmental and labour concerns in the contexts of plastic's material hegemony and Bangladesh's fledgling independence.

Previously a thoroughly modern material, social justice activists associated jute with a return to tradition, authenticity and simple living, which they asserted could be accessed by Western consumers through a link with Bangladeshi peasants. The association between plastic and modernity, meanwhile, is a theme that surfaces in many of our articles: without it, one of Henderson and Dembili's Nigerian informants fears a return to 'the era of primitive man ... the days of sand and stones'. In Cambridge, one of O'Hare's participants, born in China, recognises the drawbacks of plastic but feels that the needs of the modern world simply cannot be met without it. In Lalatendu Kesari Das's presentation at our social life of plastic event about India's Koli fishers, who are, as he puts it 'sandwiched between the city and the sea', he described how plastic tackle and nets were heavily marketed and sold to indigenous fishers in the 1970s as an effort to modernise their fleets. The same groups that stubbornly resisted the entry of plastic into their lifeworlds are now criticised by global environmentalists for their 'irresponsible' patterns of consumption and disposal. The diversity that these cases demonstrate emphasise that the link between plastic and modernity, rather than being taken for granted, should be explored in each context.

The centrality of theories of modernisation in contextualising plastic waste raises the issue of how to view its use in everyday settings. The choice of theoretical lens has implications for how individuals are portrayed on the spectrum between agents who resist or agents who are restricted. In this special collection, Dey offers the concept of mut(e)ability to theorise the seemingly insignificant act of repurposing a plastic bag by a low caste woman in an Indian village. By taking the reader on a journey from her personal circumstances to contemporary market dynamics, Dey illustrates the connection between individual acts and larger social structures. This points to the value of social science in developing theories that historicise the current intended and unintended consequences of single-use plastic. In doing so, future solutions can be considered in the context of global and national development agendas to avoid exacerbating environmental injustices of the past. In this regard, the study of plastic waste necessitates an engagement with environmental movements that aim to redress inequality (Martinez-Alier et al., 2016).

The world appears to be saturated with plastics: Their widespread presence in terrestrial and marine sedimentary deposits has even played a crucial role in the categorisation of our current epoch as the ‘anthropocene’ (Zalasiewicz et al., 2016). Some go even further, arguing that we are living in the ‘plasticine’ (Reed, 2015). It may then come as a surprise that some parts of the world are only recently having to deal with the materiality of plastic packaging and products, but such is the case of Nepali mountain-dwellers described in Diemberger and Skrivere’s article (forthcoming in this special collection). Motorable roads and telephone connections increase links with Chinese products and Indian pilgrims have introduced new products into a cosmological world where non-human landscapes are endowed with agency. Prior understandings of ‘pollution’ have to be mediated by cultural ‘brokers’ who attempt to integrate new practices of waste disposal into long-standing commitments to environmental stewardship. Yet even if a new cosmo-politics (De la Cadena, 2010) of waste can adequately accommodate a responsible approach to plastics, the practical challenges of remote mountain terrain share a similarity with the waste management difficulties of small island communities in other parts of the world.

COVID Considerations

The global COVID-19 pandemic has to some extent interrupted the anti-plastic zeitgeist. While fast food outlets closed and therefore the use of plastic cups and cutlery may have decreased, reopening has seen some outlets banning reusable cups. During lock-down, people tended to do one supermarket shop rather than several smaller shops (BBC, 2020). This has implications for open market stalls where, at least in the UK, even fresh food like fish, meat and bread began to mainly be sold pre-packed. Although there is no evidence to suggest that the virus is less able to survive on plastic than other materials, consumers see single-use plastics as a safe or ‘previously untouched’ alternative for many applications (Klemeš et al., 2020). While ‘on the go’ consumption has declined for people who have stopped commuting to offices, this might not offset the volumes of packaging waste generated from parcel and takeaway deliveries to people working from home. Different notions of cleanliness conflict in new ways, and as the coronavirus exposes our fragility, we begin to fall back on plastic solutions: Better the devil we know, it seems.

Research into consumer behaviour carried out in the months before the pandemic indicated that avoidance of some single-use plastic was becoming common-place, but its continuation relied on individuals knowing that others were avoiding these items, too (Borg et al., 2020). When infections rates subside, it will perhaps be tempting for people to go back to their ‘normal’ (e.g., wasteful) single-use plastic habits, and they may become less resolute about their own efforts to protect the environment. Anti-plastic campaigners worry that COVID-19 has taken single-use plastic critiques off the agenda and bolstered its production in an effort to supply different populations with personal protective equipment (PPE). In

healthcare settings, previous concern about the amount of single-use plastic in dentistry, for example, had already been highlighted by sustainability researchers (BBC, 2019). Evidence indicates that ‘difficult’ single-use plastic such as blister packs, could be chemically recycled but would require staff to separate them from non-recyclable waste (Tedstone et al., 2020). This might be unattractive, despite the environmental benefits, as public health services are reluctant to make more demands on over-burdened staff, whose load has been magnified since COVID-19. For contaminated items such as gloves and masks, ‘the expected amount of waste far exceeds the available capacity for treatment of hazardous medical waste since these systems were designed for waste quantities generated during normal operations’ (Klemeš et al., 2020: 2).

COVID-19 also exacerbates the adverse effect that global oil prices have on plastic waste recycling (Lacovidou and Ebner, 2020). When crude oil trades at all-time low levels and tanks are full, the temptation to produce more plastic may be strong, and the oil industry has invested heavily in ensuring a plastic future (Carbon Tracker Initiative, 2020). Although the plastic ban has come into force in England, momentum around plastic bans and taxes has slowed. It remains to be seen how much COVID-19 will impede green initiatives elsewhere, such as the European Plastics Pact, which was introduced in February 2020, just before the outbreak of the pandemic (European Plastics Pact, 2020). Certainly, it is not a foregone conclusion that the pandemic will shift attention away from environmental concerns and climate change: As has been noted, the zoonotic nature of the virus means that unbalanced human-animal relations are at its core. Further, as the former chief executive of BP suggests, ‘people who have spent months worrying about their lungs are more likely to want clean air’ (Sheppard, 2020). Yet the relation to plastic is different, since it has thus far been presented largely as part of a solution to COVID-19 (protecting bodies, holding test samples, delivering potential vaccines) than as part of the problem.

Conclusion: Bags and Beyond

Where once plastic was a potential health risk, the COVID-19 pandemic has tapped into concerns about cleanliness that reframe plastic as an important part of public health. Similar to methods used to define and represent the plastic problem before the pandemic, filming plastic waste in the ocean has been used to warn that soon there will be ‘more masks than jellyfish’ (Kassam, 2020). In doing so, environmentalists hope to revive the anti-plastic movement and push plastic pollution back up the agenda. Although interdisciplinary research can help with these advocacy efforts, a precautionary approach is needed. Advances in scientific innovation have widened the ways that consumers can conveniently prevent pollution, for example, by buying biodegradable or compostable plastic bags. But if there are no industrial processes to treat these materials post-consumption, plastic alternatives can contaminate waste streams when mixed with materials that could otherwise be recycled.

The value of a humanities and social science approach to plastic waste extends beyond understanding consumer perspectives to making visible such long-standing and emergent tensions and contradictions. The role of humanities and social science scholars is often to disrupt prevailing logics and in doing so, interdisciplinary collaborations have the potential to expand and add nuance to possible solutions to plastic waste. Through the research showcased in this special collection and our experience of working in a circular plastic hub, our contributing authors have sought to engage with plastic beliefs and behaviours across space and time, in countries including Germany, Nigeria, Uruguay, the UK, Japan, Nepal, South Africa and India. The diversity of practices, representations, and classifications of the 'plastic problem' found in our forthcoming articles constitute a compelling case against conflating the need for global action around plastics with one size fits all universal solutions.

Note

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Competing Interests

The authors declare that they have no conflict of interest. Prior informed consent was requested and received from all participants included in this study.

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